

TRANSAMINASE BIOCATALYSTS

FIELD OF THE INVENTION

This application relates to transaminases and methods of using the
5 transaminases as biocatalysts.

BACKGROUND OF THE INVENTION

Transaminases are increasingly being used for commercial scale manufacture of
chemicals, pharmaceuticals and polymers because of their ability to catalyse their
10 reactions with superior regio-, stereo- and enantioselectivity. As proteins, they
typically work in aqueous systems, removing the need for volatile, deleterious solvents,
and they avoid the production of harmful by-products often associated with competing
heavy metal catalysis. Furthermore, biocatalysts can be easily separated from the
reaction mixture, and regularly operate at environmentally friendly temperatures and
15 pressures. In essence, they are viewed as being “green” alternatives to conventional
catalytic chemistry.

However, biocatalytic process development is often challenged by availability
of an enzyme that fulfils the substrate specificity requirement for a given target
compound. For example, the long chain amino acids (e.g., C9-12) that are needed for
20 nylon manufacture are not abundant in nature, with no clear physiological role for these
molecules.

Because transaminases typically have a limited substrate range, additional
transaminases are needed.

SUMMARY OF THE INVENTION

The present inventors have isolated novel transaminases (such as p6 and p7
from a newly isolated *Pseudomonas sp.*) which can be used as biocatalysts in the
production of industrially relevant including, but not limited to, amines, diamines, and
amino acids, all of which have significant applications in, for example, polyamide or
30 polypeptide production.

Accordingly, the present invention provides a substantially purified and/or
recombinant polypeptide comprising:

- i) an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6
to 12,
- 35 ii) an amino acid sequence which is at least 40% identical to any one or more
of SEQ ID NOs:1, 2 or 6 to 12, or

iii) a biologically active fragment of i) or ii).

In an embodiment, the present invention provides a substantially purified and/or recombinant polypeptide comprising:

- i) an amino acid sequence as provided in SEQ ID NO:1 or SEQ ID NO:2,
- 5 ii) an amino acid sequence which is at least 40% identical to i), or
- iii) a biologically active fragment of i) or ii).

The present invention also provides a substantially purified and/or recombinant polypeptide comprising:

- i) an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6
10 to 12,
- ii) an amino acid sequence which is at least 40% identical to any one or more of SEQ ID NOs:1, 2 or 6 to 12, or
- iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity.

15 In an embodiment, the present invention also provides a substantially purified and/or recombinant polypeptide comprising:

- i) an amino acid sequence as provided in SEQ ID NO:1 or SEQ ID NO:2,
- ii) an amino acid sequence which is at least 40% identical to i), or
- iii) a biologically active fragment of i) or ii),

20 wherein the polypeptide has amino transferase activity.

In an embodiment of the invention, the polypeptide comprises an amino acid sequence which is at least 75%, at least 80%, at least 85%, at least 90%, or at least 95% identical to any one or more of SEQ ID NOs:1, 2 or 6 to 12.

25 In an embodiment of the invention, the polypeptide catalyses the transfer of an amino group from an amino donor to an amino acceptor. In other words, the polypeptide of the invention catalyses removal of an amino group from the amino donor and addition of an amino group to the amino acceptor. As such, both the amino donor and amino acceptor are considered to be "substrates" of the polypeptide.

30 Transamination reactions are generally reversible. Accordingly, in an embodiment of the invention, the polypeptide catalyses the reversible transfer of an amino group from an amino donor to an amino acceptor.

The inventors have surprising found that the polypeptides of the invention are able to catalyse the deamination/amination of significantly longer substrates, for example, having up to 18 carbons.

35 Thus, in a further embodiment of the invention, the amino donor or amino acceptor comprises at least 3 carbons. In another embodiment of the invention, the

amino donor or amino acceptor comprises at least 4 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises at least 9 carbons. In a further embodiment of the invention, the amino donor or amino acceptor comprises up to 12, 13, 14, 15, 16, 17, or 18 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 12 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 13 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 14 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 15 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 16 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 17 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 18 carbons.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:1,
- ii) an amino acid sequence which is at least 40% identical to i), or
- iii) a biologically active fragment of i) or ii), and

catalyses the transfer of an amino group from an amino donor comprising 3 to 12 carbons to an amino acceptor.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:1,
- ii) an amino acid sequence which is at least 40% identical to i), or
- iii) a biologically active fragment of i) or ii), and

catalyses the transfer of an amino group from an amino donor to an amino acceptor comprising 3 to 12 carbons.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in any one of SEQ ID NOs: 2 or 6 to 12,
- ii) an amino acid sequence which is at least 40% identical to any one or more of SEQ ID NOs:2 or 6 to 12, or
- iii) a biologically active fragment of i) or ii), and

catalyses the transfer of an amino group from an amino donor comprising 4 to 12 carbons to an amino acceptor.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in any one of SEQ ID NOs: 2 or 6 to 12,

ii) an amino acid sequence which is at least 40% identical to any one or more of SEQ ID NOs:2 or 6 to 12, or

iii) a biologically active fragment of i) or ii), and
catalyses the transfer of an amino group from an amino donor to an amino acceptor
5 comprising 4 to 12 carbons.

In an embodiment of the invention, the amino donor is an amino acid or an amine compound.

In an embodiment, the amino acid is an ω -amino acid such as, for example, 3-aminopropanoic acid, 4-aminobutyric acid, 5-aminopentanoic acid, 6-aminohexanoic
10 acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoheptanoic acid, 3-aminoisobutyric acid, or a derivative thereof. 3-aminoisobutyric acid is an example of a derivative of 3-aminopropanoic acid or 4-aminobutyric acid.

In an embodiment, the amino acid is a β -amino acid such as, for example, 3-
15 aminoheptanoic acid or a derivative thereof.

In an embodiment, the amine compound is a primary amine such as, for example, 1,4-diaminobutane, 1,5-diaminopentane, 1,6-diaminohexane, 6-aminohexan-1-ol, Taurine, Tyramine, Cyclohexylamine, Isopropylamine, 2-aminoindan, or a derivative thereof.

20 The primary amine may be a diamine such as, for example, 1,4-diaminobutane, 1,5-diaminopentane, 1,6-diaminohexane, or a derivative thereof.

In an embodiment of the invention, the amine compound is not Diethylaminomalonate, Aminomethylphosphonic acid, 3-aminocyclohexanoic acid, 1-aminocyclohexanoic acid, 5-aminolevulinic acid, 2,6-diaminopimelate, 2,4-
25 diaminobutyrate, Creatine, Citrulline, 2-hydroxy-4-aminobutyrate, Ethylamine, or 1,3-diaminopropane, tert-butylamine.

In an embodiment, the amino acceptor is a carbonyl containing compound such as, for example, a keto acid, a ketone or an aldehyde. The aldehyde may be, for example, glyceraldehyde or gluteraldehyde.

30 In a further embodiment, the amino acceptor also includes substances which are converted to an amino acceptor by other enzymes or whole cell processes, such as, for example, adipic acid. Adipic acid can be converted by an adipate semialdehyde dehydrogenase to 1,6-hexanedial (adipaldehyde) and 6-oxohexanoic acid (adipate semialdehyde) both of which can serve as amino acceptors.

35 In an embodiment, the polypeptide of the invention has a pH optimum of about pH 10.

In an embodiment of the invention, the polypeptide is fused to at least one other polypeptide. The at least one other polypeptide may be, for example, a polypeptide that enhances the stability of a polypeptide of the present invention, or a polypeptide that assists in the purification of the fusion protein.

5 The present invention also provides an isolated and/or exogenous polynucleotide comprising one or more of:

- i) a sequence of nucleotides as provided in any one of SEQ ID NOs:3 to 5, or 14 to 20,
- ii) a sequence of nucleotides encoding a polypeptide of the invention,
- 10 iii) a sequence of nucleotides which is at least 45% identical to any one or more of SEQ ID NOs:3 to 5, or 14 to 20,
- iv) a sequence of nucleotides which hybridizes to i) under stringent conditions, or
- v) a sequence of nucleotides complementary to any one of i) to iv).

15 In an embodiment, the polynucleotide comprises one or more of:

- i) a sequence of nucleotides as provided in SEQ ID NO:3, SEQ ID NO:4, or SEQ ID NO:5,
- ii) a sequence of nucleotides encoding a polypeptide of any one of claims 1 to 13,
- 20 iii) a sequence of nucleotides which is at least 45% identical to i),
- iv) a sequence of nucleotides which hybridizes to i) under stringent conditions, or
- v) a sequence of nucleotides complementary to any one of i) to iv).

25 Preferably, the polynucleotide encodes a polypeptide which encodes a polypeptide that has amino transferase activity.

Preferably, the polynucleotide is operably linked to a promoter.

In an embodiment of the invention, the polypeptide comprises an amino acid sequence which is at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, or at least 95% identical to any one or more of SEQ ID NOs:3 to 5, or 14 to 30 20.

The present invention provides a vector comprising a polynucleotide of the invention. Preferably, the polynucleotide is operably linked to a promoter.

The present invention also provides a host cell comprising a polynucleotide of the invention or a vector of the invention.

35 The host cell can be any type of cell. In an embodiment of the invention, the host cell is a bacterial or fungal cell.

The present invention also provides a method for producing a polypeptide of the invention, the method comprising cultivating a host cell of the invention encoding said polypeptide, or a vector of the invention encoding said polypeptide in a cell free expression system, under conditions which allow expression of the polynucleotide
5 encoding the polypeptide, and recovering the expressed polypeptide.

Also provided is a polypeptide produced using a method of the invention.

The present invention also provides an isolated or purified antibody which specifically binds to a polypeptide of the invention.

The present invention also provides a transgenic non-human organism, for
10 example, a transgenic non-human animal or plant, comprising an exogenous polynucleotide encoding at least one polypeptide of the invention.

Preferably, the polynucleotide is stably incorporated into the genome of the organism.

The present invention also provides an extract of a host cell of the invention, or
15 a transgenic non-human organism of the invention, wherein the extract comprises a polypeptide of the invention.

The present invention also provides a composition comprising one or more of all of: a polypeptide of the invention, a polynucleotide of the invention, a vector of the invention, a host cell of the invention, an antibody of the invention, a transgenic non-
20 human organism of the invention, or an extract of the invention.

The present invention also provides a method for catalysing transfer of an amino group from an amino donor to an amino acceptor, the method comprising contacting the amino donor and amino acceptor with a polypeptide of the invention or a composition of the invention. The polypeptide may be produced by a host cell of the
25 invention.

In a further embodiment of the invention, the amino donor or amino acceptor comprises at least 3 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises at least 4 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises at least 9 carbons. In a further
30 embodiment of the invention, the amino donor or amino acceptor comprises up to 12, 13, 14, 15, 16, 17, or 18 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 12 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 13 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 14
35 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 15 carbons. In another embodiment of the invention, the amino donor

or amino acceptor comprises 9 to 16 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 17 carbons. In another embodiment of the invention, the amino donor or amino acceptor comprises 9 to 12, 9 to 13, 9 to 14 9 to 15, 9 to 16, 9 to 17, or 9 to 18 carbons.

5 The present invention also provides a method for catalysing transfer of an amino group from an amino donor to an amino acceptor with a substantially purified and/or recombinant polypeptide which has amino transferase activity, wherein the amino donor or amino acceptor comprises at least 9 carbons. In one embodiment, both the amino donor and amino acceptor have at least 9 carbons. In an embodiment, the amino
10 donor or amino acceptor comprises 9 to 12, 9 to 13, 9 to 14 9 to 15, 9 to 16, 9 to 17, or 9 to 18 carbons. The polypeptide may be a polypeptide of the invention. The polypeptide may be produced by a host cell of the invention.

The above methods may further comprise adding a cofactor, for example, pyridoxal 5' phosphate (PLP), PLP-pyridoxal phosphate, or pyridoxamine phosphate.

15 In a preferred embodiment, the cofactor is PLP-pyridoxal phosphate.

In an embodiment, the methods produce an industrial product.

In a further embodiment, the methods further comprise one or more reactions to produce an industrial product. For example, the deaminated amino donor or the aminated amino acceptor can be further reacted, for example, with one or more
20 enzymes of compounds to produce an industrial product.

The industrial product may be one or more or all of: an amino acid, diacid, amine, diamine, keto acid, diketo acid, ketone, diketone, aldehyde, dialdehyde, semialdehyde, amino aldehyde, polypeptide, polyamine, polyamide, polyketone, polyaldehyde, lactam, lactone, or fatty acid.

25 In an embodiment, the industrial product is an amino acid, for example, an ω -amino acid such as, for example, 3-aminopropanoic acid, 4-aminobutyric acid, 5-aminopentanoic acid, 6-aminohexanoic acid, 7-aminoheptanoic acid, 3-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoheptanoic acid, 3-aminoisobutyric acid, or a derivative thereof. In another
30 embodiment, the industrial product is a β -amino acid such as, for example, 3-aminoheptanoic acid or a derivative thereof

In another embodiment, the industrial product is an amine such as, for example, 1,4-diaminobutane, 1,5-diaminopentane, 1,6-diaminohexane, 6-aminohexan-1-ol, Taurine, Tyramine, Cyclohexylamine, Isopropylamine, 2-aminoindan, or a derivative
35 thereof.

In another embodiment, the industrial product is a compound comprising a carbonyl group such as, for example, a keto acid, a ketone or an aldehyde. The aldehyde may be, for example, glyceraldehyde or gluteraldehyde.

In another embodiment, the industrial product is a polyamide such as, for example, nylon.

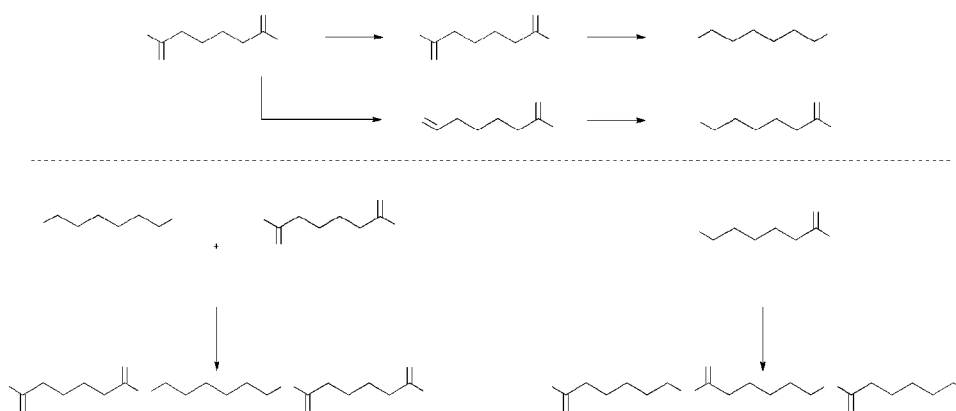
In another embodiment, the industrial product is a lactam.

In another embodiment, the industrial product is a polypeptide.

In another embodiment, the industrial product is a functionalised fatty acid.

The methods of the invention can be used to produce pharmaceutically relevant industrial products, for example, pharmaceutically relevant amines, polyamines, amino acids including ω -amino acids, polypeptides and lactams.

The methods of the invention can also be used in the production of polyamides such as nylon. For example, the polypeptides of the invention when used in conjunction with an adipate semialdehyde dehydrogenase, can be used to produce the diacid and diamine components of nylon 6,6 (shown below left), or alternatively the ω -amino acid that makes nylon 6 (below right), from adipic acid.



In this example, the diamine (hexamethylenediamine) and the ω -amino acid (aminocaproic acid) can be considered industrial products as can nylon 6,6 and nylon 6.

The methods of the invention can also be used to produce industrial products from amino acceptors. For example, glycerol (bulk diesel waste product) derivatives such as glyceraldehydes, dihydroxyacetone or ketomalonates can be used as "substrates" for chemical production.

The methods of the invention can also be used to functionalise fatty acids. Aliphatic fatty acids can function as amino acceptors in the methods of the invention

It will also be recognised that the amino donors and amino acceptors may possess asymmetric centres and are therefore capable of existing in more than one stereoisomeric form. The invention thus also relates to the use and production of the amino donors and amino acceptors in substantially pure isomeric form at one or more asymmetric centres, for example, greater than about 90% ee, such as about 95% or 97% ee or greater than 99% ee, as well as mixtures, including racemic mixtures, thereof. Such isomers may be prepared by asymmetric synthesis, for example using chiral intermediates, or by chiral resolution.

In an embodiment, the methods of the invention can also be used to make enatiopure amines. Chiral amines in enatiopure forms are important chemical building blocks, which may be used in for example, the production of pharmaceuticals.

The polypeptides of the present invention can be mutated, and the resulting mutants screened for altered activity, such as enhanced enzymatic activity or altered substrate specificity. Such mutations can be performed using any technique known in the art including, but not limited to, site-saturated mutagenesis.

Thus, the present invention also provides a method of producing a polypeptide with enhanced ability to catalyse the transfer of an amino group from an amino donor to an amino acceptor, or having altered substrate specificity, the method comprising:

- i) altering one or more amino acids of a polypeptide of the invention,
- ii) determining the ability of the altered polypeptide obtained from step i) to catalyse the transfer of an amino group from the amino donor to the amino acceptor, and
- iii) selecting an altered polypeptide with enhanced ability to catalyse the transfer of an amino group from the amino donor, or having altered substrate specificity, when compared to the polypeptide used in step i).

Step i) can be performed using any suitable technique known in the art such as, but not limited to, site-directed mutagenesis, chemical mutagenesis and DNA shuffling of the encoding nucleic acid.

Also provided is a polypeptide produced by a method of the invention.

The present invention also provides a method for screening for a microorganism capable of catalysing the transfer of an amino group from an amino donor which comprises at least 9 carbons, the method comprising:

- i) culturing a candidate microorganism in the presence of an amino donor which comprises at least 9 carbons, as a sole nitrogen source, and
- ii) determining whether the microorganism is capable of growth and/or division.

In an embodiment, the amino donor comprises 9 to 12, 9 to 13, 9 to 14 9 to 15, 9 to 16, 9 to 17, or 9 to 18 carbons.

Also provided is a microorganism identified using a method of the invention.

The present invention also provides a kit comprising one or more or all of: a
5 polypeptide of the invention, a polynucleotide of the invention, a vector of the invention, a host cell of the invention, an antibody of the invention, a transgenic non-human organism of the invention or an extract of the invention.

The present invention also provides a crystal structure of an amino transferase of the invention. In an embodiment, the amino transferase has an amino acid sequence
10 as provided in SEQ ID NO:1 or SEQ ID NO:2.

The present invention also provides a set of atomic coordinates, or subset thereof, of a crystal structure of the invention.

The present invention also provides a set of atomic coordinates, or subset thereof, provided in Appendix I.

15 The present invention also provides a computer-readable medium having recorded thereon data representing the atomic coordinates, or subset thereof, of a crystal structure of the invention; or the atomic coordinates, or subset thereof, provided in Appendix I; and/or a model produced using the atomic coordinates.

The present invention also provides a computer-assisted method of identifying a
20 compound that binds to the amino transferase of the invention, the method comprising the steps of:

- i) docking the structure of a candidate compound to a structure defined by the atomic coordinates, or subset thereof, of a crystal structure of the invention; or the atomic coordinates, or subset thereof, provided in Appendix I, and
25 ii) identifying a candidate compound which may bind to the amino transferase.

In an embodiment, the amino transferase has an amino acid sequence as provided in SEQ ID NO:1 or SEQ ID NO:2.

In an embodiment, the method further comprises synthesising or obtaining an
30 identified candidate compound and determining if the compound binds to the amino transferase.

The present invention also provides a computer-assisted method for identifying a polypeptide which has amino transferase activity, the method comprising the steps of:

- i) comparing a structure defined by the atomic coordinates, or subset thereof,
35 of a crystal structure of the invention; or the atomic coordinates, or subset thereof,

provided in Appendix I, to a model of the tertiary structure of a candidate polypeptide, and

ii) identifying a candidate compound which may have amino transferase activity.

- 5 In an embodiment, the method further comprises synthesising or obtaining an identified polypeptide and determining if the polypeptide catalyses the transfer of an amino group from an amino donor to an amino acceptor.

Any embodiment herein shall be taken to apply *mutatis mutandis* to any other embodiment unless specifically stated otherwise.

- 10 The present invention is not to be limited in scope by the specific embodiments described herein, which are intended for the purpose of exemplification only. Functionally-equivalent products, compositions and methods are clearly within the scope of the invention, as described herein

- The invention is hereinafter described by way of the following non-limiting
15 Examples and with reference to the accompanying Figures.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

Figure 1. Alignment of polypeptides produced using ancestral reconstruction.

KEY TO SEQUENCE LISTING

- 20 SEQ ID NO:1: Amino acid sequence of p6.
SEQ ID NO:2: Amino acid sequence of p7.
SEQ ID NO:3: Nucleotide sequence of p6.
SEQ ID NO:4: Nucleotide sequence of p7.
25 SEQ ID NO:5: Nucleotide sequence of p7 having a single point mutation.
SEQ ID NO:6: Amino acid sequence of p4.
SEQ ID NO:7: Amino acid sequence of p7N6.
SEQ ID NO:8: Amino acid sequence of p7N15.
SEQ ID NO:9: Amino acid sequence of p7N16.
30 SEQ ID NO:10: Amino acid sequence of p7N17.
SEQ ID NO:11: Amino acid sequence of p7N43.
SEQ ID NO:12: Amino acid sequence of p7N48.
SEQ ID NO:13: Amino acid sequence of GabT (Gamma-aminobutyrate Transaminase; E.C. 2.6.1.19).
35 SEQ ID NO:14: Nucleotide sequence of p4.
SEQ ID NO:15: Nucleotide sequence of p7N6.

SEQ ID NO:16: Nucleotide sequence of p7N15.

SEQ ID NO:17: Nucleotide sequence of p7N16.

SEQ ID NO:18: Nucleotide sequence of p7N17.

SEQ ID NO:19: Nucleotide sequence of p7N43.

5 SEQ ID NO:20: Nucleotide sequence of p7N48.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

General Techniques and Definitions

10 Unless specifically defined otherwise, all technical and scientific terms used herein shall be taken to have the same meaning as commonly understood by one of ordinary skill in the art (e.g., in cell culture, molecular genetics, immunology, immunohistochemistry, protein chemistry, polypeptide and polyamide production, and biochemistry).

15 Unless otherwise indicated, the recombinant protein, cell culture, and immunological techniques utilized in the present invention are standard procedures, well known to those skilled in the art. Such techniques are described and explained throughout the literature in sources such as, J. Perbal, A Practical Guide to Molecular Cloning, John Wiley and Sons (1984), Maniatis et al., Molecular Cloning: A Laboratory Manual, Cold Spring Harbour Laboratory Press (1982), J. Sambrook et al.,
20 Molecular Cloning: A Laboratory Manual, Cold Spring Harbour Laboratory Press (1989), T.A. Brown (editor), Essential Molecular Biology: A Practical Approach, Volumes 1 and 2, IRL Press (1991), D.M. Glover and B.D. Hames (editors), DNA Cloning: A Practical Approach, Volumes 1-4, IRL Press (1995 and 1996), F.M. Ausubel et al., (editors), Current Protocols in Molecular Biology, Greene Pub.
25 Associates and Wiley-Interscience (1988, including all updates until present), E. Harlow and D. Lane (editors), Antibodies: A Laboratory Manual, Cold Spring Harbour Laboratory (1988), and J.E. Coligan et al. (editors), Current Protocols in Immunology, John Wiley & Sons (1991, including all updates until present).

30 Throughout this specification the word "comprise", or variations such as "comprises" or "comprising", will be understood to imply the inclusion of a stated element, integer or step, or group of elements, integers or steps, but not the exclusion of any other element, integer or step, or group of elements, integers or steps.

As used herein, "about" shall generally mean within 20%, more preferably within 10%, and even more preferably within 5%, of a given value or range.

The term "and/or", e.g., "X and/or Y" shall be understood to mean either "X and Y" or "X or Y" and shall be taken to provide explicit support for both meanings or for either meaning.

5 Polypeptides

The present invention relates to polypeptides which catalyse transfer of an amino group from an amino donor to an amino acceptor. Examples of such polypeptides include, but are not limited to, those comprising an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6 to 12.

10 The terms "polypeptide" and "protein" are generally used interchangeably.

A polypeptide or class of polypeptides may be defined by the extent of identity (% identity) of its amino acid sequence to a reference amino acid sequence, or by having a greater % identity to one reference amino acid sequence than to another. The % identity of a polypeptide to a reference amino acid sequence is typically determined
15 by GAP analysis (Needleman and Wunsch, 1970; GCG program) with parameters of a gap creation penalty = 5, and a gap extension penalty = 0.3. The query sequence is at least 100 amino acids in length and the GAP analysis aligns the two sequences over a region of at least 100 amino acids. Even more preferably, the query sequence is at least
20 250 amino acids in length and the GAP analysis aligns the two sequences over a region of at least 250 amino acids. Even more preferably, the query sequence is at least 450 amino acids in length and the GAP analysis aligns the two sequences over a region of at least 450 amino acids. Even more preferably, the GAP analysis aligns two sequences over their entire length. The polypeptide or class of polypeptides may have the same enzymatic activity as, or a different activity than, or lack the activity of, the
25 reference polypeptide. Preferably, the polypeptide has an enzymatic activity of at least 10%, at least 50%, at least 75%, or at least 90%, of the activity of the reference polypeptide.

As used herein a "biologically active fragment" is a portion of a polypeptide of the invention which maintains a defined activity of a full-length reference polypeptide
30 namely, amino transferase activity. Biologically active fragments as used herein exclude the full-length polypeptide. Biologically active fragments can be any size portion as long as they maintain the defined activity. Preferably, the biologically active fragment maintains at least 10%, at least 50%, at least 75%, or at least 90%, of the activity of the full length protein.

35 With regard to a defined polypeptide or enzyme, it will be appreciated that % identity figures higher than those provided herein will encompass preferred

embodiments. Thus, where applicable, in light of the minimum % identity figures, it is preferred that the polypeptide/enzyme comprises an amino acid sequence which is at least 40%, more preferably at least 45%, more preferably at least 50%, more preferably at least 55%, more preferably at least 60%, more preferably at least 65%, more preferably at least 70%, more preferably at least 75%, more preferably at least 80%, more preferably at least 85%, more preferably at least 90%, more preferably at least 91%, more preferably at least 92%, more preferably at least 93%, more preferably at least 94%, more preferably at least 95%, more preferably at least 96%, more preferably at least 97%, more preferably at least 98%, more preferably at least 99%, more preferably at least 99.1%, more preferably at least 99.2%, more preferably at least 99.3%, more preferably at least 99.4%, more preferably at least 99.5%, more preferably at least 99.6%, more preferably at least 99.7%, more preferably at least 99.8%, and even more preferably at least 99.9% identical to the relevant nominated SEQ ID NO.

Amino acid sequence mutants of the polypeptides defined herein can be prepared by introducing appropriate nucleotide changes into a nucleic acid defined herein, or by *in vitro* synthesis of the desired polypeptide. Such mutants include for example, deletions, insertions, or substitutions of residues within the amino acid sequence. A combination of deletions, insertions and substitutions can be made to arrive at the final construct, provided that the final polypeptide product possesses the defined activity. Preferred amino acid sequence mutants have only one, two, three, four or less than 10 amino acid changes relative to the reference polypeptide.

Mutant (altered) polypeptides can be prepared using any technique known in the art, for example, using directed evolution or rational design strategies (see below). Products derived from mutated/altered DNA can readily be screened using techniques described herein to determine if they possess amino transferase activity.

In designing amino acid sequence mutants, the location of the mutation site and the nature of the mutation will depend on characteristic(s) to be modified. The sites for mutation can be modified individually or in series for example, by (1) substituting first with conservative amino acid choices and then with more radical selections depending upon the results achieved, (2) deleting the target residue, or (3) inserting other residues adjacent to the located site.

Amino acid sequence deletions generally range from about 1 to 15 residues, more preferably about 1 to 10 residues and typically about 1 to 5 contiguous residues.

Substitution mutants have at least one amino acid residue in the polypeptide removed and a different residue inserted in its place. The sites of greatest interest for substitutional mutagenesis include sites identified as the active site(s) for example

substrate or co-factor binding sites. Other sites of interest are those in which particular residues obtained from various strains or species are identical. These positions may be important for biological activity. These sites, especially those falling within a sequence of at least three other identically conserved sites, are preferably substituted in a relatively conservative manner. Such conservative substitutions are shown in Table 1

In a preferred embodiment a mutant/variant polypeptide has only, or not more than, one or two or three or four conservative amino acid changes when compared to a reference polypeptide. Details of conservative amino acid changes are provided in Table 1. As the skilled person would be aware, such minor changes can reasonably be predicted not to alter the activity of the polypeptide when expressed in a cell.

Table 1. Exemplary substitutions

Original Residue	Exemplary Substitutions
Ala (A)	val; leu; ile; gly
Arg (R)	lys
Asn (N)	gln; his
Asp (D)	glu
Cys (C)	ser
Gln (Q)	asn; his
Glu (E)	asp
Gly (G)	pro, ala
His (H)	asn; gln
Ile (I)	leu; val; ala
Leu (L)	ile; val; met; ala; phe
Lys (K)	arg
Met (M)	leu; phe
Phe (F)	leu; val; ala
Pro (P)	gly
Ser (S)	thr
Thr (T)	ser
Trp (W)	tyr
Tyr (Y)	trp; phe
Val (V)	ile; leu; met; phe, ala

Considerable guidance regarding amino acid substitutions which can be made can be obtained by aligning different amino acid transferases described herein (see, for example, Figure 1). Such alignments are highly informative regarding which amino acids can be altered, and if so what amino acids can be used at a particular site and function maintained.

In an embodiment, amino acids in the cofactor/substrate binding site are not altered, or if they are it is with a conservative amino acid substitution. Examples of amino acids in the cofactor/substrate binding site are outlined below;

p6: F89, V320, G325, T327, F24, L57, L60, W61, Y153, I166, G168, K171, S231, K288, I396, R414, F415, G416, G417, Q421, V156,

p7: S19, L58, Y59, H85, Y87, V88, L118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, A319, H322, G323, W324, T325, Y326, R419,

p7N6: S19, L58, Y59, H85, Y87, V88, L118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, A319, H322, G323, W324, T325, Y326, R419,

p7N15: S19, L58, Y59, H85, Y87, V88, M118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, P319, H322, G323, W324, T325, Y326, R419,

p7N16: S19, L58, Y59, H85, Y87, V88, M118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, P319, H322, G323, W324, T325, Y326, R419,

p7N17: S19, L58, Y59, H85, Y87, V88, M118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, P319, H322, G323, W324, T325, Y326, R419

p7N43: S19, L58, Y59, H85, Y87, V88, M118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, V319, H322, G323, W324, T325, Y326, R419, and

p7N48: S19, L58, Y59, H85, Y87, V88, M118, S119, G120, S121, Y153, G155, F169, E226, T231, D259, V261, V262, A287, K288, L297, P319, H322, G323, W324, T325, Y326, R419.

Furthermore, if desired, unnatural amino acids or synthetic amino acid analogues can be introduced as a substitution or addition into the polypeptides of the invention. Such amino acids include, but are not limited to, the D-isomers of the common amino acids, 2,4-diaminobutyric acid, α -amino isobutyric acid, 4-aminobutyric acid, 2-aminobutyric acid, 6-amino hexanoic acid, 2-amino isobutyric

acid, 3-amino propionic acid, ornithine, norleucine, norvaline, hydroxyproline, sarcosine, citrulline, homocitrulline, cysteic acid, t-butylglycine, t-butylalanine, phenylglycine, cyclohexylalanine, β -alanine, fluoro-amino acids, designer amino acids such as β -methyl amino acids, C α -methyl amino acids, N α -methyl amino acids, and amino acid analogues in general.

Also included within the scope of the invention are polypeptides which are differentially modified during or after synthesis, for example, by biotinylation, benzylation, glycosylation, acetylation, phosphorylation, amidation, derivatization by known protecting/blocking groups, proteolytic cleavage, linkage to an antibody molecule or other cellular ligand, etc. These modifications may serve to increase the stability and/or bioactivity of the polypeptides of the invention.

Polypeptides of the present invention can be produced in a variety of ways, including production and recovery of natural polypeptides, production and recovery of recombinant polypeptides, and synthetic synthesis of the polypeptides. In an embodiment, an isolated polypeptide of the present invention is produced by culturing a cell capable of expressing the polypeptide under conditions effective to produce the polypeptide, and recovering the polypeptide. A preferred cell to culture is a host cell of the present invention. Effective culture conditions include, but are not limited to, effective media, bioreactor, temperature, pH and oxygen conditions that permit polypeptide production. An effective medium refers to any medium in which a cell is cultured to produce a polypeptide of the present invention. Such medium typically comprises an aqueous medium having assimilable carbon, nitrogen and phosphate sources, and appropriate salts, minerals, metals and other nutrients, such as vitamins.

Cells of the present invention can be cultured in conventional fermentation bioreactors, shake flasks, test tubes, microtiter dishes, and petri plates. Culturing can be carried out at a temperature, pH and oxygen content appropriate for a host cell. Such culturing conditions are within the expertise of one of ordinary skill in the art.

Directed Evolution

In directed evolution, random mutagenesis is applied to a protein, and a selection regime is used to pick out variants that have the desired qualities, for example, increased amino transferase activity. Further rounds of mutation and selection are then applied. A typical directed evolution strategy involves three steps:

1) *Diversification*: The gene encoding the protein of interest is mutated and/or recombined at random to create a large library of gene variants. Variant gene libraries can be constructed through error prone PCR (see, for example, Leung, 1989;

Cadwell and Joyce, 1992), from pools of DNaseI digested fragments prepared from parental templates (Stemmer, 1994a; Stemmer, 1994b; Cramer et al., 1998; Coco et al., 2001) from degenerate oligonucleotides (Ness et al., 2002, Coco, 2002) or from mixtures of both, or even from undigested parental templates (Zhao et al., 1998; Eggert et al., 2005; Jézéque et al., 2008) and are usually assembled through PCR. Libraries can also be made from parental sequences recombined *in vivo* or *in vitro* by either homologous or non-homologous recombination (Ostermeier et al., 1999; Volkov et al., 1999; Sieber et al., 2001). Variant gene libraries can also be constructed by sub-cloning a gene of interest into a suitable vector, transforming the vector into a "mutator" strain such as the *E. coli* XL-1 red (Stratagene) and propagating the transformed bacteria for a suitable number of generations. Variant gene libraries can also be constructed by subjecting the gene of interest to DNA shuffling (i.e., *in vitro* homologous recombination of pools of selected mutant genes by random fragmentation and reassembly) as broadly described by Harayama (1998).

2) *Selection:* The library is tested for the presence of mutants (variants) possessing the desired property using a screen or selection. Screens enable the identification and isolation of high-performing mutants by hand, while selections automatically eliminate all nonfunctional mutants. A screen may involve screening for the presence of known conserved amino acid motifs. Alternatively, or in addition, a screen may involve expressing the mutated polynucleotide in a cell or transgenic non-human organism or part thereof and assaying the level of, for example, amino transferase activity by, for example, quantifying the level of resultant product in the cell or transgenic non-human organism or part thereof or extracted from the cell or transgenic non-human organism or part thereof, and determining the level of product relative to a corresponding cell or transgenic non-human organism or part thereof lacking the mutated polynucleotide and optionally, expressing the parent (unmutated) polynucleotide. Alternatively, the screen may involve feeding the cell or transgenic non-human organism or part thereof labelled substrate and determining the level of substrate or product in the cell or transgenic non-human organism or part thereof, or extracted from the cell or transgenic non-human organism or part thereof relative to a corresponding cell or transgenic non-human organism or part thereof lacking the mutated polynucleotide and optionally, expressing the parent (unmutated) polynucleotide.

3) *Amplification:* The variants identified in the selection or screen are replicated many fold, enabling researchers to sequence their DNA in order to understand what mutations have occurred.

Together, these three steps are termed a "round" of directed evolution. Most experiments will entail more than one round. In these experiments, the "winners" of the previous round are diversified in the next round to create a new library. At the end of the experiment, all evolved protein or polynucleotide mutants are characterized using biochemical methods.

Rational Design

A protein can be designed rationally, on the basis of known information about protein structure and folding. This can be accomplished by design from scratch (*de novo* design) or by redesign based on native scaffolds (see, for example, Hellinga, 1997; and Lu and Berry, Protein Structure Design and Engineering, Handbook of Proteins 2, 1153-1157 (2007)). Protein design typically involves identifying sequences that fold into a given or target structure and can be accomplished using computer models. Computational protein design algorithms search the sequence-conformation space for sequences that are low in energy when folded to the target structure. Computational protein design algorithms use models of protein energetics to evaluate how mutations would affect a protein's structure and function. These energy functions typically include a combination of molecular mechanics, statistical (i.e., knowledge-based), and other empirical terms. Suitable available software includes IPRO (Interactive Protein Redesign and Optimization), EGAD (A Genetic Algorithm for Protein Design), Rosetta Design, Sharpen and Abalone.

Amino Transferase Activity

The polypeptides of the invention are transaminases (also referred to herein as amino transferases).

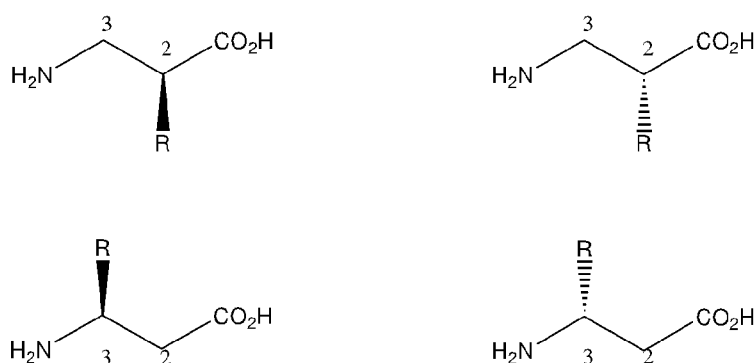
As used herein, the term "transaminase" or "amino transferase" refers to an enzyme which catalyses the transfer of an amino group from an amino donor to an amino acceptor, for example, from an amino acid to an α -keto acid. This enzyme class can be divided into four subgroups based on sequence alignment (Mehta et al., 1993). Enzymes in subgroups I, III and IV transfer the amino group bonded to an α -carbon of amino acids. Transaminases in subgroup II can transfer the amino group from a carbon atom that does not bear a carboxyl group. Transaminases in subgroup II are often referred to as ω -amino acid transaminases. In a preferred embodiment, the polypeptides of the invention are ω -amino acid transaminases. For a review of ω -amino acid transaminases see Malik et al. (2012).

As used herein "ω-amino acid transaminases" refers to transaminases that catalyse transfer of a non α-amino group from an amino donor to an amino acceptor. Such transferases typically have greater substrate specificity and may also be capable of transferring an amino group from an amine compound to a compound comprising a carbonyl group, for example, to a keto acid, a ketone, or an aldehyde.

As used herein, the term "α-amino acid" refers to a compound having an amino or amine group (NH₂) and a carboxyl group (COOH) in which the amino group and the carboxyl group are separated by a single carbon atom, the α-carbon atom. An α-amino acid includes naturally occurring and non-naturally occurring L-amino acids and their D-isomers.

As used herein, the term "ω-amino acid" refers to amino acids which have the amino group attached to a non α-carbon. The term is a general term that does not specify the actual position of the amino group but represents all non-α positions and therefore covers, for example, β-, γ- and δ-amino acids.

As used herein, the term "β-amino acid" refers to an amino acid that differs from an α-amino acid in that there are two (2) carbon atoms separating the carboxyl terminus and the amino terminus. The β-amino acid may be, for example, 3-aminoheptanoic acid or a derivative thereof. β-amino acids with a specific side chain can exist as the *R* or *S* enantiomers at either of the α (C2) carbon or the β (C3) carbon, resulting in a total of 4 possible isomers for any given side chain (as shown below). The side chains may be the same as those of naturally occurring α-amino acids or may be the side chains of non-naturally occurring amino acids.



Similarly, the chiral carbons of other ω-amino acids can exist as the *R* or *S* enantiomers. As would be understood in the art, as the number of carbon atoms separating the carboxyl terminus and the amino terminus increases the number of

possible isomeric forms also increases. For example, if a molecule contains two asymmetric carbons, there are up to 4 possible configurations. The possibilities continue to multiply as there are more asymmetric centers in a molecule. In general, the number of configurational isomers of a molecule can be determined by calculating 2^n , where n = the number of chiral centers in the molecule. This holds true except in cases where the molecule has meso forms.

The "amino donor" may be any compound capable of donating an amino or amine group (NH_2), for example, an amino acid or an amine compound. Amino donors include the non-chiral amino acid glycine, chiral amino acids having the S-configuration such as L-alanine or L-aspartic acid, ω -amino acids such as 3-aminopropanoic acid (β -alanine), 4-aminobutyric acid, 5-aminopentanoic acid, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoheptanoic acid, 3-aminoisobutyric acid and derivatives thereof. Amino donors, however, need not be amino acids. For example, amines such as 6-aminohexan-1-ol, Taurine, Tyramine, Cyclohexylamine, Isopropylamine, 2-aminoindan, and derivatives thereof, and diamines such as 1,4-diaminobutane, 1,5-diaminopentane, and 1,6-diaminohexane, and derivatives thereof can be used as amino donors. The amino donor may be a compound which is converted to an amino donor by an enzyme or whole cell process(es).

The carbon atoms of the amino donor can be arranged as a straight alkyl chain, a branched alkyl chain, cycloalkyl groups and aryl groups or a combination thereof.

The term "cycloalkyl" as used herein, refers to cyclic hydrocarbon groups. Suitable cycloalkyl groups include, but are not limited to, cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl.

The term "aryl" as used herein, refers to a C_6 - C_{10} aromatic hydrocarbon group, for example phenyl or naphthyl.

An "amino acid" is a compound that comprises an amino or amine (NH_2) group and a carboxyl group (COOH). Amino acids having two (2) amine groups and at least one carboxyl group can be more specifically referred to as "diamino acids". However, as used herein, the term "amino acid" will be generally understood to include diamino acids. The stereo configuration of the α -carbon is typically referred to using the D/L notation with reference to the absolute configuration of Glyceraldehyde. Alternatively, (*S*) and (*R*) designators may be used to indicate the absolute stereochemistry.

The term "non-naturally occurring amino acid" as used herein, refers to amino acids having a side chain that does not occur in nature. Examples of non-natural amino acids and derivatives include, but are not limited to, 4-aminobutyric acid, 5-

aminopentanoic acid, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoheptanoic acid, and 3-aminoisobutyric acid.

5 An "amine compound" is a compound (including straight chain, branched and cyclic compounds) that comprises a nitrogen atom connected by three sigma bonds to alkyl, aryl or alkylaryl groups or hydrogen atoms. Amines are classified as primary, secondary, or tertiary according to the number of carbons bonded directly to the nitrogen atom. Primary amines have one carbon bonded to the nitrogen. Secondary amines have two carbons bonded to the nitrogen, and tertiary amines have three
10 carbons bonded to the nitrogen. The amine compound may have one or more primary amino groups (NH_2). Amines having two primary amino groups can be more specifically referred to as "diamines". Amines having two or more primary amino groups can be more specifically referred to as polyamines. However, as used herein, the term "amine" will be generally understood to include diamines and polyamines. An
15 amine compound may be a chiral amine compound.

The "amino acceptor" may be any compound capable of accepting an amino or amine group (NH_2), for example, a compound comprising a carbonyl group ($\text{C}=\text{O}$), for example, a keto acid, a ketone, or an aldehyde. The amino acceptor may also be a compound which is converted to an amino acceptor by an enzyme or whole cell
20 process(es), such as fumaric acid (which can be converted to oxaloacetic acid), or glucose (which can be converted to pyruvate), or adipic acid (which can be converted by an adipate semialdehyde dehydrogenase to 1,6-hexanedial (adipaldehyde) and 6-oxohexanoic acid (adipate semialdehyde).

A "carbonyl group" is a functional group composed of a carbon atom double
25 bonded to an oxygen atom ($\text{C}=\text{O}$).

A "keto acid (or oxacid)" is a compound that comprises a carboxylic acid group ($-\text{COOH}$) and a ketone group ($\text{R}(\text{CO})\text{R}^1$). Keto acids include, for example, glyoxalic acid, pyruvic acid, oxaloacetic acid, and the like, as well as salts of these acids. Keto acids having two or more ketone groups and at least one carboxylic acid group can be
30 more specifically referred to as "diketo acids".

A "ketone (or alkanone)" is a compound that comprises a carbonyl group bonded to two other carbon atoms having the general formula $\text{R}(\text{CO})\text{R}^1$, where R may be the same or different to R^1 . Ketones having two ketone groups can be more specifically referred to as diketones. Ketones having two or more ketone groups can be
35 more specifically referred to as polyketones. However, as used herein, the term "ketone" will be generally understood to include diketones and polyketones.

An "aldehyde" is a compound comprising a formyl or aldehyde group (CHO) having the general formula R-CHO. The formyl group consists of a carbonyl (C=O) center bonded to hydrogen and an R group, which is H or alkyl or aryl or arylalkyl. Aldehydes differ from ketones in that the carbonyl is placed at the end of a carbon skeleton rather than between two carbon atoms. Aldehydes include, for example, glutaraldehyde (pentanedial) and glyceraldehyde. Aldehydes having two formyl groups can be more specifically referred to as "dialdehydes". Aldehydes having two or more formyl groups can be more specifically referred to as "polyaldehydes". Aldehydes having a formyl group and a carboxyl group (COOH) can be more specifically referred to as "semialdehydes". Aldehydes having a formyl group an amino or amine group (NH₂) can be more specifically referred to as "aminoaldehydes". However, as used herein, the term "aldehyde" will be generally understood to include dialdehydes, polyaldehydes semialdehydes and aminoaldehydes.

As used herein, "amino transferase activity" refers to the ability of a polypeptide to catalyse transfer of an amino group from an amino donor to an amino acceptor. Typically, the polypeptide can catalyse reversal of the transamination. The transferase reaction is divided into two half reactions: oxidative deamination of an amino donor and reductive amination of an amino acceptor. For activity, a co-factor is required and acts as an intermediate carrier of the amino group during the reaction.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:1,
- ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:1, or
- iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the substrates selected from, but not limited to, glycine, beta-alanine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoisobutyrate, putrescine, cadaverine, 3-aminocyclohexanoate, propionaldehyde, butyraldehyde, tyramine, 2-aminoindan, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, taurine, glyceraldehyde, 3-aminoheptanoic acid, cyclohexylamine, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, ethanolamine, alanine and pyruvate.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:2,
- ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:2, or
- iii) a biologically active fragment of i) or ii),

5 wherein the polypeptide has amino transferase activity on one, more or all of the substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-
10 diaminoctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

In an embodiment, the polypeptide comprises:

- 15 i) an amino acid sequence as provided in SEQ ID NO:6,
- ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:6, or
- iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the
20 substrates selected from, but not limited to, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, putrescine, cadaverine, 3-aminocyclohexanoate, propionaldehyde, butyraldehyde, tyramine, 2-aminoindan, 2-methylbenzylamine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminoctane, 1,9-diaminononane, 1,10-diaminodecane,
25 cyclohexylamine, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, cyclohexanone, dopamine, serotonin, alanine and pyruvate.

In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:7,
- ii) an amino acid sequence which is at least 40% identical, or at least 80%
30 identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:7, or
- iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic
35 acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine,

hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

5 In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:8,
- ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:8, or
- iii) a biologically active fragment of i) or ii),

10 wherein the polypeptide has amino transferase activity on one, more or all of the substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine,

15 diethylaminomalonate, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

20 In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:9,
- ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:9, or
- iii) a biologically active fragment of i) or ii),

25 wherein the polypeptide has amino transferase activity on one, more or all of the substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-

30 ornithine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

35 In an embodiment, the polypeptide comprises:

- i) an amino acid sequence as provided in SEQ ID NO:10,

ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:10, or

iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the
 5 substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-
 10 diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

In an embodiment, the polypeptide comprises:

15 i) an amino acid sequence as provided in SEQ ID NO:11,

ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:11, or

iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the
 20 substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, diethylaminomalonate, cyclohexylamine, hexamethylenediamine, 1,7-
 25 diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

In an embodiment, the polypeptide comprises:

30 i) an amino acid sequence as provided in SEQ ID NO:12,

ii) an amino acid sequence which is at least 40% identical, or at least 80% identical, or at least 90% identical, or at least 95% identical, to SEQ ID NO:12, or

iii) a biologically active fragment of i) or ii),

wherein the polypeptide has amino transferase activity on one, more or all of the
 35 substrates selected from, but not limited to, glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic

acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, diethylaminomalonate, cyclohexylamine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminohexanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

The polypeptides of the invention can be used to produce an industrial product.

As used herein, the term "industrial product" refers to a product that is manufactured on a commercial scale for human use. The industrial product may be an intermediate product that can be sold or used for production of a further product. For example, the polypeptides of the present invention may be used to produce amines which are themselves considered to be industrial products. These amines could be sold and used as building blocks for the synthesis of polyamides such as nylons (i.e., a further industrial product). The industrial product may be a mixture of products, for example, a mixture of amino acids and amines. The industrial product may be further reacted with, for example, one or more enzymes or compounds or itself, to produce another industrial product. A skilled person will appreciate that the industrial product may be a monomer that can be reacted with itself or other monomers to form a polymer.

Polynucleotides

The present invention refers to various polynucleotides.

The terms "polynucleotide", and "nucleic acid" are used interchangeably. A polynucleotide is a polymer of nucleotide monomers. A polynucleotide of the invention may be of any length and can comprise deoxyribonucleotides or ribonucleotides, or analogs thereof, or a mixture thereof. A polynucleotide of the invention may be of genomic, cDNA, semisynthetic, or synthetic origin, double-stranded or single-stranded and by virtue of its origin or manipulation: (1) is not associated with all or a portion of a polynucleotide with which it is associated in nature, (2) is linked to a polynucleotide other than that to which it is linked in nature (for example, a promoter), or (3) does not occur in nature. The following are non-limiting examples of polynucleotides: coding or non-coding regions of a gene or gene fragment, loci (locus) defined from linkage analysis, exons, introns, messenger RNA (mRNA), transfer RNA (tRNA), ribosomal RNA (rRNA), ribozymes, cDNA, recombinant polynucleotides, branched polynucleotides, plasmids, vectors, isolated DNA, isolated

RNA, chimeric DNA, nucleic acid probes, and primers. A polynucleotide may comprise modified nucleotides such as methylated nucleotides and nucleotide analogs. If present, modifications to the nucleotide structure may be imparted before or after assembly of the polymer. The sequence of nucleotides may be interrupted by non-nucleotide components. A polynucleotide may be further modified after polymerization such as by conjugation with a labeling component.

By "isolated polynucleotide" it is meant a polynucleotide which has generally been separated from the polynucleotide sequences with which it is associated or linked in its native state. Preferably, the isolated polynucleotide is at least 60% free, more preferably at least 75% free, and more preferably at least 90% free from the polynucleotide sequences with which it is naturally associated or linked.

By "exogenous polynucleotide" it is meant a polynucleotide present in a cell free expression system or a cell that does not naturally comprise the polynucleotide or a polynucleotide expressed in an altered amount or expressed at an altered rate (e.g., in the case of mRNA) compared to its native state. In an embodiment, the polynucleotide is introduced into a cell that does not naturally comprise the polynucleotide. Typically an exogenous DNA is used as a template for transcription of mRNA which is then translated into a continuous sequence of amino acid residues coding for a polypeptide of the invention within the transformed cell. In another embodiment, the polynucleotide is endogenous to the cell and its expression is altered by recombinant means, for example, an exogenous control sequence is introduced upstream of an endogenous gene of interest to enable the transformed cell to express the polypeptide encoded by the gene.

An exogenous polynucleotide of the invention includes polynucleotides which have not been separated from other components of the cell-based or cell-free expression system, in which it is present, and polynucleotides produced in said cell-based or cell-free systems which are subsequently purified away from at least some other components.

With regard to the defined polynucleotides, it will be appreciated that % identity figures higher than those provided above will encompass preferred embodiments. Thus, where applicable, in light of the minimum % identity figures, it is preferred that the polynucleotide comprises a polynucleotide sequence which is at least 50%, more preferably at least 60%, more preferably at least 65%, more preferably at least 70%, more preferably at least 75%, more preferably at least 80%, more preferably at least 85%, more preferably at least 90%, more preferably at least 91%, more preferably at least 92%, more preferably at least 93%, more preferably at least 94%, more preferably

at least 95%, more preferably at least 96%, more preferably at least 97%, more preferably at least 98%, more preferably at least 99%, more preferably at least 99.1%, more preferably at least 99.2%, more preferably at least 99.3%, more preferably at least 99.4%, more preferably at least 99.5%, more preferably at least 99.6%, more preferably at least 99.7%, more preferably at least 99.8%, and even more preferably at least 99.9% identical to the relevant nominated SEQ ID NO.

A polynucleotide of, or useful for, the present invention may selectively hybridise, under stringent conditions, to a polynucleotide defined herein. As used herein, stringent conditions are those that: (1) employ during hybridisation a denaturing agent such as formamide, for example, 50% (v/v) formamide with 0.1% (w/v) bovine serum albumin, 0.1% Ficoll, 0.1% polyvinylpyrrolidone, 50 mM sodium phosphate buffer at pH 6.5 with 750 mM NaCl, 75 mM sodium citrate at 42°C; or (2) employ 50% formamide, 5 x SSC (0.75 M NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 g/ml), 0.1% SDS and 10% dextran sulfate at 42°C in 0.2 x SSC and 0.1% SDS, and/or (3) employ low ionic strength and high temperature for washing, for example, 0.015 M NaCl/0.0015 M sodium citrate/0.1% SDS at 50°C.

Polynucleotides of the invention may possess, when compared to reference polynucleotides, one or more mutations which are deletions, insertions, or substitutions of nucleotide residues. Polynucleotides which have mutations relative to a reference sequence can be either naturally occurring (that is to say, isolated from a natural source) or synthetic (for example, by performing site-directed mutagenesis or DNA shuffling on the nucleic acid).

Recombinant Vectors

One embodiment of the present invention includes a recombinant vector, which comprises at least one polynucleotide defined herein and is capable of delivering the polynucleotide into a host cell. Recombinant vectors include expression vectors. Recombinant vectors contain heterologous polynucleotide sequences, i.e., polynucleotide sequences that are not naturally found adjacent to polynucleotides of the present invention, that are preferably derived from a species other than the species from which the polynucleotides of the present invention are derived. The vector can be either RNA or DNA, either prokaryotic or eukaryotic, and typically is a viral vector, derived from a virus, or a plasmid.

Plasmid vectors typically include additional nucleic acid sequences that provide for easy selection, amplification, and transformation in prokaryotic cells, for example,

pUC-derived vectors, pSK-derived vectors, pGEM-derived vectors, pSP-derived vectors, pBS-derived vectors, or binary vectors containing one or more T-DNA regions. Additional nucleic acid sequences include origins of replication to provide for autonomous replication of the vector, selectable marker genes, preferably encoding
5 antibiotic or herbicide resistance, unique multiple cloning sites providing for multiple sites to insert nucleic acid sequences or genes encoded in the nucleic acid construct, and sequences that enhance transformation of prokaryotic and eukaryotic cells.

"Operably linked" as used herein, refers to a functional relationship between two or more nucleic acid (e.g., DNA) segments. Typically, it refers to the functional
10 relationship of transcriptional regulatory element (promoter) to a transcribed sequence. For example, a promoter is operably linked to a coding sequence of a polynucleotide defined herein, if it stimulates or modulates the transcription of the coding sequence in an appropriate cell. Generally, promoter transcriptional regulatory elements that are
15 operably linked to a transcribed sequence are physically contiguous to the transcribed sequence, i.e., they are *cis*-acting. However, some transcriptional regulatory elements such as enhancers, need not be physically contiguous or located in close proximity to the coding sequences whose transcription they enhance.

When there are multiple promoters present, each promoter may independently be the same or different.

20 Recombinant vectors may also contain: (a) one or more secretory signals which encode signal peptide sequences, to enable an expressed polypeptide defined herein to be secreted from the cell that produces the polypeptide, or which provide for localisation of the expressed polypeptide, for example, for retention of the polypeptide in the endoplasmic reticulum (ER) in the cell, or transfer into a plastid, and/or (b)
25 contain fusion sequences which lead to the expression of nucleic acid molecules as fusion proteins. Examples of suitable signal segments include any signal segment capable of directing the secretion or localisation of a polypeptide defined herein. Recombinant vectors may also include intervening and/or untranslated sequences surrounding and/or within the nucleic acid sequence of a polynucleotide defined herein.

30 To facilitate identification of transformants, the recombinant vector desirably comprises a selectable or screenable marker gene as, or in addition to, the nucleic acid sequence of a polynucleotide defined herein. By "marker gene" is meant a gene that imparts a distinct phenotype to cells expressing the marker gene and thus, allows such transformed cells to be distinguished from cells that do not have the marker. A
35 selectable marker gene confers a trait for which one can "select" based on resistance to a selective agent (e.g., a herbicide, antibiotic, radiation, heat, or other treatment

damaging to untransformed cells). A screenable marker gene (or reporter gene) confers a trait that one can identify through observation or testing, i.e., by "screening" (e.g., β -glucuronidase, luciferase, GFP or other enzyme activity not present in untransformed cells). The marker gene and the nucleotide sequence of interest do not have to be
5 linked - co-transformation of unlinked genes is described in, for example, US 4,399,216. The actual choice of a marker is not crucial as long as it is functional (i.e., selective) in combination with the host cell.

Examples of bacterial selectable markers are markers that confer antibiotic resistance such as ampicillin, erythromycin, chloramphenicol, or tetracycline
10 resistance, preferably kanamycin resistance. Exemplary selectable markers for selection of plant transformants include, but are not limited to, a *hyg* gene which encodes hygromycin B resistance; a neomycin phosphotransferase (*nptII*) gene conferring resistance to kanamycin, paromomycin, G418; a glutathione-S-transferase gene from rat liver conferring resistance to glutathione derived herbicides as, for
15 example, described in EP 256223; a glutamine synthetase gene conferring, upon overexpression, resistance to glutamine synthetase inhibitors such as phosphinothricin as, for example, described in WO 87/05327; an acetyltransferase gene from *Streptomyces viridochromogenes* conferring resistance to the selective agent phosphinothricin as, for example, described in EP 275957; a gene encoding a 5-
20 enolshikimate-3-phosphate synthase (EPSPS) conferring tolerance to N-phosphonomethylglycine as, for example, described by Hinchee et al. (1988); a *bar* gene conferring resistance against bialaphos as, for example, described in WO 91/02071; a nitrilase gene such as *bxn* from *Klebsiella ozaenae* which confers resistance to bromoxynil (Stalker et al., 1988); a dihydrofolate reductase (DHFR) gene
25 conferring resistance to methotrexate (Thillet et al., 1988); a mutant acetolactate synthase gene (ALS) which confers resistance to imidazolinone, sulfonylurea, or other ALS-inhibiting chemicals (EP 154,204); a mutated anthranilate synthase gene that confers resistance to 5-methyl tryptophan; or a dalapon dehalogenase gene that confers resistance to the herbicide.

30 Preferred screenable markers include, but are not limited to, a *uidA* gene encoding a β -glucuronidase (GUS) enzyme for which various chromogenic substrates are known; a β -galactosidase gene encoding an enzyme for which chromogenic substrates are known; an aequorin gene (Prasher et al., 1985) which may be employed in calcium-sensitive bioluminescence detection; a green fluorescent protein gene
35 (Niedz et al., 1995) or derivatives thereof; or a luciferase (*luc*) gene (Ow et al., 1986) which allows for bioluminescence detection. By "reporter molecule" it is meant a

molecule that, by its chemical nature, provides an analytically identifiable signal that facilitates determination of promoter activity by reference to protein product.

Preferably, the recombinant vector is stably incorporated into the genome of the cell. Accordingly, the recombinant vector may comprise appropriate elements which
5 allow the vector to be incorporated into the genome, or into a chromosome of the cell.

Expression Vector

As used herein, an "expression vector" is a DNA or RNA vector that is capable of transforming a host cell and of effecting expression of one or more specified
10 polynucleotides. Preferably, the expression vector is also capable of replicating within the host cell. Expression vectors can be either prokaryotic or eukaryotic, and are typically viruses or plasmids. Expression vectors of the present invention include any vectors that function (i.e., direct gene expression) in host cells of the present invention, including in bacterial, fungal, endoparasite, arthropod, animal, plant and algal cells.
15 Particularly preferred expression vectors of the present invention can direct gene expression in bacterial or fungal cells.

Expression vectors of the present invention contain regulatory sequences such as transcription control sequences, translation control sequences, origins of replication, and other regulatory sequences that are compatible with the host cell and that control
20 the expression of polynucleotides of the present invention. In particular, expression vectors of the present invention include transcription control sequences. Transcription control sequences are sequences which control the initiation, elongation, and termination of transcription. Particularly important transcription control sequences are those which control transcription initiation such as promoter, enhancer, operator and
25 repressor sequences. Suitable transcription control sequences include any transcription control sequence that can function in a host cell of the present invention. The choice of the regulatory sequences used depends on the host cell. Such regulatory sequences may be obtained from any eukaryotic organism, or may be chemically synthesized. A variety of such transcription control sequences are known to those skilled in the art.

Preferred transcription control sequences include those which function in
30 bacterial, fungal, arthropod, nematode, plant or mammalian cells, such as, but not limited to, *tac*, *lac*, *trp*, *trc*, *oxy-pro*, *omp/lpp*, *rrnB*, bacteriophage lambda, bacteriophage T7, T7lac, bacteriophage T3, bacteriophage SP6, bacteriophage SP01, metallothionein, alpha-mating factor, *Pichia* alcohol oxidase, alphavirus subgenomic
35 promoters (such as Sindbis virus subgenomic promoters), antibiotic resistance gene, baculovirus, *Heliothis zea* insect virus, vaccinia virus, herpesvirus, raccoon poxvirus,

other poxvirus, adenovirus, cytomegalovirus (such as intermediate early promoters), simian virus 40, retrovirus, actin, retroviral long terminal repeat, Rous sarcoma virus, heat shock, phosphate and nitrate transcription control sequences, as well as other sequences capable of controlling gene expression in prokaryotic or eukaryotic cells.

- 5 The 5' non-translated leader sequence can be derived from the promoter selected to express the heterologous gene sequence of the polynucleotide of the present invention, or may be heterologous with respect to the coding region of the enzyme to be produced, and can be specifically modified if desired so as to increase translation of mRNA. For a review of optimizing expression of transgenes, see Koziel et al. (1996).
- 10 The present invention is not limited to constructs wherein the non-translated region is derived from the 5' non-translated sequence that accompanies the promoter sequence. The leader sequence could also be derived from an unrelated promoter or coding sequence.

- 15 The termination of transcription is accomplished by a 3' non-translated DNA sequence operably linked in the expression vector to the polynucleotide of interest. The 3' non-translated region of a recombinant DNA molecule contains a polyadenylation signal that functions in the host cell to cause the addition of adenylate nucleotides to the 3' end of the RNA.

- 20 Recombinant DNA technologies can be used to improve expression of a transformed polynucleotide by manipulating for example, the number of copies of the polynucleotide within a host cell, the efficiency with which those polynucleotide are transcribed, the efficiency with which the resultant transcripts are translated, and the efficiency of post-translational modifications. Recombinant techniques useful for increasing the expression of polynucleotides defined herein include, but are not limited to, operatively linking the polynucleotide to a high-copy number plasmid, integration of
- 25 the polynucleotide molecule into one or more host cell chromosomes, addition of vector stability sequences to the plasmid, substitutions or modifications of transcription control signals (e.g., promoters, operators, enhancers), substitutions or modifications of translational control signals (e.g., ribosome binding sites, Shine-Dalgarno sequences),
- 30 modification of the polynucleotide to correspond to the codon usage of the host cell, and the deletion of sequences that destabilize transcripts.

Host and Recombinant Cells

- 35 As used herein, the term "host cell" refers to a cell capable of being transformed with an exogenous polynucleotide of the invention. Once transformed, the host cell can be referred to as a "recombinant cell" or "transgenic cell".

The term "recombinant cell" includes direct or indirect progeny cells thereof comprising the polynucleotide.

Transformation of a polynucleotide into a host cell can be accomplished by any method by which a polynucleotide can be inserted into the cell. Transformation techniques include, but are not limited to, transfection, electroporation, microinjection, lipofection, adsorption, and protoplast fusion.

A recombinant cell may remain unicellular or may grow into a tissue, organ or a multicellular organism. Transformed polynucleotides of the present invention can remain extrachromosomal or can integrate into one or more sites within a chromosome of the transformed (i.e., recombinant) cell in such a manner that their ability to be expressed is retained.

The recombinant cell may be a cell in culture, a cell *in vitro*, or in an organism or part thereof. In one embodiment, the recombinant cell is a non-human cell.

Suitable host cells to transform include any cell that can be transformed with a polynucleotide of the present invention. Host cells of the present invention can either be endogenously (i.e., naturally) capable of producing polypeptides of the present invention or can be capable of producing such polypeptides after being transformed with at least one polynucleotide of the present invention. Host cells of the present invention can be any cell capable of producing at least one protein of the present invention, and include bacterial, fungal (including yeast such as *Candida sp.* and *Saccharomyces*), filamentous fungal cells (such as *Penicillium* and *Aspergillus*), parasite, nematode, arthropod, animal and plant cells. Examples of host cells include *Salmonella*, *Escherichia*, *Bacillus*, *Listeria*, *Pseudomonas*, *Saccharomyces*, *Spodoptera*, *Mycobacteria*, *Trichoplusia*, BHK (baby hamster kidney) cells, MDCK cells, CRFK cells, CV-1 cells, COS (e.g., COS-7) cells, and Vero cells. Further examples of host cells are *E. coli*, including *E. coli* K-12 derivatives; *Salmonella typhi*; *Salmonella typhimurium*, including attenuated strains; *Spodoptera frugiperda*; *Trichoplusia ni*; and non-tumorigenic mouse myoblast G8 cells (e.g., ATCC CRL 1246).

Particularly preferred host cells are *E. coli*, *Pseudomonas*, *Bacillus*, *Candida sp.*, *Saccharomyces*, *Penicillium* and *Aspergillus*.

Transgenic Non-Human Organism

The term "transgenic non-human organism" refers to, for example, a non-human animal, plant, or a fungus comprising an exogenous polynucleotide (transgene) or a recombinant polypeptide of the invention.

A "transgene" is a gene that has been introduced into the genome by a transformation procedure. The term includes a gene in a cell or non-human organism or part thereof which was introduced into the genome of a progenitor cell thereof. Progeny of a cell or non-human organism may be at least a 3rd or 4th generation of the progenitor cell or non-human organism. Progeny may be produced by sexual reproduction or vegetatively such as, for example, from tubers in potatoes or ratoons in sugarcane. The term "genetically modified", and variations thereof, is a broader term that includes introducing a gene into a cell by transformation or transduction, mutating a gene in a cell and genetically altering or modulating the regulation of a gene in a cell, or the progeny of any cell modified as described above.

As used herein, the term "wild-type" or variations thereof refers to a cell, or non-human organism or part thereof that has not been genetically modified.

Transgenic Plants

The term "plant" as used herein refers to whole plants, such as, for example, a plant growing in a field, and any substance which is present in, obtained from, derived from, or related to a plant, such as, for example, vegetative structures (e.g., leaves, stems), roots, floral organs/structures, seeds (including embryo, endosperm, and seed coat), plant tissue (e.g., vascular, tissue, ground tissue, and the like), cells (e.g., pollen), and progeny thereof.

Plants contemplated for use in the practice of the present invention include both monocotyledons and dicotyledons. Target plants include, but are not limited to, the following: cereals (wheat, barley, rye, oats, rice, sorghum, triticale, and related crops); beet (sugar beet and fodder beet); pomes (apples, pears), stone fruit (plums, peaches, almonds, cherries), tropical fruit (bananas, pineapple, pawpaws) and soft fruit (cherries, strawberries, raspberries and black-berries); leguminous plants (beans, lentils, peas, soybeans, lucerne, lupins); oil plants (rape, mustard, poppy, olives, sunflowers, coconut, castor oil plants, cocoa beans, groundnuts); cucumber plants (marrows, cucumbers, melons); fibre plants (cotton, cotton defoliant, flax, hemp, jute); citrus fruit (oranges, lemons, grapefruit, mandarins); vegetables (spinach, lettuce, asparagus, cabbages, carrots, onions, tomatoes, potatoes, paprika); lauraceae (avocados, cinnamon, camphor); or plants such as maize, tobacco, nuts, coffee, sugar cane, tea, vines, hops, turf including perennial grass and the phalaris cultivars sirolan and sirone, and natural rubber plants, as well as ornamentals (flowers such as daffodils, gladioli and tulips, shrubs such as Duboisia, broad-leaved trees and evergreens, such as conifers). Preferably, the plants are angiosperms.

Transgenic plants, as defined in the context of the present invention include plants (as well as parts and cells of said plants) and their progeny which have been genetically modified using recombinant techniques to cause production of at least one polypeptide of the present invention in the desired plant or plant organ. Transgenic plants can be produced using techniques known in the art, such as those generally described in A. Slater et al., *Plant Biotechnology - The Genetic Manipulation of Plants*, Oxford University Press (2003); and P. Christou and H. Klee, *Handbook of Plant Biotechnology*, John Wiley and Sons (2004).

In a preferred embodiment of the invention, the transgenic plants are homozygous for each and every gene that has been introduced (transgene) so that their progeny do not segregate for the desired phenotype. The transgenic plants may also be heterozygous for the introduced transgene(s), such as, for example, in F1 progeny which have been grown from hybrid seed. Such plants may provide advantages such as hybrid vigour, well known in the art.

A polynucleotide of the present invention may be expressed constitutively in the transgenic plants during all stages of development. Depending on the use of the plant or plant organs, the polypeptides may be expressed in a stage-specific manner. Furthermore, the polynucleotides may be expressed tissue-specifically.

Regulatory sequences which are known or are found to cause expression of a gene encoding a polypeptide of interest in plants may be used in the present invention. The choice of the regulatory sequences used depends on the target plant and/or target organ of interest. Such regulatory sequences may be obtained from plants or plant viruses, or may be chemically synthesized. Such regulatory sequences are well known to those skilled in the art.

A number of vectors suitable for stable transfection of plant cells or for the establishment of transgenic plants have been described in, for example, Pouwels et al., *Cloning Vectors: A Laboratory Manual* (1985, supp. 1987); Weissbach and Weissbach, *Methods for Plant Molecular Biology*, Academic Press (1989); and Gelvin et al., *Plant Molecular Biology Manual*, Kluwer Academic Publishers (1990). Typically, plant expression vectors include, for example, one or more cloned plant genes under the transcriptional control of 5' and 3' regulatory sequences and a dominant selectable marker. Such plant expression vectors can also contain a promoter regulatory region (e.g., a regulatory region controlling inducible or constitutive, environmentally- or developmentally-regulated, or cell- or tissue-specific expression), a transcription initiation start site, a ribosome binding site, an RNA processing signal, a transcription termination site, and/or a polyadenylation signal.

A number of constitutive promoters that are active in plant cells have been described. Suitable promoters for constitutive expression in plants include, but are not limited to, the cauliflower mosaic virus (CaMV) 35S promoter, the Figwort mosaic virus (FMV) 35S, the sugarcane bacilliform virus promoter, the commelina yellow mottle virus promoter, the light-inducible promoter from the small subunit of the ribulose-1,5-bis-phosphate carboxylase, the rice cytosolic triosephosphate isomerase promoter, the adenine phosphoribosyltransferase promoter of *Arabidopsis*, the rice actin 1 gene promoter, the mannopine synthase and octopine synthase promoters, the Adh promoter, the sucrose synthase promoter, the R gene complex promoter, and the chlorophyll α/β binding protein gene promoter. These promoters have been used to create DNA vectors that have been expressed in plants; see for example, PCT publication WO 84/02913. All of these promoters have been used to create various types of plant-expressible recombinant DNA vectors.

The 5' non-translated leader sequence can be derived from the promoter selected to express the heterologous gene sequence of the polynucleotide of the present invention, and can be specifically modified if desired so as to increase translation of mRNA. For a review of optimizing expression of transgenes, see Koziel et al. (1996). The 5' non-translated regions can also be obtained from plant viral RNAs (tobacco mosaic virus, tobacco etch virus, maize dwarf mosaic virus, alfalfa mosaic virus, among others) from suitable eukaryotic genes, plant genes (wheat and maize chlorophyll a/b binding protein gene leader), or from a synthetic gene sequence. The present invention is not limited to constructs wherein the non-translated region is derived from the 5' non-translated sequence that accompanies the promoter sequence. The leader sequence could also be derived from an unrelated promoter or coding sequence. Leader sequences useful in context of the present invention comprise the maize Hsp70 leader (see US 5,362,865 and US 5,859,347), and the TMV omega element.

The termination of transcription is accomplished by a 3' non-translated DNA sequence operably linked in the chimeric vector to the polynucleotide of interest. The 3' non-translated region of a recombinant DNA molecule contains a polyadenylation signal that functions in plants to cause the addition of adenylate nucleotides to the 3' end of the RNA. The 3' non-translated region can be obtained from various genes that are expressed in plant cells. The nopaline synthase 3' untranslated region, the 3' untranslated region from pea small subunit Rubisco gene, the 3' untranslated region from soybean 7S seed storage protein gene are commonly used in this capacity. The 3'

transcribed, non-translated regions containing the polyadenylate signal of *Agrobacterium* tumor-inducing (Ti) plasmid genes are also suitable.

Four general methods for direct delivery of a gene into cells have been described: (1) chemical methods (Graham et al., 1973); (2) physical methods such as microinjection (Capecchi, 1980); electroporation (see WO 87/06614, US 5,472,869, 5,384,253, WO 92/09696 and WO 93/21335); and the gene gun (see US 4,945,050 and US 5,141,131); (3) viral vectors (Clapp, 1993; Lu et al., 1993; Eglitis et al., 1988); and (4) receptor-mediated mechanisms (Curiel et al., 1992; Wagner et al., 1992).

To confirm the presence of the transgenes in transgenic cells and plants, a polymerase chain reaction (PCR) amplification or Southern blot analysis can be performed using methods known to those skilled in the art. Expression products of the transgenes can be detected in any of a variety of ways, depending upon the nature of the product, and include Western blot and enzyme assay. One particularly useful way to quantitate protein expression and to detect replication in different plant tissues is to use a reporter gene, such as GUS. Once transgenic plants have been obtained, they may be grown to produce plant tissues or parts having the desired phenotype. The plant tissue or plant parts, may be harvested, and/or the seed collected. The seed may serve as a source for growing additional plants with tissues or parts having the desired characteristics.

20

Transgenic Non-Human Animals

A "transgenic non-human animal" refers to an animal, other than a human, that contains a gene construct ("transgene") not found in a wild-type animal of the same species or breed. Techniques for producing transgenic animals are well known in the art. A useful general textbook on this subject is Houdebine, Transgenic animals – Generation and Use, Harwood Academic (1997).

Heterologous DNA can be introduced, for example, into fertilized mammalian ova. For instance, totipotent or pluripotent stem cells can be transformed by microinjection, calcium phosphate mediated precipitation, liposome fusion, retroviral infection or other means. The transformed cells are then introduced into the embryo, and the embryo then develops into a transgenic animal. In a highly preferred method, developing embryos are infected with a retrovirus containing the desired DNA, and transgenic animals produced from the infected embryo. In a most preferred method, however, the appropriate DNAs are coinjected into the pronucleus or cytoplasm of embryos, preferably at the single cell stage, and the embryos allowed to develop into mature transgenic animals.

35

Another method used to produce a transgenic animal involves microinjecting a nucleic acid into pro-nuclear stage eggs by standard methods. Injected eggs are then cultured before transfer into the oviducts of pseudopregnant recipients.

Transgenic animals may also be produced by nuclear transfer technology.

- 5 Using this method, fibroblasts from donor animals are stably transfected with a plasmid incorporating the coding sequences for a binding domain or binding partner of interest under the control of regulatory sequences. Stable transfectants are then fused to enucleated oocytes, cultured and transferred into female recipients.

10 Compositions

- Compositions of the present invention can include a carrier. The carrier may be solid or liquid. Useful examples of carriers include, but are not limited to, diluents, solvents, surfactants, excipients, suspending agents, buffering agents, lubricating agents, adjuvants, vehicles, emulsifiers, absorbants, dispersion media, coatings, stabilizers, protective colloids, adhesives, thickeners, thixotropic agents, penetration agents, sequestering agents, isotonic and absorption delaying agents that do not affect the activity of the active agents of the disclosure.

- Examples of excipients include water, saline, Ringer's solution, dextrose solution, Hank's solution, and other aqueous physiologically balanced salt solutions. Nonaqueous vehicles, such as fixed oils, sesame oil, ethyl oleate, or triglycerides may also be used. Other useful formulations include suspensions containing viscosity enhancing agents, such as sodium carboxymethylcellulose, sorbitol, or dextran. Excipients can also contain minor amounts of additives, such as substances that enhance isotonicity and chemical stability.

- 25 Examples of buffers include phosphate buffer, bicarbonate buffer and Tris buffer, while examples of preservatives include thimerosal or o-cresol, formalin and benzyl alcohol. Excipients can also be used to increase the half-life of a composition, for example, but are not limited to, polymeric controlled release vehicles, biodegradable implants, liposomes, bacteria, viruses, other cells, oils, esters, and glycols.

- 30 Furthermore, a polypeptide described herein can be provided in a composition that enhances the rate and/or degree of amino transferase activity, or increases the stability of the polypeptide. For example, the polypeptide can be immobilized on a polyurethane matrix (Gordon et al., 1999), or encapsulated in appropriate liposomes (Petrikovics et al., 2000a and b). The polypeptide can also be incorporated into a composition comprising a foam, such as those used routinely in fire-fighting (LeJeune et al., 1998).

One embodiment of the present invention is a controlled release formulation that is capable of slowly releasing a composition of the present invention. As used herein, a "controlled release formulation" comprises a composition of the present invention in a controlled release vehicle. Suitable controlled release vehicles include, but are not limited to, biocompatible polymers, other polymeric matrices, capsules, microcapsules, microparticles, bolus preparations, osmotic pumps, diffusion devices, liposomes, lipospheres, and transdermal delivery systems. Preferred controlled release formulations are biodegradable (i.e., bioerodible).

The concentration of the polypeptide, vector, bacteria, extract, or host cell etc., of the present invention that will be required to produce effective compositions for catalysing transfer of an amino group from an amino donor to an amino acceptor will depend on the nature of the substrate, the concentration of the substrate, and the formulation of the composition. The effective concentration of the polypeptide, vector, bacteria, extract, or host cell etc., within the composition can readily be determined experimentally, as will be understood by the skilled person.

As used herein, the term "extract" refers to a composition comprising one or more components obtained from a cell, cell free system, culture medium, or non-human organism of the invention. The extract comprises a polypeptide of the invention. The term "extract" is also intended to cover supernatant that comprises a secreted form of a polypeptide of the invention.

Antibodies

The term "antibody" as used in this invention includes polyclonal antibodies, monoclonal antibodies, bispecific antibodies, diabodies, triabodies, heteroconjugate antibodies, chimeric antibodies including intact molecules as well as fragments thereof, such as Fab, F(ab')₂, and Fv which are capable of binding the epitopic determinant, and other antibody-like molecules.

Antibody fragments retain some ability to selectively bind with its antigen and are defined as follows:

(1) Fab, the fragment which contains a monovalent antigen-binding fragment of an antibody molecule can be produced by digestion of whole antibody with the enzyme papain to yield an intact light chain and a portion of one heavy chain;

(2) Fab', the fragment of an antibody molecule can be obtained by treating whole antibody with pepsin, followed by reduction, to yield an intact light chain and a portion of the heavy chain; two Fab' fragments are obtained per antibody molecule;

(3) (Fab')₂, the fragment of the antibody that can be obtained by treating whole antibody with the enzyme pepsin without subsequent reduction; F(ab)₂ is a dimer of two Fab' fragments held together by two disulfide bonds;

5 (4) Fv, defined as a genetically engineered fragment containing the variable region of the light chain and the variable region of the heavy chain expressed as two chains; and

(5) Single chain antibody ("SCA"), defined as a genetically engineered molecule containing the variable region of the light chain, the variable region of the heavy chain, linked by a suitable polypeptide linker as a genetically fused single chain
10 molecule.

Methods of making these fragments are known in the art (see for example, Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, New York (1988)).

(6) Single domain antibody, typically a variable heavy domain devoid of a
15 light chain.

The term "specifically binds" refers to the ability of the antibody to bind to at least one polypeptide of the present invention but not other known proteins.

As used herein, the term "epitope" refers to a region of a polypeptide of the invention which is bound by the antibody. An epitope can be administered to an
20 animal to generate antibodies against the epitope, however, antibodies of the present invention preferably specifically bind the epitope region in the context of the entire polypeptide.

If polyclonal antibodies are desired, a selected mammal (e.g., mouse, rabbit, goat, horse, etc.) is immunised with an immunogenic polypeptide of the invention.
25 Serum from the immunised animal is collected and treated according to known procedures. If serum containing polyclonal antibodies contains antibodies to other antigens, the polyclonal antibodies can be purified by immunoaffinity chromatography. Techniques for producing and processing polyclonal antisera are known in the art. In order that such antibodies may be made, the invention also provides polypeptides of the
30 invention or fragments thereof haptenised to another polypeptide for use as immunogens in animals.

Monoclonal antibodies directed against polypeptides of the invention can also be readily produced by one skilled in the art. The general methodology for making monoclonal antibodies by hybridomas is well known. Immortal antibody-producing
35 cell lines can be created by cell fusion, and also by other techniques such as direct transformation of B lymphocytes with oncogenic DNA, or transfection with Epstein-

Barr virus. Panels of monoclonal antibodies produced can be screened for various properties; i.e., for isotype and epitope affinity.

5 An alternative technique involves screening phage display libraries where, for example the phage express scFv fragments on the surface of their coat with a large variety of complementarity determining regions (CDRs). This technique is well known in the art.

Other techniques for producing antibodies of the invention are known in the art.

10 Antibodies of the invention may be bound to a solid support and/or packaged into kits in a suitable container along with suitable reagents, controls, instructions and the like.

In an embodiment, antibodies of the present invention are detectably labeled. Exemplary detectable labels that allow for direct measurement of antibody binding include radiolabels, fluorophores, dyes, magnetic beads, chemiluminescers, colloidal particles, and the like. Examples of labels which permit indirect measurement of
15 binding include enzymes where the substrate may provide for a coloured or fluorescent product. Additional exemplary detectable labels include covalently bound enzymes capable of providing a detectable product signal after addition of suitable substrate. Examples of suitable enzymes for use in conjugates include horseradish peroxidase, alkaline phosphatase, malate dehydrogenase and the like. Where not commercially
20 available, such antibody-enzyme conjugates are readily produced by techniques known to those skilled in the art. Further, exemplary detectable labels include biotin, which binds with high affinity to avidin or streptavidin; fluorochromes (e.g., phycobiliproteins, phycoerythrin and allophycocyanins; fluorescein and Texas red), which can be used with a fluorescence activated cell sorter; haptens; and the like.
25 Preferably, the detectable label allows for direct measurement in a plate luminometer, for example, biotin. Such labeled antibodies can be used in techniques known in the art to detect polypeptides of the invention.

Identification of Amino Transferases and Compounds that bind thereto

30 *Enhanced Amino Transferase Activity or Altered Substrate Specificity*

In one aspect, the invention provides a method for identifying an acyltransferase having enhanced ability to catalyse the transfer of an amino group from an amino acid or an amine compound to an amino acceptor, or altered substrate specificity.

35 The method comprises altering one or more amino acids of a polypeptide of the invention. Mutants may be engineered using standard procedures in the art (see above) such as by introducing appropriate nucleotide changes into a nucleic acid defined

herein, or by *in vitro* synthesis of the desired polypeptide. Mutant polypeptides can readily be screened using techniques described herein to determine if they possess amino transferase activity, for example, using a coupled dehydrogenase assay (Bernt and Bergmeyer, 1974).

5 For example, a polynucleotide comprising a sequence as shown in any one or more of SEQ ID NOs:3 to 5, or 14 to 20 which encodes an amino transferase may be mutated and/or recombined at random to create a large library of gene variants (mutants) using for example, error-prone PCR and/or DNA shuffling. Mutants may be selected for further investigation on the basis that they comprise a conserved amino
10 acid motif.

Direct PCR sequencing of the nucleic acid or a fragment thereof may be used to determine the exact nucleotide sequence and deduce the corresponding amino acid sequence and thereby identify conserved amino acid sequences. Degenerate primers based on conserved amino acid sequences may be used to direct PCR amplification.
15 Degenerate primers can also be used as probes in DNA hybridization assays. Alternatively, the conserved amino acid sequence(s) may be detected in protein hybridization assays that utilize for example, an antibody that specifically binds to the conserved amino acid sequences(s), or a substrate that specifically binds to the conserved amino acid sequences(s).

20 A cell comprising a nucleic acid molecule encoding an amino transferase operably linked to a promoter which is active in the cell may be obtained using standard procedures in the art such as by introducing the nucleic acid molecule into a cell by, for example, calcium phosphate precipitation, polyethylene glycol treatment, electroporation, and combinations of these treatments. Other methods of cell
25 transformation can also be used and include, but are not limited to, the introduction of DNA into plants by direct DNA transfer or injection. Transformed plant cells may also be obtained using *Agrobacterium*-mediated transfer and acceleration methods as described herein.

The method further comprises determining if the amino transferase activity is
30 increased when compared to the parent unaltered polypeptide using known techniques in the art. For example, using the coupled assays described previously, HPLC, NMR, or mass spectrometry.

As used herein "compared with" refers to comparing levels of the amino transferase activity of an altered polypeptide or a cell or a transgenic non-human
35 organism expressing the altered polypeptide with a polypeptide, cell or transgenic non-human organism of the invention.

Three Dimensional Structure of a Polypeptide of the Invention

As used herein, the term "crystal" means a structure (such as a three dimensional (3D) solid aggregate) in which the plane faces intersect at definite angles and in which there is a regular structure (such as internal structure) of the constituent chemical species. The term "crystal" refers in particular to a solid physical crystal form such as an experimentally prepared crystal.

It will be understood that any reference herein to the atomic coordinates or subset of the atomic coordinates shown in Appendix I shall include, unless specified otherwise, atomic coordinates having a root mean square deviation of backbone atoms of not more than 1.5 Å, preferably not more than 1 Å, when superimposed on the corresponding backbone atoms described by the atomic coordinates shown in Appendix I. The following defines what is intended by the term "root mean square deviation (RMSD)" between two data sets. For each element in the first data set, its deviation from the corresponding item in the second data set is computed. The squared deviation is the square of that deviation, and the mean squared deviation is the mean of all these squared deviations. The root mean square deviation is the square root of the mean squared deviation. Preferred variants are those in which the RMSD of the x, y and z coordinates for all backbone atoms other than hydrogen is less than 1.5 Å (preferably less than 1 Å, 0.7 Å or less than 0.3 Å) compared with the coordinates given in Appendix I. It will be readily appreciated by those skilled in the art that a 3D rigid body rotation and/or translation of the atomic coordinates does not alter the structure of the molecule concerned.

The three-dimensional structure of a polypeptide of the invention, such as SEQ ID NO:1 or SEQ ID NO:2, can be used in a method of the invention such as a computer-assisted method of identifying a compound (for example, a substrate, a co-factor, an antagonist or an agonist) that binds a polypeptide as defined herein.

For example, substrates, co-factors, antagonists or agonists can be identified through the use of computer modeling using a docking program such as GRAM, DOCK, or AUTODOCK (Dunbrack et al., 1997). Computer programs can also be employed to estimate the attraction, repulsion, and steric hindrance of a candidate compound to the polypeptide. For example, when trying to identify a substrate (i.e., an amino donor or amino acceptor) of a polypeptide defined herein, docking studies can be used to assess the level of steric interference in the binding pocket(s) of the enzyme. Generally the tighter the fit (e.g., the lower the steric hindrance, and/or the greater the attractive force) the more likely the compound is a substrate.

The three-dimensional structure of a polypeptide of the invention, such as SEQ ID NO:1 or SEQ ID NO:2, can also be used to identify other amino transferases. For example, homology modelling, also known as comparative modelling of a protein, can be used to construct a three-dimensional structural model of a candidate polypeptide from its amino acid sequence (query sequence). This model can be used to assess the likelihood that a polypeptide sequence encodes an amino transferase. The three-dimensional structure of a polypeptide of the invention, such as SEQ ID NO:1 or SEQ ID NO:2, can also be used to develop an *in silico* method for sequence based prediction of substrate specificity. Identification of key amino acids residues responsible for the desired activity can be followed by exploration of public databases to identify candidate enzymes carrying the desired amino acid substitutions.

The three-dimensional structure of a polypeptide of the invention, such as SEQ ID NO:1 or SEQ ID NO:2, can also be used to redesign substrate specificity of the transferase. Binding pockets of the transferase can be re-designed by using a combination of *in silico* modelling, site-saturated mutagenesis and directed evolution.

For most types of models, standard molecular force fields, representing the forces between constituent atoms and groups, are necessary, and can be selected from force fields known in physical chemistry. Exemplary force fields that are known in the art and can be used in such methods include, but are not limited to, the Constant Valence Force Field (CVFF), the AMBER force field and the CHARMM force field. The incomplete or less accurate experimental structures can serve as constraints on the complete and more accurate structures computed by these modeling methods.

Further examples of molecular modeling systems are the CHARMM and QUANTA programs (Polygen Corporation, Waltham, MA). CHARMM performs the energy minimization and molecular dynamics functions. QUANTA performs the construction, graphic modeling and analysis of molecular structure. QUANTA allows interactive construction, modification, visualization, and analysis of the behaviour of molecules with each other.

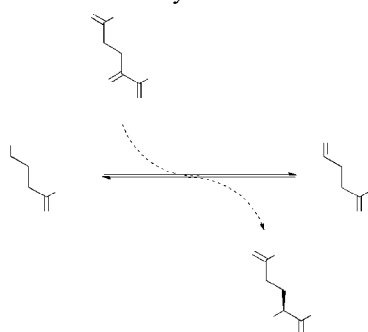
As used herein, a "subset" of the atomic coordinates provided in Appendix I refers to a group of the co-ordinates which can be used in a method of the invention such as a computer-assisted method of identifying a compound (for example, a substrate, a co-factor, an antagonist or an agonist) that binds p6 or a polypeptide defined herein, or a computer-assisted method for identifying other amino transferases or for redesigning substrate specificity of the transferase.

EXAMPLES

Background

The long chain amino acids (e.g., C9-12) that are needed for nylon manufacture are not abundant in nature, with no clear physiological role for these molecules.

- 5 Literature searches to identify biocatalysts for these substrates were also unsuccessful. Of relevance in this area, however, was the ability of omega-transaminases such as the well characterised GabT (Gamma-aminobutyrate Transaminase; E.C. 2.6.1.19) to produce short chain omega-amino acids (C4-C7 reported) from aliphatic carboxylic acid semialdehydes as shown below.



10

Gamma-aminobutyrate, the substrate for GabT, is an important neurotransmitter in the mammalian central nervous system, and as a result, both the molecule and protein have been the subjects of extensive medical research, affording a wealth of information in the area, but leaving biocatalytic potential unexplored.

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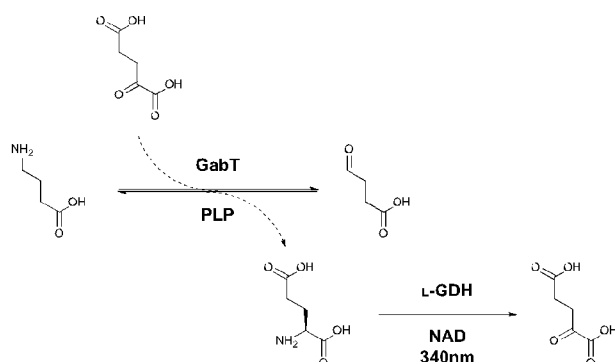
DNA encoding the GabT protein from *E. coli* strain BL21-DE3 was amplified from genomic DNA using specially designed primers. The PCR product was restricted using NdeI and BamHI restriction endonucleases (NEB) and ligated (T4 DNA ligase, NEB) into a modified pET expression vector that had also been restricted using the aforementioned enzymes, and contained ampicillin resistance for selectivity. The vector was transformed into electrocompetent *E. coli* strain BL21-DE3 and transformants plated onto LB agar plates containing ampicillin (100 µg/mL) for selectivity. Transformant DNA was isolated and sent for sequencing to confirm the identity of the vector construct. Following DNA sequencing, overexpression of GabT was achieved in LB media containing ampicillin (100 µg/mL) and induction using IPTG (Isopropyl β-D-1-thiogalactopyranoside; 1 mM final concentration). The protein was purified using a HiTrap Chelating HP 5 mL column (GE Healthcare) for nickel affinity chromatography on an FPLC (Fast Protein Liquid Chromatography, GE

20

25

Healthcare), exploiting an N-terminal His₆-tag on GabT. SDS-PAGE confirmed the protein size.

Protein activity was confirmed using a coupled assay that comprised GabT and a commercially available glutamate dehydrogenase (GDH; Sigma Aldrich). The assay works as illustrated below, with the dehydrogenase catalysing the oxidative deamination of glutamate - the co-product of the GabT transamination reaction. The deamination requires the use of a cofactor, NAD (nicotinamide adenine dinucleotide), which is concurrently reduced by the enzyme to NADH, and the formation of this reduced product can be detected by UV photospectrometry as a hyperchromic shift at 340 nm.



This assay was used to determine the substrate scope of GabT, which was ultimately shown to be C4-C8 omega-amino acids. Therefore, although a viable biocatalyst for these substrates had been identified, it could not produce the desired longer chain (>C9) products. With this in mind, a new strategy was adopted.

Bioprospecting

In order to test for activity, bacterial strains were grown on minimal media containing no source of nitrogen other than supplemented ω -amino alkanoates (e.g. 8-amino octanoic acid, 11-amino undecanoic acid and 12-aminododecanoic acid) covering a range of carbon chain lengths (C4-C12). The bacteria were incubated for several days at 37°C and monitored regularly for colony formation on the surface of the agar. Without nitrogen, the bacteria would be unable to grow, and as such, any colonies on the plates would be indicative of a strain that was able to break down the ω -amino alkanoate and release the nitrogen for growth. From this screen, one bacterial strain, a *Pseudomonas sp.*, was identified as being able to grow on the minimal media plates supplemented with C4-C12 ω -amino alkanoates, and a large culture was inoculated

with the bacteria in order to test the crude cell lysate for activity and identify the type of protein acting on the C12 amino acid. Genomic DNA was also isolated from the strain and sent to the Beijing Genomics Institute for sequencing.

5 Assaying of the cell-free extract was suggestive, although not conclusive, that a transaminase was catalysing the breakdown of the 12-aminododecanoic acid. The screen involved the addition of both pyruvate and alpha-ketoglutarate, as well as both alanine and glutamate dehydrogenases and screening for NADH formation in the manner previously described. This assay was positive for transaminase activity.

10 Identifying the Biocatalyst within *Pseudomonas* sp.

Following genomic sequence elucidation of the *Pseudomonas* sp., the genome was analysed using Exonerate – a sequence alignment tool that can align query sequences against genomic DNA and identify similar genes. In light of previous investigations with GabT, this was used as the query sequence in a protein2genome
15 model alignment, and following analysis of the genome, fourteen potential homologues were identified in the *Pseudomonas* sp. genome. These ranged in sequence identity from 4-74%. Primers were designed to amplify each of the fourteen genes from the genomic DNA for cloning into *E. coli*.

20 Cloning and Expression

Each of the gene fragments was amplified by PCR from genomic DNA, digested using NdeI and BamHI restriction endonucleases and ligated into a modified pET vector in the same manner as GabT described previously. The vector was transformed into electrocompetent *E. coli* BL21-DE3 and plated on LB agar plates containing
25 ampicillin. Following incubation at 37°C overnight, observed transformants were used to inoculate small LBamp cultures (typically 10 mL). Vector DNA was isolated from the bacteria and sent for DNA sequencing to confirm the construct.

Protein overexpression was achieved by growing 200 mL of *E. coli* BL21-DE3 containing the desired vector in LB media containing ampicillin (100 µg/mL) at 37°C.
30 When the OD₆₀₀ reached 0.6-1.0, the cultures were induced by the addition of IPTG (1 mM final concentration) and further incubated at 37°C for 18 hours. The cells were isolated by centrifugation (4,500 rpm; 20 minutes) and the supernatant discarded. The pellet was resuspended in potassium phosphate buffer (100 mM, pH 7.5) and cell lysis was achieved using BugBuster[®] 10x reagent (Merck) with shaking on ice for one hour.
35 Cellular debris was precipitated by centrifugation (18,000 rpm, 1 hour) and the cell-free extract was passed over a HiTrap Chelating HP column on an FPLC against an

increasing concentration of imidazole. Eluted proteins were washed in phosphate buffer (100 mM, pH 7.5) and concentrated by centrifugation utilising spin columns (GE Healthcare; 10k MWCO). Purity was assessed by SDS-PAGE.

5 Assaying For Novel Activity

Activity for each protein was assessed using coupled dehydrogenase assays as described previously. A typical assay comprised:

- Substrate (6.25 mM final concentration in potassium phosphate buffer)
- 10 • Co-substrate (pyruvate (0.5 mM final concentration) or α -KG (0.25 mM final concentration))
- NAD (1.25 mM final concentration)
- Dehydrogenase (1 μ L from ADH - ≥ 35 units/mL stock solution or GDH ≥ 35 units/mg protein stock)
- 15 • Transaminase (final concentration dependent)
- Potassium phosphate buffer (100 mM)

UV absorbance at 340 nm was recorded at 28°C over a pH range of 7.5-10 with a range of substrates. Of the fourteen proteins tested, three referred to herein as p6 (amino acid sequence provided in SEQ ID NO:1; polynucleotide sequence provided in SEQ ID NO:3), p7 (amino acid sequence provided in SEQ ID NO:2; polynucleotide sequence provided in SEQ ID NO:4), and p4 (amino acid sequence provided in SEQ ID NO:6; polynucleotide sequence provided in SEQ ID NO:14), have shown the desired activity with ω -amino acids, notably including long chain amino acids C11 and C12 (shown below left; C9 and C10 are not commercially available). In addition, the p6 enzyme also accepts substrates as small as C3 (β -alanine) and is tolerant of some functionalisation along the carbon chain. Similarly, the p7 enzyme accepts substrates as small as C4 (γ -aminobutyrate; GABA) and is tolerant of some functionalisation along the carbon chain.

30 The p6 enzyme is a pyruvate : ω -amino acid transaminase, with a pH optimum around pH 10. The enzyme has 19% sequence identity to GabT, and is predicted to be a Beta-alanine : pyruvate transaminase based on BLAST analysis against online protein databases. Although other proteins in the database share high homology (up to 87%, with a recent entry 07.03.13 sharing 99%, none have been characterised to date).

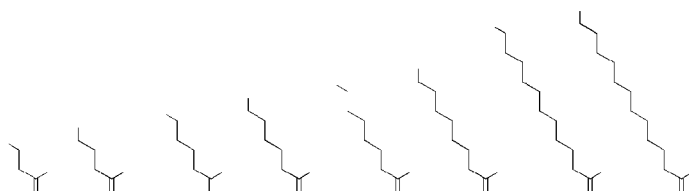
35 The p7 enzyme is a pyruvate : ω -amino acid transaminase, with a pH optimum around pH 10. The enzyme has 27% sequence identity to GabT, and is predicted to be

an acetylornithine transaminase based on BLAST analysis against online protein databases.

The p4 enzyme is a pyruvate : ω -amino acid transaminase, with a pH optimum around pH 10. The enzyme has 23% sequence identity to GabT, and is predicted to be a putrescine transaminase based on BLAST analysis against online protein databases.

To corroborate the findings of the UV assay, a large-scale (200 mL) p6 reaction was carried out using C11 amino acid substrate. After seven days, the mixed reaction was allowed to settle and yellow oil was observed on the surface of the reaction. This oil was concentrated *in vacuo* and analysed by GC-MS. In addition to the detection of alanine (co-product for the reaction), a peak corresponding to the mass of the C11 diacid was also found in large concentrations. The diacid is thought to be the oxidation product of the semialdehyde formed by the transaminase, further supporting the findings of the UV assay.

The alanine dehydrogenase-coupled assay has been used to determine some early kinetic parameters for p6 and p7. Reactions with C3 to C8 for p6 and C4 to C8 have been fully characterised and show no clear trend in terms of reaction rate vs. carbon chain length. For C11 and C12, the solubility of the substrates is extremely low, and as such, kinetic parameters cannot be determined.



Ancestral Reconstruction

p7N6, p7N15, p7N16, p7N17, p7N43 and p7N48 are de novo peptide sequences based on p7. These molecules were produced by ancestral reconstruction using the method described below.

Homologues of p7 were obtained by BLAST analysis of the amino acid sequence, and were aligned to one another. Multiple sequence alignment (MSA) for the sequences was inferred using MAFFT version 7.043 (Katoh and Standley, 2013) and Seaview version 4.4.1 (Gouy et al., 2010). A preliminary MSA was inferred for the data using the LINSI option of MAFFT. Using Seaview, the preliminary alignment was refined to yield the final alignment. Duplicate sequences were identified, and then

removed from the final alignment using IQ-TREE version 0.9.3 (Minh et al., 2013). The reduced data was realigned.

To assess whether the data could be assumed to have evolved under globally stationary, reversible, and homogeneous (SRH) conditions (Jayaswal et al. 2011), the
 5 inventors surveyed the alignment using Homo version 1.0 (available at <http://www.bioinformatics.csiro.au/homo>) (Ababneh et al., 2006). The observed p-values were plotted against the expected p-values obtained under the null distribution. Forty-five of the 18336 tests (~0.2%) produced a p-value < 0.05 and the smallest p-value was 0.0126, implying that the data are consistent with evolution under globally SRH
 10 conditions.

IQ-TREE version 0.9.3 (Minh et al., 2013) was used to identify optimal models of evolution. The optimal model of evolution for the master alignment was identified using the -m TESTONLY option with IQ-TREE invoked and found to be the LG+I+G4 model. A phylogenetic tree for the master alignment was inferred using maximum-
 15 likelihood (ML), as implemented in IQ-TREE. A non-parametric bootstrap analysis was carried out using the UFBoot method (using default settings) and the inferred trees were then used to infer the ancestral sequences. Ancestral amino-acid sequences were inferred under the ML criterion using FastML (Pupko et al., 2002) and the following ancestral sequences were then identified and chosen for further biochemical analysis;

- 20 • p7N6 which shares 91% sequence identity with p7 and 25% identity to GabT (amino acid sequence of p7N6 provided in SEQ ID NO:7; polynucleotide sequence provided in SEQ ID NO:15),
- p7N15 which shares 85% sequence identity with p7 and 27% identity to GabT (amino acid sequence of p7N15 provided in SEQ ID NO:8; polynucleotide
 25 sequence provided in SEQ ID NO:16),
- p7N16 which shares 81% sequence identity with p7 and 27% identity to GabT (amino acid sequence of p7N16 provided in SEQ ID NO:9; polynucleotide sequence provided in SEQ ID NO:17),
- p7N17 which shares 80% sequence identity with p7 and 27% identity to GabT (amino acid sequence of p7N17 provided in SEQ ID NO:10 polynucleotide
 30 sequence provided in SEQ ID NO:18),
- p7N43 which shares 77% sequence identity with p7 and 27% identity to GabT (amino acid sequence of p7N43 provided in SEQ ID NO:11; polynucleotide sequence provided in SEQ ID NO:19), and

- p7N48 which shares 76% sequence identity with p7 and 27% identity to GabT (amino acid sequence of p7N43 provided in SEQ ID NO:12; polynucleotide sequence provided in SEQ ID NO:20).

Proteins encoded by p7N6, p7N15, p7N16, p7N17, p7N43 and p7N48 were expressed using an *E. coli* recombinant expression platform and subsequently purified. Proteins were tested using the same coupled assays described above and found to have activity in accordance with p7.

Functional Characterisation

Each of the proteins were assayed for substrate specificity. Substrates identified by assaying for each of the proteins are summarized below.

p4 - 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, putrescine, cadaverine, 3-aminocyclohexanoate, propionaldehyde, butyraldehyde, tyramine, 2-aminoindan, 2-methylbenzylamine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, cyclohexylamine, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, cyclohexanone, dopamine, serotonin, alanine and pyruvate.

p6 - glycine, beta-alanine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoisobutyrate, putrescine, cadaverine, 3-aminocyclohexanoate, propionaldehyde, butyraldehyde, tyramine, 2-aminoindan, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, taurine, glyceraldehyde, 3-aminoheptanoic acid, cyclohexylamine, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, ethanolamine, alanine and pyruvate.

p7 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

p7N6 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-

aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

p7N15 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, diethylaminomalonate, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

p7N16 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

p7N17 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

p7N43 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, diethylaminomalonate, cyclohexylamine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-

aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

- p7N48 - glycine, 4-aminobutyrate, 5-aminopentanoate, 6-aminohexanoic acid,
 5 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, ornithine, lysine, 3-aminocyclohexanoate, 4-amino-2-hydroxybutyrate, putrescine, cadaverine, N-acetyl-L-ornithine, diethylaminomalonate, cyclohexylamine, hexamethylenediamine, 1,7-diaminoheptane, 1,8-diaminooctane, 1,9-diaminononane, 1,10-diaminodecane, 6-aminohexanol, 7-aminoheptanol, 8-
 10 aminooctanol, 9-aminononanol, 10-aminodecanol, 2,4-diaminobutyrate, 2-methylbenzylamine, dihydroxyacetone phosphate, hydroxymethylfurfural, alanine and pyruvate.

X-Ray Crystallography

- 15 The p6 protein was crystallised from purified P6 at 8 mg/mL in 50 mM potassium phosphate buffer using a reservoir solution of 200 mM MgCl₂, 100 mM Tris buffer at pH 7 and 10% PEG 8000 at 20 °C. Crystals were taken to the Australian Synchrotron and the subsequent data were indexed using XDS (Kabsch, 2010). The data were scaled using the CCP4 program suite and the structure was solved using
 20 molecular replacement using PDB code 3A8U as a starting model and the program Phaser (McCoy et al., 2007). The structure was subsequently rebuilt and refined using Coot (Emsley et al., 2010) and Refmac (Mushudov et al., 2011) (Appendix I).

- The structure of p7 was determined from a crystal grown using 5 mg/mL p7 protein (in PO₄/NaCl) from a solution containing 1.61 M ammonium sulfate, 0.05 M
 25 sodium MES pH 6.8, 0.9 %v/v dioxane. The structure of P7n6 was determined from a crystal grown using 10 mg/mL protein (in sodium ADA/NaCl) from a solution containing 0.155 M magnesium chloride, 0.1 M tris chloride pH 8.5, 12.8 %v/v glycerol and 15.2 %w/v PEG 8000. The structure of P7n15 was determined from a crystal grown using 10 mg/mL protein (in sodium ADA/NaCl) from a solution
 30 containing 0.152 M magnesium chloride, 0.1 M tris chloride pH 7.2, 17.1 %v/v glycerol and 14.9 %w/v PEG 8000. The structure of P7n16 was determined from a crystal grown using 10 mg/mL protein (in tris chloride/NaCl) from a solution containing 0.135 M ammonium formate, and 20.1 %w/v PEG 3350. The structure of P7n17 was determined from a crystal grown using 10 mg/mL protein (in tris
 35 chloride/NaCl) from a solution containing 0.152 M magnesium chloride, 0.1 M tris chloride pH 7.1, 14.8 %v/v glycerol and 11.9 %w/v PEG 8000. The structure of P7n43

was determined from a crystal grown using 4 mg/mL protein (in sodium MOPS/NaCl) from a solution containing 0.011 M calcium acetate, 0.1 M tris chloride pH 7.1 and 15.1 %w/v PEG 8000. The structure of P7n48 was determined from a crystal grown using 10 mg/mL protein (in PO4/NaCl) from a solution containing 0.03 M magnesium nitrate, and 15.6 %w/v PEG 3350. The p7, p7N6, p7N15, p7N16, p7N17, p7N43 and p7N48 structures have been solved (data not shown) and are similar to p6. The RMS values for each, relative to p6 are shown below.

p6,p7 – 1.106
 10 p6, p7N6 – 1.094
 p6,p7N15 – 1.076
 p6,p7N16 – 1.076
 p6,p7N17 – 1.054
 p6,p7N43 – 1.076
 15 p6,p7N48 – 1.114

Crystals were taken to the Australian Synchrotron and the subsequent data were indexed using XDS (Kabsch, 2010). The data were scaled using the CCP4 program suite and the native structure was solved using molecular replacement using PDB code 3GJU as a starting model and the program Phaser (McCoy et al., 2007). The structure was subsequently rebuilt and refined using Coot (Emsley et al., 2010) and Refmac (Mushudov et al., 2011). The various ancestral protein structures (nodes n6 to n48) were solved using the same procedure but with the native structure as the starting point for molecular replacement.

25 To corroborate the findings of the UV assay, a large-scale (200 mL) p6 reaction was carried out using C11 amino acid substrate. After seven days, the mixed reaction was allowed to settle and yellow oil was observed on the surface of the reaction. This oil was concentrated in vacuo and analysed by GC-MS. In addition to the detection of alanine (co-product for the reaction), a peak corresponding to the mass of the C11 diacid was also found in large concentrations. The diacid is thought to be the oxidation product of the semialdehyde formed by the transaminase, further supporting the findings of the UV assay.

The alanine dehydrogenase-coupled assay has been used to determine some early kinetic parameters for all the aforementioned enzymes. Reactions with C3 to C8 for p6 and C4 to C8 for p7 have been fully characterised and show no clear trend in

terms of reaction rate vs. carbon chain length. For C11 and C12, the solubility of the substrates is extremely low, and as such, kinetic parameters cannot be determined.

5 It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

10 The present application claims priority from AU 2013902128 filed 12 June 2013, the entire contents of which are incorporated herein by reference.

 All publications discussed and/or referenced herein are incorporated herein in their entirety.

15 Any discussion of documents, acts, materials, devices, articles or the like which has been included in the present specification is solely for the purpose of providing a context for the present invention. It is not to be taken as an admission that any or all of these matters form part of the prior art base or were common general knowledge in the field relevant to the present invention as it existed before the priority date of each claim of this application.

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Appendix I

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HEADER      ----                      XX-XXX-XX   xxxx

COMPND      ---

REMARK      3

5  REMARK    3  REFINEMENT.

REMARK      3    PROGRAM      :  REFMAC 5.7.0029

REMARK      3    AUTHORS      :  MURSHUDOV,SKUBAK,LEBEDEV,PANNU,

REMARK      3                                STEINER,NICHOLLS,WINN, LONG,VAGIN

REMARK      3

10 REMARK    3    REFINEMENT TARGET :  MAXIMUM LIKELIHOOD

REMARK      3

REMARK      3    DATA USED IN REFINEMENT.

REMARK      3    RESOLUTION RANGE HIGH (ANGSTROMS) :    1.35

REMARK      3    RESOLUTION RANGE LOW  (ANGSTROMS) :   43.03

15 REMARK    3    DATA CUTOFF          (SIGMA(F)) :  NONE

REMARK      3    COMPLETENESS FOR RANGE          (%) :   99.48

REMARK      3    NUMBER OF REFLECTIONS              :  107182

REMARK      3

REMARK      3    FIT TO DATA USED IN REFINEMENT.

20 REMARK    3    CROSS-VALIDATION METHOD              :  THROUGHOUT

REMARK      3    FREE R VALUE TEST SET SELECTION          :  RANDOM

REMARK      3    R VALUE          (WORKING + TEST SET) :  0.13495

REMARK      3    R VALUE          (WORKING SET)           :  0.13342

REMARK      3    FREE R VALUE                          :  0.16413

25 REMARK    3    FREE R VALUE TEST SET SIZE          (%) :    5.0

REMARK      3    FREE R VALUE TEST SET COUNT              :   5659

REMARK      3

REMARK      3    FIT IN THE HIGHEST RESOLUTION BIN.

REMARK      3    TOTAL NUMBER OF BINS USED                      :    20

30 REMARK    3    BIN RESOLUTION RANGE HIGH              :    1.350

REMARK      3    BIN RESOLUTION RANGE LOW                          :    1.385

REMARK      3    REFLECTION IN BIN          (WORKING SET)          :    7775

REMARK      3    BIN COMPLETENESS (WORKING+TEST) (%)              :   98.65

REMARK      3    BIN R VALUE          (WORKING SET)                :    0.260

35 REMARK    3    BIN FREE R VALUE SET COUNT                  :    424

REMARK      3    BIN FREE R VALUE                          :    0.285

```

REMARK 3
REMARK 3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK 3 ALL ATOMS : 4052
REMARK 3
5 REMARK 3 B VALUES.
REMARK 3 FROM WILSON PLOT (A**2) : NULL
REMARK 3 MEAN B VALUE (OVERALL, A**2) : 11.966
REMARK 3 OVERALL ANISOTROPIC B VALUE.
REMARK 3 B11 (A**2) : -1.06
10 REMARK 3 B22 (A**2) : 2.27
REMARK 3 B33 (A**2) : -1.21
REMARK 3 B12 (A**2) : -0.00
REMARK 3 B13 (A**2) : 0.00
REMARK 3 B23 (A**2) : 0.00
15 REMARK 3
REMARK 3 ESTIMATED OVERALL COORDINATE ERROR.
REMARK 3 ESU BASED ON R VALUE (A): 0.044
REMARK 3 ESU BASED ON FREE R VALUE (A): 0.044
REMARK 3 ESU BASED ON MAXIMUM LIKELIHOOD (A): 0.033
20 REMARK 3 ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 1.872
REMARK 3
REMARK 3 CORRELATION COEFFICIENTS.
REMARK 3 CORRELATION COEFFICIENT FO-FC : 0.978
REMARK 3 CORRELATION COEFFICIENT FO-FC FREE : 0.970
25 REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES COUNT RMS WEIGHT
REMARK 3 BOND LENGTHS REFINED ATOMS (A): 3758 ; 0.024 ; 0.019
REMARK 3 BOND LENGTHS OTHERS (A): 3565 ; 0.001 ; 0.020
REMARK 3 BOND ANGLES REFINED ATOMS (DEGREES): 5141 ; 2.281 ; 1.962
30 REMARK 3 BOND ANGLES OTHERS (DEGREES): 8248 ; 1.101 ; 3.000
REMARK 3 TORSION ANGLES, PERIOD 1 (DEGREES): 509 ; 6.342 ; 5.000
REMARK 3 TORSION ANGLES, PERIOD 2 (DEGREES): 164 ; 34.203 ; 24.573
REMARK 3 TORSION ANGLES, PERIOD 3 (DEGREES): 631 ; 12.884 ; 15.000
REMARK 3 TORSION ANGLES, PERIOD 4 (DEGREES): 19 ; 21.965 ; 15.000
35 REMARK 3 CHIRAL-CENTER RESTRAINTS (A**3): 542 ; 0.149 ; 0.200
REMARK 3 GENERAL PLANES REFINED ATOMS (A): 4521 ; 0.014 ; 0.021

61

REMARK 3 GENERAL PLANES OTHERS (A): 872 ; 0.005 ; 0.020

REMARK 3

REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. COUNT RMS WEIGHT

REMARK 3

5 REMARK 3 ANISOTROPIC THERMAL FACTOR RESTRAINTS. COUNT RMS WEIGHT

REMARK 3 RIGID-BOND RESTRAINTS (A**2): 7323 ;12.782 ; 3.000

REMARK 3 SPHERICITY; FREE ATOMS (A**2): 97 ;14.858 ; 5.000

REMARK 3 SPHERICITY; BONDED ATOMS (A**2): 7520 ; 6.260 ; 5.000

REMARK 3

10 REMARK 3 NCS RESTRAINTS STATISTICS

REMARK 3 NUMBER OF NCS GROUPS : NULL

REMARK 3

REMARK 3 TWIN DETAILS

REMARK 3 NUMBER OF TWIN DOMAINS : NULL

15 REMARK 3

REMARK 3

REMARK 3 TLS DETAILS

REMARK 3 NUMBER OF TLS GROUPS : NULL

REMARK 3

20 REMARK 3

REMARK 3 BULK SOLVENT MODELLING.

REMARK 3 METHOD USED : MASK

REMARK 3 PARAMETERS FOR MASK CALCULATION

REMARK 3 VDW PROBE RADIUS : 1.20

25 REMARK 3 ION PROBE RADIUS : 0.80

REMARK 3 SHRINKAGE RADIUS : 0.80

REMARK 3

REMARK 3 OTHER REFINEMENT REMARKS:

REMARK 3 HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS

30 REMARK 3 U VALUES : REFINED INDIVIDUALLY

REMARK 3

CRYST1 62.985 122.003 134.342 90.00 90.00 90.00 I 2 2 2

SCALE1 0.015877 0.000000 0.000000 0.000000

SCALE2 -0.000000 0.008197 0.000000 0.000000

35 SCALE3 0.000000 -0.000000 0.007444 0.000000

ATOM 1 N ASP A 15 27.195 -99.868 267.429 1.00 71.19 N

62

	ANISOU	1	N	ASP	A	15	9695	8346	9006	-1368	-2412	-954	N
	ATOM	2	CA	ASP	A	15	26.076	-100.178	266.516	1.00	40.67		C
	ANISOU	2	CA	ASP	A	15	5249	3970	6233	2153	-650	520	C
	ATOM	3	CB	ASP	A	15	25.478	-101.515	266.815	1.00	49.73		C
5	ANISOU	3	CB	ASP	A	15	5514	4753	8628	26	-1446	-1803	C
	ATOM	4	CG	ASP	A	15	24.538	-101.915	265.755	1.00	53.64		C
	ANISOU	4	CG	ASP	A	15	8048	5102	7231	-178	-764	-3006	C
	ATOM	5	OD1	ASP	A	15	24.944	-101.865	264.557	1.00	71.65		O
	ANISOU	5	OD1	ASP	A	15	9724	9966	7532	3521	-671	4006	O
10	ATOM	6	OD2	ASP	A	15	23.397	-102.228	266.125	1.00	72.54		O
	ANISOU	6	OD2	ASP	A	15	6105	6592	14862	-3528	-3373	1265	O
	ATOM	7	C	ASP	A	15	24.892	-99.148	266.388	1.00	32.22		C
	ANISOU	7	C	ASP	A	15	4307	3553	4380	1305	207	-448	C
	ATOM	8	O	ASP	A	15	24.468	-98.930	265.271	1.00	39.84		O
15	ANISOU	8	O	ASP	A	15	5865	3338	5934	2821	-906	-373	O
	ATOM	9	N	LEU	A	16	24.350	-98.563	267.455	1.00	26.20		N
	ANISOU	9	N	LEU	A	16	3010	2894	4049	1171	143	586	N
	ATOM	10	CA	LEU	A	16	23.282	-97.527	267.276	1.00	22.78		C
	ANISOU	10	CA	LEU	A	16	2570	2446	3638	249	2	496	C
20	ATOM	11	CB	LEU	A	16	22.573	-97.272	268.584	1.00	19.61		C
	ANISOU	11	CB	LEU	A	16	2491	1644	3316	-9	-71	1123	C
	ATOM	12	CG	LEU	A	16	21.703	-98.457	268.995	1.00	21.57		C
	ANISOU	12	CG	LEU	A	16	2683	1673	3839	-216	-86	563	C
	ATOM	13	CD1	LEU	A	16	21.162	-98.168	270.391	1.00	24.02		C
25	ANISOU	13	CD1	LEU	A	16	3135	2721	3270	128	-70	1082	C
	ATOM	14	CD2	LEU	A	16	20.603	-98.840	267.970	1.00	23.30		C
	ANISOU	14	CD2	LEU	A	16	3030	2460	3360	-507	86	-103	C
	ATOM	15	C	LEU	A	16	23.902	-96.207	266.869	1.00	20.69		C
	ANISOU	15	C	LEU	A	16	2724	2296	2840	324	-651	647	C
30	ATOM	16	O	LEU	A	16	24.994	-95.837	267.338	1.00	21.11		O
	ANISOU	16	O	LEU	A	16	2476	2112	3432	555	-738	229	O
	ATOM	17	N	ASN	A	17	23.241	-95.490	265.976	1.00	18.12		N
	ANISOU	17	N	ASN	A	17	2099	2119	2664	181	-336	597	N
	ATOM	18	CA	ASN	A	17	23.698	-94.161	265.613	1.00	13.87		C
35	ANISOU	18	CA	ASN	A	17	1989	1695	1583	591	-6	-304	C
	ATOM	19	CB	ASN	A	17	23.358	-93.808	264.160	1.00	18.57		C

	ANISOU	19	CB	ASN	A	17	2379	2541	2133	592	-250	-187	C
	ATOM	20	CG	ASN	A	17	23.852	-92.459	263.758	1.00	16.88		C
	ANISOU	20	CG	ASN	A	17	1835	2816	1763	449	6	66	C
	ATOM	21	OD1	ASN	A	17	24.358	-91.611	264.510	1.00	20.92		O
5	ANISOU	21	OD1	ASN	A	17	2811	2709	2428	347	283	116	O
	ATOM	22	ND2	ASN	A	17	23.665	-92.211	262.461	1.00	24.85		N
	ANISOU	22	ND2	ASN	A	17	3386	3779	2275	-234	75	911	N
	ATOM	23	C	ASN	A	17	22.973	-93.167	266.549	1.00	10.68		C
	ANISOU	23	C	ASN	A	17	1619	681	1755	479	-190	14	C
10	ATOM	24	O	ASN	A	17	21.805	-92.775	266.257	1.00	13.63		O
	ANISOU	24	O	ASN	A	17	1548	1667	1962	407	-268	-154	O
	ATOM	25	N	LEU	A	18	23.586	-92.806	267.625	1.00	11.29		N
	ANISOU	25	N	LEU	A	18	1697	1104	1486	345	-167	110	N
	ATOM	26	CA	LEU	A	18	22.905	-92.016	268.632	1.00	14.70		C
15	ANISOU	26	CA	LEU	A	18	1802	1911	1869	600	53	-110	C
	ATOM	27	CB	LEU	A	18	23.743	-91.905	269.914	1.00	16.55		C
	ANISOU	27	CB	LEU	A	18	2239	1905	2142	-27	-88	143	C
	ATOM	28	CG	LEU	A	18	23.933	-93.307	270.587	1.00	16.86		C
	ANISOU	28	CG	LEU	A	18	2468	1412	2526	206	-251	-26	C
20	ATOM	29	CD1	LEU	A	18	24.696	-93.068	271.873	1.00	20.15		C
	ANISOU	29	CD1	LEU	A	18	3074	2382	2200	396	-8	-13	C
	ATOM	30	CD2	LEU	A	18	22.633	-94.009	270.898	1.00	19.56		C
	ANISOU	30	CD2	LEU	A	18	2211	2500	2718	668	324	490	C
	ATOM	31	C	LEU	A	18	22.499	-90.600	268.075	1.00	13.30		C
25	ANISOU	31	C	LEU	A	18	1603	1680	1767	43	391	-41	C
	ATOM	32	O	LEU	A	18	21.464	-90.033	268.448	1.00	16.59		O
	ANISOU	32	O	LEU	A	18	1883	2018	2400	633	538	700	O
	ATOM	33	N	ALYS	A	19	23.313	-90.042	267.183	0.50	10.98		N
	ANISOU	33	N	ALYS	A	19	1305	857	2009	309	117	83	N
30	ATOM	34	N	BLYS	A	19	23.274	-90.043	267.147	0.50	10.85		N
	ANISOU	34	N	BLYS	A	19	1234	873	2015	351	83	112	N
	ATOM	35	CA	ALYS	A	19	23.106	-88.683	266.686	0.50	10.61		C
	ANISOU	35	CA	ALYS	A	19	1432	752	1846	346	56	39	C
	ATOM	36	CA	BLYS	A	19	23.039	-88.670	266.682	0.50	10.84		C
35	ANISOU	36	CA	BLYS	A	19	1507	706	1903	375	63	31	C
	ATOM	37	CB	ALYS	A	19	24.387	-88.157	266.070	0.50	17.80		C

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	ANISOU	37	CB	ALYS	A	19	2040	1803	2917	-396	353	309	C
	ATOM	38	CB	BLYS	A	19	24.285	-88.089	266.069	0.50	17.71		C
	ANISOU	38	CB	BLYS	A	19	1890	1764	3074	-251	236	374	C
	ATOM	39	CG	ALYS	A	19	25.482	-87.939	267.151	0.50	21.89		C
5	ANISOU	39	CG	ALYS	A	19	2319	2445	3550	-496	-168	416	C
	ATOM	40	CG	BLYS	A	19	25.325	-87.751	267.165	0.50	21.17		C
	ANISOU	40	CG	BLYS	A	19	2554	1996	3493	-517	-127	98	C
	ATOM	41	CD	ALYS	A	19	26.799	-87.449	266.532	0.50	28.06		C
	ANISOU	41	CD	ALYS	A	19	2685	3382	4591	-648	328	-286	C
10	ATOM	42	CD	BLYS	A	19	26.562	-87.087	266.560	0.50	28.31		C
	ANISOU	42	CD	BLYS	A	19	2579	3638	4538	-234	691	-187	C
	ATOM	43	CE	ALYS	A	19	27.959	-87.502	267.525	0.50	34.38		C
	ANISOU	43	CE	ALYS	A	19	4439	4761	3860	832	-439	333	C
	ATOM	44	CE	BLYS	A	19	26.538	-85.570	266.694	0.50	33.98		C
15	ANISOU	44	CE	BLYS	A	19	3930	4069	4911	403	340	-809	C
	ATOM	45	NZ	ALYS	A	19	27.580	-86.679	268.689	0.50	33.80		N
	ANISOU	45	NZ	ALYS	A	19	3145	4731	4967	24	-872	-611	N
	ATOM	46	NZ	BLYS	A	19	27.855	-84.963	266.364	0.50	39.79		N
	ANISOU	46	NZ	BLYS	A	19	4680	5055	5383	-1548	-997	-342	N
20	ATOM	47	C	ALYS	A	19	21.960	-88.662	265.644	0.50	9.36		C
	ANISOU	47	C	ALYS	A	19	1134	823	1596	246	262	-64	C
	ATOM	48	C	BLYS	A	19	21.909	-88.661	265.645	0.50	9.79		C
	ANISOU	48	C	BLYS	A	19	1173	857	1689	216	239	-69	C
	ATOM	49	O	ALYS	A	19	21.450	-87.572	265.378	0.50	10.66		O
25	ANISOU	49	O	ALYS	A	19	1306	1084	1659	414	179	204	O
	ATOM	50	O	BLYS	A	19	21.355	-87.596	265.375	0.50	11.07		O
	ANISOU	50	O	BLYS	A	19	1395	1140	1670	403	140	182	O
	ATOM	51	N	ALA	A	20	21.489	-89.837	265.144	1.00	9.54		N
	ANISOU	51	N	ALA	A	20	1233	1032	1359	138	-37	-25	N
30	ATOM	52	CA	ALA	A	20	20.433	-89.815	264.145	1.00	8.60		C
	ANISOU	52	CA	ALA	A	20	1192	748	1326	-379	141	62	C
	ATOM	53	CB	ALA	A	20	20.212	-91.160	263.487	1.00	9.38		C
	ANISOU	53	CB	ALA	A	20	1231	848	1485	-100	38	-116	C
	ATOM	54	C	ALA	A	20	19.110	-89.416	264.850	1.00	7.44		C
35	ANISOU	54	C	ALA	A	20	1026	634	1167	-111	-39	-36	C
	ATOM	55	O	ALA	A	20	18.167	-88.955	264.152	1.00	7.20		O

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	ANISOU	55	O	ALA	A	20	1106	540	1090	-15	197	91	O
	ATOM	56	N	HIS	A	21	18.918	-89.716	266.126	1.00	8.67		N
	ANISOU	56	N	HIS	A	21	1259	963	1070	153	91	342	N
	ATOM	57	CA	HIS	A	21	17.686	-89.383	266.881	1.00	8.39		C
5	ANISOU	57	CA	HIS	A	21	1125	840	1220	-32	145	257	C
	ATOM	58	CB	HIS	A	21	17.263	-90.585	267.712	1.00	7.25		C
	ANISOU	58	CB	HIS	A	21	1132	412	1209	16	-10	111	C
	ATOM	59	CG	HIS	A	21	16.067	-90.394	268.577	1.00	9.18		C
	ANISOU	59	CG	HIS	A	21	1209	1065	1214	-63	254	117	C
10	ATOM	60	ND1	HIS	A	21	15.788	-91.140	269.688	1.00	8.70		N
	ANISOU	60	ND1	HIS	A	21	1397	699	1209	-25	6	189	N
	ATOM	61	CE1	HIS	A	21	14.661	-90.733	270.251	1.00	8.45		C
	ANISOU	61	CE1	HIS	A	21	1278	561	1369	49	171	158	C
	ATOM	62	NE2	HIS	A	21	14.246	-89.674	269.603	1.00	8.96		N
15	ANISOU	62	NE2	HIS	A	21	1126	979	1297	272	202	175	N
	ATOM	63	CD2	HIS	A	21	15.095	-89.465	268.538	1.00	9.38		C
	ANISOU	63	CD2	HIS	A	21	1375	1109	1077	196	177	175	C
	ATOM	64	C	HIS	A	21	17.959	-88.213	267.761	1.00	8.78		C
	ANISOU	64	C	HIS	A	21	1117	1023	1194	119	5	106	C
20	ATOM	65	O	HIS	A	21	18.755	-88.277	268.680	1.00	7.98		O
	ANISOU	65	O	HIS	A	21	1101	581	1348	35	-39	-1	O
	ATOM	66	N	TRP	A	22	17.252	-87.132	267.442	1.00	8.71		N
	ANISOU	66	N	TRP	A	22	1123	1166	1018	199	-10	-30	N
	ATOM	67	CA	TRP	A	22	17.259	-85.894	268.249	1.00	6.98		C
25	ANISOU	67	CA	TRP	A	22	747	735	1170	184	24	117	C
	ATOM	68	CB	TRP	A	22	16.985	-84.710	267.383	1.00	7.48		C
	ANISOU	68	CB	TRP	A	22	937	733	1173	195	109	120	C
	ATOM	69	CG	TRP	A	22	17.115	-83.381	268.060	1.00	7.20		C
	ANISOU	69	CG	TRP	A	22	872	888	975	135	184	97	C
30	ATOM	70	CD1	TRP	A	22	17.253	-83.086	269.397	1.00	7.72		C
	ANISOU	70	CD1	TRP	A	22	1110	692	1130	84	19	-3	C
	ATOM	71	NE1	TRP	A	22	17.393	-81.752	269.589	1.00	7.24		N
	ANISOU	71	NE1	TRP	A	22	1106	724	922	-38	-50	42	N
	ATOM	72	CE2	TRP	A	22	17.376	-81.157	268.342	1.00	6.20		C
35	ANISOU	72	CE2	TRP	A	22	812	582	962	107	66	-88	C
	ATOM	73	CD2	TRP	A	22	17.205	-82.161	267.390	1.00	6.38		C

	ANISOU	73	CD2	TRP	A	22	849	720	855	57	140	-89	C
	ATOM	74	CE3	TRP	A	22	17.119	-81.826	266.047	1.00	7.17		C
	ANISOU	74	CE3	TRP	A	22	987	681	1055	61	4	-119	C
	ATOM	75	CZ3	TRP	A	22	17.182	-80.470	265.722	1.00	7.73		C
5	ANISOU	75	CZ3	TRP	A	22	1119	849	970	-143	51	71	C
	ATOM	76	CH2	TRP	A	22	17.377	-79.422	266.673	1.00	7.86		C
	ANISOU	76	CH2	TRP	A	22	1284	571	1129	82	-50	5	C
	ATOM	77	CZ2	TRP	A	22	17.453	-79.732	268.008	1.00	7.45		C
	ANISOU	77	CZ2	TRP	A	22	1078	745	1007	-87	97	61	C
10	ATOM	78	C	TRP	A	22	16.233	-86.133	269.326	1.00	6.95		C
	ANISOU	78	C	TRP	A	22	1026	688	925	14	92	-19	C
	ATOM	79	O	TRP	A	22	15.029	-86.064	269.064	1.00	8.99		O
	ANISOU	79	O	TRP	A	22	1191	1123	1099	111	-68	144	O
	ATOM	80	N	MET	A	23	16.679	-86.479	270.547	1.00	8.45		N
15	ANISOU	80	N	MET	A	23	1094	1055	1059	73	-33	-5	N
	ATOM	81	CA	MET	A	23	15.824	-86.927	271.603	1.00	7.64		C
	ANISOU	81	CA	MET	A	23	944	951	1006	-23	-5	52	C
	ATOM	82	CB	MET	A	23	16.743	-87.588	272.655	1.00	8.38		C
	ANISOU	82	CB	MET	A	23	1071	1017	1094	140	-66	90	C
20	ATOM	83	CG	MET	A	23	17.485	-88.789	272.115	1.00	9.09		C
	ANISOU	83	CG	MET	A	23	1204	1095	1154	52	-23	77	C
	ATOM	84	SD	MET	A	23	18.793	-89.347	273.299	1.00	10.19		S
	ANISOU	84	SD	MET	A	23	1327	1137	1408	165	27	339	S
	ATOM	85	CE	MET	A	23	17.704	-90.065	274.583	1.00	10.39		C
25	ANISOU	85	CE	MET	A	23	1257	1154	1535	-80	-59	199	C
	ATOM	86	C	MET	A	23	15.035	-85.809	272.248	1.00	7.37		C
	ANISOU	86	C	MET	A	23	910	1002	885	-130	-232	-127	C
	ATOM	87	O	MET	A	23	15.515	-84.684	272.368	1.00	8.02		O
	ANISOU	87	O	MET	A	23	943	867	1237	116	109	-92	O
30	ATOM	88	N	PRO	A	24	13.768	-86.118	272.659	1.00	6.93		N
	ANISOU	88	N	PRO	A	24	971	762	898	33	41	297	N
	ATOM	89	CA	PRO	A	24	12.869	-85.202	273.245	1.00	8.25		C
	ANISOU	89	CA	PRO	A	24	1168	805	1160	33	125	223	C
	ATOM	90	CB	PRO	A	24	11.516	-85.876	273.045	1.00	8.56		C
35	ANISOU	90	CB	PRO	A	24	953	1069	1227	190	116	392	C
	ATOM	91	CG	PRO	A	24	11.838	-87.303	273.232	1.00	7.90		C

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	ANISOU	91	CG	PRO	A	24	1198	782	1020	55	26	75	C
	ATOM	92	CD	PRO	A	24	13.262	-87.542	272.696	1.00	7.43		C
	ANISOU	92	CD	PRO	A	24	1214	678	930	3	30	96	C
	ATOM	93	C	PRO	A	24	13.118	-84.871	274.667	1.00	7.61		C
5	ANISOU	93	C	PRO	A	24	856	902	1131	60	-8	13	C
	ATOM	94	O	PRO	A	24	13.414	-85.732	275.479	1.00	8.80		O
	ANISOU	94	O	PRO	A	24	1056	1095	1190	105	67	281	O
	ATOM	95	N	PHE	A	25	13.058	-83.563	275.012	1.00	6.71		N
	ANISOU	95	N	PHE	A	25	874	695	977	3	104	147	N
10	ATOM	96	CA	PHE	A	25	13.307	-83.039	276.404	1.00	7.22		C
	ANISOU	96	CA	PHE	A	25	975	615	1152	187	52	-7	C
	ATOM	97	CB	PHE	A	25	12.025	-83.092	277.299	1.00	7.85		C
	ANISOU	97	CB	PHE	A	25	1245	586	1152	-72	230	-103	C
	ATOM	98	CG	PHE	A	25	11.318	-81.776	277.309	1.00	8.24		C
15	ANISOU	98	CG	PHE	A	25	1163	813	1152	-41	-50	124	C
	ATOM	99	CD1	PHE	A	25	11.889	-80.533	277.743	1.00	7.56		C
	ANISOU	99	CD1	PHE	A	25	1152	762	959	-32	213	175	C
	ATOM	100	CE1	PHE	A	25	11.215	-79.314	277.843	1.00	10.04		C
	ANISOU	100	CE1	PHE	A	25	1734	721	1361	68	203	45	C
20	ATOM	101	CZ	PHE	A	25	9.879	-79.347	277.496	1.00	9.97		C
	ANISOU	101	CZ	PHE	A	25	1446	976	1363	395	345	84	C
	ATOM	102	CE2	PHE	A	25	9.318	-80.465	277.060	1.00	9.36		C
	ANISOU	102	CE2	PHE	A	25	1314	1217	1024	107	-238	120	C
	ATOM	103	CD2	PHE	A	25	9.952	-81.708	276.974	1.00	8.64		C
25	ANISOU	103	CD2	PHE	A	25	1110	1189	980	124	-28	-43	C
	ATOM	104	C	PHE	A	25	14.444	-83.771	277.054	1.00	7.86		C
	ANISOU	104	C	PHE	A	25	940	885	1159	165	-21	-13	C
	ATOM	105	O	PHE	A	25	14.403	-84.192	278.196	1.00	8.27		O
	ANISOU	105	O	PHE	A	25	1343	725	1073	106	42	190	O
30	ATOM	106	N	SER	A	26	15.539	-83.823	276.278	1.00	7.87		N
	ANISOU	106	N	SER	A	26	908	1101	980	163	34	116	N
	ATOM	107	CA	SER	A	26	16.748	-84.516	276.716	1.00	7.38		C
	ANISOU	107	CA	SER	A	26	925	818	1059	30	-161	182	C
	ATOM	108	CB	SER	A	26	16.892	-85.831	275.923	1.00	9.97		C
35	ANISOU	108	CB	SER	A	26	1370	945	1473	-74	272	116	C
	ATOM	109	OG	SER	A	26	15.799	-86.743	276.140	1.00	8.33		O

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	ANISOU	109	OG	SER	A	26	1242	679	1243	12	94	295	O
	ATOM	110	C	SER	A	26	18.045	-83.729	276.533	1.00	8.05		C
	ANISOU	110	C	SER	A	26	1025	939	1094	-79	-49	149	C
	ATOM	111	O	SER	A	26	18.162	-83.007	275.526	1.00	8.41		O
5	ANISOU	111	O	SER	A	26	1104	897	1192	97	-53	314	O
	ATOM	112	N	ALA	A	27	18.959	-83.884	277.468	1.00	7.81		N
	ANISOU	112	N	ALA	A	27	1124	893	949	13	-54	61	N
	ATOM	113	CA	ALA	A	27	20.346	-83.484	277.313	1.00	8.40		C
	ANISOU	113	CA	ALA	A	27	1180	825	1185	154	66	139	C
10	ATOM	114	CB	ALA	A	27	20.990	-83.410	278.676	1.00	11.50		C
	ANISOU	114	CB	ALA	A	27	1299	1599	1470	137	-198	-188	C
	ATOM	115	C	ALA	A	27	21.008	-84.492	276.441	1.00	7.83		C
	ANISOU	115	C	ALA	A	27	1194	819	963	-146	117	64	C
	ATOM	116	O	ALA	A	27	21.507	-85.520	276.883	1.00	10.56		O
15	ANISOU	116	O	ALA	A	27	1349	1345	1317	205	-7	526	O
	ATOM	117	N	ASN	A	28	20.942	-84.234	275.117	1.00	7.53		N
	ANISOU	117	N	ASN	A	28	1105	803	952	31	-147	-1	N
	ATOM	118	CA	ASN	A	28	21.402	-85.141	274.166	1.00	8.67		C
	ANISOU	118	CA	ASN	A	28	1196	1111	986	-22	28	-52	C
20	ATOM	119	CB	ASN	A	28	21.097	-84.704	272.752	1.00	7.90		C
	ANISOU	119	CB	ASN	A	28	1118	796	1086	148	0	-122	C
	ATOM	120	CG	ASN	A	28	19.636	-84.907	272.291	1.00	7.24		C
	ANISOU	120	CG	ASN	A	28	1140	487	1122	-20	101	115	C
	ATOM	121	OD1	ASN	A	28	19.384	-85.652	271.276	1.00	8.89		O
25	ANISOU	121	OD1	ASN	A	28	1180	1067	1129	-9	110	-65	O
	ATOM	122	ND2	ASN	A	28	18.680	-84.343	273.001	1.00	8.28		N
	ANISOU	122	ND2	ASN	A	28	971	1109	1064	146	130	78	N
	ATOM	123	C	ASN	A	28	22.947	-85.373	274.274	1.00	8.66		C
	ANISOU	123	C	ASN	A	28	1197	952	1140	89	-77	13	C
30	ATOM	124	O	ASN	A	28	23.360	-86.543	274.164	1.00	9.41		O
	ANISOU	124	O	ASN	A	28	1106	986	1483	277	22	237	O
	ATOM	125	N	ARG	A	29	23.678	-84.363	274.575	1.00	9.67		N
	ANISOU	125	N	ARG	A	29	1039	1220	1413	18	-97	186	N
	ATOM	126	CA	ARG	A	29	25.114	-84.487	274.709	1.00	10.69		C
35	ANISOU	126	CA	ARG	A	29	1128	1412	1519	9	4	230	C
	ATOM	127	CB	ARG	A	29	25.733	-83.139	274.914	1.00	12.17		C

	ANISOU	127	CB	ARG	A	29	1230	1680	1712	-168	-124	394	C
	ATOM	128	CG	ARG	A	29	25.761	-82.289	273.625	1.00	9.54		C
	ANISOU	128	CG	ARG	A	29	1232	959	1432	124	69	-160	C
	ATOM	129	CD	ARG	A	29	25.968	-80.775	273.971	1.00	8.91		C
5	ANISOU	129	CD	ARG	A	29	1419	817	1148	-121	-8	171	C
	ATOM	130	NE	ARG	A	29	24.886	-80.283	274.784	1.00	12.00		N
	ANISOU	130	NE	ARG	A	29	1298	1710	1548	-91	255	112	N
	ATOM	131	CZ	ARG	A	29	24.935	-79.404	275.776	1.00	11.36		C
	ANISOU	131	CZ	ARG	A	29	1327	1126	1861	37	-83	228	C
10	ATOM	132	NH1	ARG	A	29	26.070	-78.767	276.075	1.00	12.85		N
	ANISOU	132	NH1	ARG	A	29	1620	1533	1729	-201	-228	1	N
	ATOM	133	NH2	ARG	A	29	23.887	-79.225	276.559	1.00	12.28		N
	ANISOU	133	NH2	ARG	A	29	1500	1503	1663	-61	137	196	N
	ATOM	134	C	ARG	A	29	25.475	-85.423	275.859	1.00	10.79		C
15	ANISOU	134	C	ARG	A	29	1365	1411	1323	191	120	389	C
	ATOM	135	O	ARG	A	29	26.400	-86.241	275.713	1.00	12.43		O
	ANISOU	135	O	ARG	A	29	1500	1402	1817	145	3	347	O
	ATOM	136	N	ASN	A	30	24.801	-85.273	276.982	1.00	10.67		N
	ANISOU	136	N	ASN	A	30	1561	1200	1290	287	96	167	N
20	ATOM	137	CA	ASN	A	30	24.969	-86.216	278.110	1.00	9.16		C
	ANISOU	137	CA	ASN	A	30	1153	1075	1250	291	-323	122	C
	ATOM	138	CB	ASN	A	30	24.094	-85.813	279.284	1.00	11.27		C
	ANISOU	138	CB	ASN	A	30	1394	1432	1453	132	191	505	C
	ATOM	139	CG	ASN	A	30	24.071	-86.890	280.374	1.00	12.81		C
25	ANISOU	139	CG	ASN	A	30	1828	1461	1578	-134	-66	577	C
	ATOM	140	OD1	ASN	A	30	23.191	-87.700	280.374	1.00	14.50		O
	ANISOU	140	OD1	ASN	A	30	1769	1943	1797	-97	-6	528	O
	ATOM	141	ND2	ASN	A	30	25.069	-86.881	281.228	1.00	15.35		N
	ANISOU	141	ND2	ASN	A	30	1875	2249	1708	-314	-246	399	N
30	ATOM	142	C	ASN	A	30	24.690	-87.641	277.707	1.00	11.07		C
	ANISOU	142	C	ASN	A	30	1325	1273	1608	-98	113	-59	C
	ATOM	143	O	ASN	A	30	25.415	-88.565	278.022	1.00	13.93		O
	ANISOU	143	O	ASN	A	30	1567	1817	1908	150	-88	398	O
	ATOM	144	N	PHE	A	31	23.589	-87.803	277.027	1.00	11.35		N
35	ANISOU	144	N	PHE	A	31	1318	1327	1664	-5	-46	156	N
	ATOM	145	CA	PHE	A	31	23.182	-89.120	276.665	1.00	11.00		C

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	ANISOU	145	CA	PHE	A	31	1188	1604	1384	-134	8	-60	C
	ATOM	146	CB	PHE	A	31	21.761	-89.066	275.971	1.00	9.73		C
	ANISOU	146	CB	PHE	A	31	1284	1161	1249	-38	25	204	C
	ATOM	147	CG	PHE	A	31	21.154	-90.437	275.771	1.00	9.75		C
5	ANISOU	147	CG	PHE	A	31	1354	746	1602	372	65	-15	C
	ATOM	148	CD1	PHE	A	31	20.359	-91.006	276.813	1.00	10.51		C
	ANISOU	148	CD1	PHE	A	31	1412	1177	1401	376	116	123	C
	ATOM	149	CE1	PHE	A	31	19.879	-92.268	276.698	1.00	11.49		C
	ANISOU	149	CE1	PHE	A	31	1493	1175	1698	262	8	233	C
10	ATOM	150	CZ	PHE	A	31	20.067	-92.962	275.567	1.00	9.82		C
	ANISOU	150	CZ	PHE	A	31	1356	724	1648	-6	-274	516	C
	ATOM	151	CE2	PHE	A	31	20.786	-92.502	274.527	1.00	12.53		C
	ANISOU	151	CE2	PHE	A	31	1472	1994	1293	-33	17	-135	C
	ATOM	152	CD2	PHE	A	31	21.359	-91.252	274.616	1.00	10.59		C
15	ANISOU	152	CD2	PHE	A	31	1270	1377	1377	433	-37	106	C
	ATOM	153	C	PHE	A	31	24.245	-89.778	275.759	1.00	11.35		C
	ANISOU	153	C	PHE	A	31	1407	1409	1496	123	89	70	C
	ATOM	154	O	PHE	A	31	24.532	-90.969	275.889	1.00	13.41		O
	ANISOU	154	O	PHE	A	31	1575	1396	2124	399	159	151	O
20	ATOM	155	N	HIS	A	32	24.776	-89.083	274.767	1.00	11.10		N
	ANISOU	155	N	HIS	A	32	1481	1004	1732	374	112	222	N
	ATOM	156	CA	HIS	A	32	25.771	-89.643	273.876	1.00	12.44		C
	ANISOU	156	CA	HIS	A	32	1237	1712	1775	-106	58	47	C
	ATOM	157	CB	HIS	A	32	26.297	-88.586	272.905	1.00	13.51		C
25	ANISOU	157	CB	HIS	A	32	1587	1762	1784	464	185	214	C
	ATOM	158	CG	HIS	A	32	25.263	-88.045	271.994	1.00	17.07		C
	ANISOU	158	CG	HIS	A	32	1924	2225	2335	-17	-224	543	C
	ATOM	159	ND1	HIS	A	32	25.379	-86.791	271.382	1.00	16.16		N
	ANISOU	159	ND1	HIS	A	32	1955	2001	2182	29	-235	155	N
30	ATOM	160	CE1	HIS	A	32	24.249	-86.558	270.699	1.00	16.56		C
	ANISOU	160	CE1	HIS	A	32	2265	1753	2272	238	-194	78	C
	ATOM	161	NE2	HIS	A	32	23.446	-87.612	270.823	1.00	14.82		N
	ANISOU	161	NE2	HIS	A	32	1692	1949	1989	222	62	168	N
	ATOM	162	CD2	HIS	A	32	24.029	-88.504	271.693	1.00	15.46		C
35	ANISOU	162	CD2	HIS	A	32	2193	2054	1625	-140	-70	264	C
	ATOM	163	C	HIS	A	32	27.006	-90.145	274.686	1.00	13.07		C

	ANISOU	163	C	HIS	A	32	1609	1769	1588	206	-85	239	C
	ATOM	164	O	HIS	A	32	27.604	-91.114	274.298	1.00	14.98		O
	ANISOU	164	O	HIS	A	32	1488	1963	2239	362	168	-6	O
	ATOM	165	N	ALYS	A	33	27.361	-89.456	275.765	0.50	11.43		N
5	ANISOU	165	N	ALYS	A	33	1344	1205	1795	232	-41	118	N
	ATOM	166	N	BLYS	A	33	27.354	-89.458	275.774	0.50	11.49		N
	ANISOU	166	N	BLYS	A	33	1370	1203	1791	216	-21	119	N
	ATOM	167	CA	ALYS	A	33	28.522	-89.866	276.539	0.50	12.41		C
	ANISOU	167	CA	ALYS	A	33	1364	1489	1861	225	-90	178	C
10	ATOM	168	CA	BLYS	A	33	28.521	-89.850	276.559	0.50	13.24		C
	ANISOU	168	CA	BLYS	A	33	1421	1631	1976	252	-81	254	C
	ATOM	169	CB	ALYS	A	33	29.011	-88.661	277.389	0.50	14.62		C
	ANISOU	169	CB	ALYS	A	33	1491	1583	2481	-77	-410	259	C
	ATOM	170	CB	BLYS	A	33	28.930	-88.671	277.494	0.50	16.64		C
15	ANISOU	170	CB	BLYS	A	33	1819	1728	2775	53	-240	169	C
	ATOM	171	CG	ALYS	A	33	29.679	-87.528	276.594	0.50	19.67		C
	ANISOU	171	CG	ALYS	A	33	2805	1767	2900	123	-355	904	C
	ATOM	172	CG	BLYS	A	33	30.070	-88.967	278.471	0.50	26.48		C
	ANISOU	172	CG	BLYS	A	33	3048	4148	2863	50	-886	262	C
20	ATOM	173	CD	ALYS	A	33	30.257	-86.467	277.532	0.50	23.04		C
	ANISOU	173	CD	ALYS	A	33	2971	2500	3282	-342	-448	162	C
	ATOM	174	CD	BLYS	A	33	30.579	-87.720	279.171	0.50	28.03		C
	ANISOU	174	CD	BLYS	A	33	3035	4260	3355	-592	163	35	C
	ATOM	175	CE	ALYS	A	33	31.073	-85.458	276.710	0.50	27.83		C
25	ANISOU	175	CE	ALYS	A	33	3333	2993	4247	380	712	465	C
	ATOM	176	CE	BLYS	A	33	31.736	-88.096	280.124	0.50	30.64		C
	ANISOU	176	CE	BLYS	A	33	2902	4085	4655	-1052	-861	-227	C
	ATOM	177	NZ	ALYS	A	33	31.991	-86.222	275.835	0.50	30.27		N
	ANISOU	177	NZ	ALYS	A	33	5067	3725	2707	248	341	-506	N
30	ATOM	178	NZ	BLYS	A	33	32.029	-87.020	281.118	0.50	40.05		N
	ANISOU	178	NZ	BLYS	A	33	5853	5668	3695	-302	-1045	-242	N
	ATOM	179	C	ALYS	A	33	28.218	-91.064	277.440	0.50	15.21		C
	ANISOU	179	C	ALYS	A	33	1606	1985	2186	444	68	594	C
	ATOM	180	C	BLYS	A	33	28.225	-91.081	277.383	0.50	15.50		C
35	ANISOU	180	C	BLYS	A	33	1668	1994	2224	384	49	552	C
	ATOM	181	O	ALYS	A	33	29.115	-91.837	277.729	0.50	16.90		O

	ANISOU	181	O	ALYS	A	33	1720	923	3778	203	-157	711	O
	ATOM	182	O	BLYS	A	33	29.109	-91.879	277.637	0.50	18.22		O
	ANISOU	182	O	BLYS	A	33	1741	1293	3888	213	-158	790	O
	ATOM	183	N	AASP	A	34	26.991	-91.160	277.942	0.50	14.41		N
5	ANISOU	183	N	AASP	A	34	1296	2111	2066	-160	-280	370	N
	ATOM	184	N	BASP	A	34	27.005	-91.193	277.868	0.50	15.37		N
	ANISOU	184	N	BASP	A	34	1380	2227	2231	-173	-256	369	N
	ATOM	185	CA	AASP	A	34	26.549	-92.159	278.994	0.50	18.63		C
	ANISOU	185	CA	AASP	A	34	2017	2587	2475	-718	-85	597	C
10	ATOM	186	CA	BASP	A	34	26.655	-92.170	278.923	0.50	19.47		C
	ANISOU	186	CA	BASP	A	34	2031	2795	2569	-676	-79	622	C
	ATOM	187	CB	AASP	A	34	26.312	-91.477	280.408	0.50	25.24		C
	ANISOU	187	CB	AASP	A	34	3373	3372	2845	-284	319	154	C
	ATOM	188	CB	BASP	A	34	26.630	-91.458	280.321	0.50	27.58		C
15	ANISOU	188	CB	BASP	A	34	3526	4107	2844	-278	368	-48	C
	ATOM	189	CG	AASP	A	34	25.526	-92.431	281.444	0.50	26.80		C
	ANISOU	189	CG	AASP	A	34	4281	2215	3684	694	239	1151	C
	ATOM	190	CG	BASP	A	34	28.036	-91.068	280.886	0.50	33.61		C
	ANISOU	190	CG	BASP	A	34	4159	3597	5013	1142	-1089	-835	C
20	ATOM	191	OD1AASP	A	34	25.996	-93.602	281.351	0.50	27.72			O
	ANISOU	191	OD1AASP	A	34	5909	2687	1936	1691	34	464		O
	ATOM	192	OD1BASP	A	34	29.033	-91.781	280.608	0.50	34.52			O
	ANISOU	192	OD1BASP	A	34	3178	5705	4232	1209	331	-413		O
	ATOM	193	OD2AASP	A	34	24.498	-92.072	282.254	0.50	19.25			O
25	ANISOU	193	OD2AASP	A	34	2174	1666	3472	665	-1366	1018		O
	ATOM	194	OD2BASP	A	34	28.115	-90.055	281.668	0.50	29.36			O
	ANISOU	194	OD2BASP	A	34	4921	3790	2442	686	-575	355		O
	ATOM	195	C	AASP	A	34	25.193	-92.705	278.625	0.50	14.39		C
	ANISOU	195	C	AASP	A	34	1654	2235	1578	-125	-147	56	C
30	ATOM	196	C	BASP	A	34	25.236	-92.693	278.617	0.50	14.66		C
	ANISOU	196	C	BASP	A	34	1721	2274	1574	-122	-158	34	C
	ATOM	197	O	AASP	A	34	24.252	-92.390	279.311	0.50	19.49		O
	ANISOU	197	O	AASP	A	34	2487	3051	1864	-39	519	66	O
	ATOM	198	O	BASP	A	34	24.303	-92.350	279.318	0.50	20.16		O
35	ANISOU	198	O	BASP	A	34	2584	3183	1890	-37	594	123	O
	ATOM	199	N	PRO	A	35	25.061	-93.446	277.521	1.00	12.65		N

	ANISOU	199	N	PRO	A	35	1393	1605	1805	-317	40	289	N
	ATOM	200	CA	PRO	A	35	23.673	-93.771	277.049	1.00	13.18		C
	ANISOU	200	CA	PRO	A	35	1269	2012	1726	-28	169	305	C
	ATOM	201	CB	PRO	A	35	23.844	-94.490	275.737	1.00	13.48		C
5	ANISOU	201	CB	PRO	A	35	1933	1027	2159	125	-16	539	C
	ATOM	202	CG	PRO	A	35	25.310	-94.458	275.452	1.00	19.46		C
	ANISOU	202	CG	PRO	A	35	2369	2254	2770	-114	824	-350	C
	ATOM	203	CD	PRO	A	35	26.067	-93.884	276.559	1.00	15.39		C
	ANISOU	203	CD	PRO	A	35	1903	1546	2395	9	82	27	C
10	ATOM	204	C	PRO	A	35	22.947	-94.660	278.084	1.00	13.55		C
	ANISOU	204	C	PRO	A	35	1621	1707	1817	384	241	834	C
	ATOM	205	O	PRO	A	35	23.536	-95.632	278.633	1.00	16.70		O
	ANISOU	205	O	PRO	A	35	1952	1295	3098	305	144	910	O
	ATOM	206	N	ARG	A	36	21.680	-94.341	278.355	1.00	11.32		N
15	ANISOU	206	N	ARG	A	36	1277	1520	1502	147	-13	388	N
	ATOM	207	CA	ARG	A	36	20.804	-95.049	279.260	1.00	9.52		C
	ANISOU	207	CA	ARG	A	36	1407	893	1317	110	-116	200	C
	ATOM	208	CB	ARG	A	36	20.259	-94.148	280.312	1.00	12.05		C
	ANISOU	208	CB	ARG	A	36	1677	1186	1714	164	52	183	C
20	ATOM	209	CG	ARG	A	36	21.329	-93.525	281.193	1.00	12.38		C
	ANISOU	209	CG	ARG	A	36	1944	1216	1542	209	-215	423	C
	ATOM	210	CD	ARG	A	36	20.787	-92.468	282.175	1.00	13.01		C
	ANISOU	210	CD	ARG	A	36	1753	1452	1737	308	-94	281	C
	ATOM	211	NE	ARG	A	36	20.311	-91.241	281.480	1.00	13.40		N
25	ANISOU	211	NE	ARG	A	36	1738	1238	2114	-59	-141	160	N
	ATOM	212	CZ	ARG	A	36	21.089	-90.280	281.084	1.00	12.36		C
	ANISOU	212	CZ	ARG	A	36	1639	1381	1674	99	-293	448	C
	ATOM	213	NH1	ARG	A	36	20.556	-89.255	280.406	1.00	11.83		N
	ANISOU	213	NH1	ARG	A	36	1304	1186	2002	-28	-385	486	N
30	ATOM	214	NH2	ARG	A	36	22.402	-90.272	281.298	1.00	13.87		N
	ANISOU	214	NH2	ARG	A	36	1520	1844	1905	171	-298	394	N
	ATOM	215	C	ARG	A	36	19.754	-95.635	278.387	1.00	9.85		C
	ANISOU	215	C	ARG	A	36	1208	1230	1304	147	-43	335	C
	ATOM	216	O	ARG	A	36	18.748	-94.993	278.103	1.00	11.61		O
35	ANISOU	216	O	ARG	A	36	1536	1436	1439	131	164	664	O
	ATOM	217	N	AILE	A	37	19.961	-96.899	278.021	0.50	10.97		N

	ANISOU	217	N	AILE	A	37	1521	1104	1542	-27	44	312	N
	ATOM	218	N	BILE	A	37	19.935	-96.908	278.030	0.50	11.22		N
	ANISOU	218	N	BILE	A	37	1570	1117	1576	-24	39	327	N
	ATOM	219	CA	AILE	A	37	19.117	-97.599	277.059	0.50	10.59		C
5	ANISOU	219	CA	AILE	A	37	1592	942	1488	218	50	108	C
	ATOM	220	CA	BILE	A	37	19.077	-97.595	277.059	0.50	11.14		C
	ANISOU	220	CA	BILE	A	37	1641	985	1603	188	10	126	C
	ATOM	221	CB	AILE	A	37	20.003	-98.193	275.970	0.50	12.62		C
	ANISOU	221	CB	AILE	A	37	1495	1707	1590	345	131	166	C
10	ATOM	222	CB	BILE	A	37	19.938	-98.171	275.925	0.50	14.26		C
	ANISOU	222	CB	BILE	A	37	1647	2002	1766	385	126	166	C
	ATOM	223	CG1AILE	A	37		20.678	-97.066	275.220	0.50	13.88		C
	ANISOU	223	CG1AILE	A	37		1797	1966	1511	-59	239	-142	C
	ATOM	224	CG1BILE	A	37		20.554	-97.041	275.103	0.50	15.80		C
15	ANISOU	224	CG1BILE	A	37		1841	2190	1972	-49	-7	-13	C
	ATOM	225	CD1AILE	A	37		19.737	-96.331	274.290	0.50	13.25		C
	ANISOU	225	CD1AILE	A	37		1905	1596	1531	-131	328	-84	C
	ATOM	226	CD1BILE	A	37		21.717	-97.487	274.220	0.50	20.73		C
	ANISOU	226	CD1BILE	A	37		2178	3195	2502	-293	564	-371	C
20	ATOM	227	CG2AILE	A	37		19.203	-98.973	274.984	0.50	11.43		C
	ANISOU	227	CG2AILE	A	37		1633	1059	1650	252	249	218	C
	ATOM	228	CG2BILE	A	37		19.120	-99.030	275.008	0.50	13.62		C
	ANISOU	228	CG2BILE	A	37		1997	1324	1852	330	240	287	C
	ATOM	229	C	AILE	A	37	18.313	-98.681	277.724	0.50	11.20		C
25	ANISOU	229	C	AILE	A	37	1177	1487	1591	40	27	356	C
	ATOM	230	C	BILE	A	37	18.260	-98.682	277.714	0.50	11.31		C
	ANISOU	230	C	BILE	A	37	1230	1498	1570	95	13	394	C
	ATOM	231	O	AILE	A	37	18.879	-99.566	278.368	0.50	11.85		O
	ANISOU	231	O	AILE	A	37	1668	1069	1765	24	66	422	O
30	ATOM	232	O	BILE	A	37	18.802	-99.576	278.364	0.50	12.23		O
	ANISOU	232	O	BILE	A	37	1648	1207	1789	189	33	401	O
	ATOM	233	N	AILE	A	38	16.988	-98.600	277.549	0.50	10.36		N
	ANISOU	233	N	AILE	A	38	1469	1026	1440	-13	-192	374	N
	ATOM	234	N	BILE	A	38	16.942	-98.602	277.528	0.50	10.47		N
35	ANISOU	234	N	BILE	A	38	1483	1039	1455	-27	-172	349	N
	ATOM	235	CA	AILE	A	38	16.018	-99.535	278.080	0.50	11.18		C

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	ANISOU	235	CA	AILE	A	38	1501	1216	1530	-82	190	284	C
	ATOM	236	CA	BILE	A	38	15.985	-99.530	278.068	0.50	11.09		C
	ANISOU	236	CA	BILE	A	38	1489	1200	1523	-50	183	289	C
	ATOM	237	CB	AILE	A	38	14.793	-98.834	278.757	0.50	11.80		C
5	ANISOU	237	CB	AILE	A	38	1854	1081	1545	87	40	252	C
	ATOM	238	CB	BILE	A	38	14.783	-98.798	278.728	0.50	11.69		C
	ANISOU	238	CB	BILE	A	38	1856	1022	1563	121	44	260	C
	ATOM	239	CG1AILE	A	38		15.249	-98.039	279.989	0.50	10.62		C
	ANISOU	239	CG1AILE	A	38		1577	1017	1438	303	-14	83	C
10	ATOM	240	CG1BILE	A	38		15.345	-97.864	279.802	0.50	11.55		C
	ANISOU	240	CG1BILE	A	38		1482	1373	1532	149	105	-62	C
	ATOM	241	CD1AILE	A	38		15.930	-98.868	281.069	0.50	12.60		C
	ANISOU	241	CD1AILE	A	38		1439	1662	1686	451	-230	325	C
	ATOM	242	CD1BILE	A	38		14.496	-96.682	280.162	0.50	13.66		C
15	ANISOU	242	CD1BILE	A	38		1780	1492	1914	382	161	212	C
	ATOM	243	CG2AILE	A	38		13.670	-99.836	279.059	0.50	12.35		C
	ANISOU	243	CG2AILE	A	38		1745	1550	1395	39	69	167	C
	ATOM	244	CG2BILE	A	38		13.713	-99.792	279.190	0.50	12.49		C
	ANISOU	244	CG2BILE	A	38		1694	1561	1489	45	119	134	C
20	ATOM	245	C	AILE	A	38	15.510	-100.452	276.967	0.50	9.56		C
	ANISOU	245	C	AILE	A	38	1429	756	1447	328	265	176	C
	ATOM	246	C	BILE	A	38	15.488	-100.452	276.964	0.50	9.55		C
	ANISOU	246	C	BILE	A	38	1418	750	1461	364	248	176	C
	ATOM	247	O	AILE	A	38	15.253	-99.979	275.841	0.50	11.24		O
25	ANISOU	247	O	AILE	A	38	1615	1277	1376	263	129	99	O
	ATOM	248	O	BILE	A	38	15.226	-99.984	275.839	0.50	11.30		O
	ANISOU	248	O	BILE	A	38	1611	1315	1366	232	139	98	O
	ATOM	249	N	VAL	A	39	15.458	-101.812	277.233	1.00	9.32		N
	ANISOU	249	N	VAL	A	39	1522	684	1332	259	55	194	N
30	ATOM	250	CA	VAL	A	39	15.067	-102.761	276.186	1.00	10.84		C
	ANISOU	250	CA	VAL	A	39	1240	1411	1465	169	127	252	C
	ATOM	251	CB	VAL	A	39	16.240	-103.753	275.918	1.00	11.45		C
	ANISOU	251	CB	VAL	A	39	1417	1300	1631	171	131	94	C
	ATOM	252	CG1	VAL	A	39	17.501	-103.034	275.524	1.00	10.64		C
35	ANISOU	252	CG1	VAL	A	39	1523	681	1836	222	-65	135	C
	ATOM	253	CG2	VAL	A	39	16.589	-104.663	277.107	1.00	12.04		C

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	ANISOU	253	CG2	VAL	A	39	1800	766	2006	447	-38	123	C
	ATOM	254	C	VAL	A	39	13.807-103.554	276.510	1.00	8.68			C
	ANISOU	254	C	VAL	A	39	1243	702	1353	129	81	-24	C
	ATOM	255	O	VAL	A	39	13.265-104.244	275.619	1.00	11.32			O
5	ANISOU	255	O	VAL	A	39	1671	1155	1475	-2	44	27	O
	ATOM	256	N	ALA	A	40	13.375-103.518	277.787	1.00	9.41			N
	ANISOU	256	N	ALA	A	40	1467	852	1256	3	106	7	N
	ATOM	257	CA	ALA	A	40	12.228-104.303	278.232	1.00	9.95			C
	ANISOU	257	CA	ALA	A	40	1430	937	1414	59	143	355	C
10	ATOM	258	CB	ALA	A	40	12.566-105.803	278.465	1.00	12.89			C
	ANISOU	258	CB	ALA	A	40	2040	978	1878	446	36	145	C
	ATOM	259	C	ALA	A	40	11.684-103.647	279.484	1.00	9.79			C
	ANISOU	259	C	ALA	A	40	1231	1101	1385	172	-146	18	C
	ATOM	260	O	ALA	A	40	12.369-102.961	280.172	1.00	10.97			O
15	ANISOU	260	O	ALA	A	40	1477	1059	1629	78	-57	25	O
	ATOM	261	N	ALA	A	41	10.424-103.930	279.775	1.00	10.44			N
	ANISOU	261	N	ALA	A	41	1342	1100	1523	83	52	32	N
	ATOM	262	CA	ALA	A	41	9.801-103.565	281.021	1.00	10.26			C
	ANISOU	262	CA	ALA	A	41	1603	1029	1265	152	70	400	C
20	ATOM	263	CB	ALA	A	41	9.316-102.146	280.922	1.00	10.43			C
	ANISOU	263	CB	ALA	A	41	1712	918	1332	1	236	431	C
	ATOM	264	C	ALA	A	41	8.652-104.513	281.326	1.00	10.60			C
	ANISOU	264	C	ALA	A	41	1433	1097	1496	138	-83	129	C
	ATOM	265	O	ALA	A	41	7.923-104.905	280.430	1.00	11.33			O
25	ANISOU	265	O	ALA	A	41	1650	937	1716	81	128	166	O
	ATOM	266	N	GLU	A	42	8.425-104.712	282.609	1.00	11.08			N
	ANISOU	266	N	GLU	A	42	1715	1086	1409	-101	94	301	N
	ATOM	267	CA	GLU	A	42	7.285-105.509	283.050	1.00	10.64			C
	ANISOU	267	CA	GLU	A	42	1415	1029	1597	6	86	327	C
30	ATOM	268	CB	GLU	A	42	7.624-107.034	283.056	1.00	13.91			C
	ANISOU	268	CB	GLU	A	42	2174	990	2120	-87	17	179	C
	ATOM	269	CG	GLU	A	42	6.420-107.932	283.409	1.00	20.77			C
	ANISOU	269	CG	GLU	A	42	2628	1852	3410	-178	624	143	C
	ATOM	270	CD	GLU	A	42	6.738-109.431	283.426	1.00	33.24			C
35	ANISOU	270	CD	GLU	A	42	6460	2004	4162	755	1444	-690	C
	ATOM	271	OE1	GLU	A	42	7.147-110.008	282.410	1.00	29.23			O

	ANISOU	271	OE1	GLU	A	42	4959	1895	4250	352	1209	87	O
	ATOM	272	OE2	GLU	A	42	6.536-110.006	284.480	1.00	45.03			O
	ANISOU	272	OE2	GLU	A	42	7567	4331	5211	201	669	1196	O
	ATOM	273	C	GLU	A	42	6.978-105.109	284.476	1.00	9.11			C
5	ANISOU	273	C	GLU	A	42	1545	546	1367	-140	93	174	C
	ATOM	274	O	GLU	A	42	7.879-104.931	285.313	1.00	10.71			O
	ANISOU	274	O	GLU	A	42	1484	1090	1495	0	61	251	O
	ATOM	275	N	GLY	A	43	5.694-104.846	284.726	1.00	10.60			N
	ANISOU	275	N	GLY	A	43	1406	1203	1418	86	33	109	N
10	ATOM	276	CA	GLY	A	43	5.346-104.383	286.088	1.00	10.88			C
	ANISOU	276	CA	GLY	A	43	1516	1262	1353	-43	100	-92	C
	ATOM	277	C	GLY	A	43	5.986-103.064	286.423	1.00	11.32			C
	ANISOU	277	C	GLY	A	43	1627	1116	1556	75	139	146	C
	ATOM	278	O	GLY	A	43	5.920-102.066	285.665	1.00	11.19			O
15	ANISOU	278	O	GLY	A	43	1490	1225	1535	-6	20	426	O
	ATOM	279	N	SER	A	44	6.609-103.005	287.584	1.00	9.21			N
	ANISOU	279	N	SER	A	44	1578	763	1158	-184	96	114	N
	ATOM	280	CA	SER	A	44	7.212-101.788	288.036	1.00	8.70			C
	ANISOU	280	CA	SER	A	44	1522	292	1491	-47	124	50	C
20	ATOM	281	CB	SER	A	44	7.035-101.630	289.556	1.00	9.35			C
	ANISOU	281	CB	SER	A	44	1708	461	1383	33	191	147	C
	ATOM	282	OG	SER	A	44	5.658-101.671	289.911	1.00	11.79			O
	ANISOU	282	OG	SER	A	44	1589	1144	1746	127	40	162	O
	ATOM	283	C	SER	A	44	8.727-101.728	287.712	1.00	10.29			C
25	ANISOU	283	C	SER	A	44	1468	999	1439	133	158	100	C
	ATOM	284	O	SER	A	44	9.425-100.912	288.286	1.00	12.42			O
	ANISOU	284	O	SER	A	44	1895	1134	1687	-310	12	373	O
	ATOM	285	N	TRP	A	45	9.184-102.580	286.810	1.00	11.26			N
	ANISOU	285	N	TRP	A	45	1571	1193	1511	-7	174	139	N
30	ATOM	286	CA	TRP	A	45	10.605-102.730	286.505	1.00	10.92			C
	ANISOU	286	CA	TRP	A	45	1641	1059	1449	12	206	57	C
	ATOM	287	CB	TRP	A	45	11.061-104.109	286.969	1.00	12.43			C
	ANISOU	287	CB	TRP	A	45	1776	1125	1821	21	236	-11	C
	ATOM	288	CG	TRP	A	45	10.933-104.291	288.455	1.00	13.09			C
35	ANISOU	288	CG	TRP	A	45	1903	1292	1778	-62	44	611	C
	ATOM	289	CD1	TRP	A	45	9.821-104.824	289.123	1.00	13.51			C

	ANISOU	289	CD1	TRP	A	45	1769	1510	1854	-7	-62	431	C
	ATOM	290	NE1	TRP	A	45	10.045-104.793	290.449	1.00	13.80			N
	ANISOU	290	NE1	TRP	A	45	2400	1021	1820	279	-181	349	N
	ATOM	291	CE2	TRP	A	45	11.281-104.276	290.704	1.00	14.98			C
5	ANISOU	291	CE2	TRP	A	45	2406	1374	1911	-2	-73	944	C
	ATOM	292	CD2	TRP	A	45	11.867-103.950	289.462	1.00	12.80			C
	ANISOU	292	CD2	TRP	A	45	1946	1002	1913	164	119	466	C
	ATOM	293	CE3	TRP	A	45	13.153-103.388	289.459	1.00	14.42			C
	ANISOU	293	CE3	TRP	A	45	1970	1606	1900	-21	-25	626	C
10	ATOM	294	CZ3	TRP	A	45	13.806-103.162	290.663	1.00	15.27			C
	ANISOU	294	CZ3	TRP	A	45	2036	1409	2356	202	-92	311	C
	ATOM	295	CH2	TRP	A	45	13.192-103.498	291.875	1.00	15.54			C
	ANISOU	295	CH2	TRP	A	45	2268	1606	2027	208	-244	365	C
	ATOM	296	CZ2	TRP	A	45	11.932-104.041	291.915	1.00	17.53			C
15	ANISOU	296	CZ2	TRP	A	45	2491	2144	2025	85	-261	464	C
	ATOM	297	C	TRP	A	45	10.962-102.547	285.030	1.00	13.37			C
	ANISOU	297	C	TRP	A	45	1558	2021	1499	-293	-97	35	C
	ATOM	298	O	TRP	A	45	10.358-103.161	284.162	1.00	13.63			O
	ANISOU	298	O	TRP	A	45	1951	1568	1657	-592	110	54	O
20	ATOM	299	N	LEU	A	46	11.994-101.755	284.803	1.00	10.68			N
	ANISOU	299	N	LEU	A	46	1576	1186	1297	23	29	-47	N
	ATOM	300	CA	LEU	A	46	12.695-101.548	283.565	1.00	10.64			C
	ANISOU	300	CA	LEU	A	46	1441	1273	1327	350	89	354	C
	ATOM	301	CB	LEU	A	46	13.200-100.116	283.408	1.00	11.40			C
25	ANISOU	301	CB	LEU	A	46	1732	1324	1275	127	138	565	C
	ATOM	302	CG	LEU	A	46	12.142 -99.129	283.626	1.00	11.16			C
	ANISOU	302	CG	LEU	A	46	1648	1175	1418	-101	268	35	C
	ATOM	303	CD1	LEU	A	46	12.867 -97.818	283.697	1.00	11.93			C
	ANISOU	303	CD1	LEU	A	46	1595	1417	1521	-74	20	20	C
30	ATOM	304	CD2	LEU	A	46	11.065 -99.083	282.606	1.00	10.78			C
	ANISOU	304	CD2	LEU	A	46	1562	853	1680	-75	103	126	C
	ATOM	305	C	LEU	A	46	13.868-102.545	283.503	1.00	11.07			C
	ANISOU	305	C	LEU	A	46	1630	1152	1424	280	208	131	C
	ATOM	306	O	LEU	A	46	14.436-102.874	284.582	1.00	11.02			O
35	ANISOU	306	O	LEU	A	46	1608	1089	1489	-3	-84	406	O
	ATOM	307	N	VAL	A	47	14.285-102.877	282.282	1.00	10.52			N

	ANISOU	307	N	VAL	A	47	1525	1174	1298	259	126	179	N
	ATOM	308	CA	VAL	A	47	15.524-103.695	282.073	1.00	11.56			C
	ANISOU	308	CA	VAL	A	47	1307	1594	1488	185	143	379	C
	ATOM	309	CB	VAL	A	47	15.266-105.135	281.575	1.00	15.91			C
5	ANISOU	309	CB	VAL	A	47	2088	1999	1957	148	67	152	C
	ATOM	310	CG1	VAL	A	47	16.552-105.913	281.422	1.00	14.03			C
	ANISOU	310	CG1	VAL	A	47	2322	1146	1863	-120	0	680	C
	ATOM	311	CG2	VAL	A	47	14.250-105.788	282.532	1.00	17.76			C
	ANISOU	311	CG2	VAL	A	47	2439	1809	2498	40	79	167	C
10	ATOM	312	C	VAL	A	47	16.383-102.906	281.083	1.00	10.35			C
	ANISOU	312	C	VAL	A	47	1598	976	1357	-130	-39	-113	C
	ATOM	313	O	VAL	A	47	15.883-102.634	279.964	1.00	11.08			O
	ANISOU	313	O	VAL	A	47	1486	1248	1473	109	87	268	O
	ATOM	314	N	ASP	A	48	17.632-102.653	281.427	1.00	12.15			N
15	ANISOU	314	N	ASP	A	48	1718	1206	1690	14	3	477	N
	ATOM	315	CA	ASP	A	48	18.510-101.901	280.516	1.00	12.87			C
	ANISOU	315	CA	ASP	A	48	1654	1663	1570	37	116	214	C
	ATOM	316	CB	ASP	A	48	19.425-100.945	281.262	1.00	12.57			C
	ANISOU	316	CB	ASP	A	48	1737	1373	1666	244	-28	352	C
20	ATOM	317	CG	ASP	A	48	20.622-101.547	281.970	1.00	12.94			C
	ANISOU	317	CG	ASP	A	48	1561	1695	1661	321	-97	-121	C
	ATOM	318	OD1	ASP	A	48	20.864-102.797	281.794	1.00	14.83			O
	ANISOU	318	OD1	ASP	A	48	1988	1563	2080	404	-45	360	O
	ATOM	319	OD2	ASP	A	48	21.298-100.759	282.628	1.00	15.85			O
25	ANISOU	319	OD2	ASP	A	48	1934	2146	1942	102	-142	411	O
	ATOM	320	C	ASP	A	48	19.225-102.858	279.541	1.00	12.69			C
	ANISOU	320	C	ASP	A	48	1809	1526	1484	-20	79	249	C
	ATOM	321	O	ASP	A	48	19.055-104.086	279.632	1.00	13.98			O
	ANISOU	321	O	ASP	A	48	1868	1466	1975	551	342	361	O
30	ATOM	322	N	ASP	A	49	20.054-102.238	278.662	1.00	12.95			N
	ANISOU	322	N	ASP	A	49	1581	1542	1795	294	430	312	N
	ATOM	323	CA	ASP	A	49	20.708-103.006	277.641	1.00	13.06			C
	ANISOU	323	CA	ASP	A	49	1637	1569	1753	250	408	486	C
	ATOM	324	CB	ASP	A	49	21.183-102.131	276.481	1.00	15.21			C
35	ANISOU	324	CB	ASP	A	49	2062	1915	1801	249	560	467	C
	ATOM	325	CG	ASP	A	49	22.198-101.106	276.862	1.00	17.29			C

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	ANISOU	325	CG	ASP	A	49	2292	2193	2084	92	242	409	C
	ATOM	326	OD1	ASP	A	49	22.472-100.774	278.069	1.00	17.32			O
	ANISOU	326	OD1	ASP	A	49	2224	1948	2408	167	-178	144	O
	ATOM	327	OD2	ASP	A	49	22.704-100.505	275.843	1.00	21.64			O
5	ANISOU	327	OD2	ASP	A	49	2439	3237	2546	334	652	749	O
	ATOM	328	C	ASP	A	49	21.899-103.859	278.188	1.00	16.43			C
	ANISOU	328	C	ASP	A	49	2583	1444	2214	681	-1	263	C
	ATOM	329	O	ASP	A	49	22.511-104.570	277.397	1.00	21.05			O
	ANISOU	329	O	ASP	A	49	2922	2627	2446	1408	560	268	O
10	ATOM	330	N	ALYS	A	50	22.192-103.739	279.470	0.50	17.12			N
	ANISOU	330	N	ALYS	A	50	1906	2462	2133	651	208	397	N
	ATOM	331	N	BLYS	A	50	22.221-103.725	279.464	0.50	17.29			N
	ANISOU	331	N	BLYS	A	50	1886	2546	2136	652	223	406	N
	ATOM	332	CA	ALYS	A	50	23.175-104.571	280.179	0.50	16.59			C
15	ANISOU	332	CA	ALYS	A	50	2195	2086	2023	566	256	1308	C
	ATOM	333	CA	BLYS	A	50	23.184-104.604	280.151	0.50	17.40			C
	ANISOU	333	CA	BLYS	A	50	2329	2155	2127	657	292	1412	C
	ATOM	334	CB	ALYS	A	50	24.062-103.685	281.083	0.50	25.23			C
	ANISOU	334	CB	ALYS	A	50	3256	3156	3173	94	-151	683	C
20	ATOM	335	CB	BLYS	A	50	24.106-103.810	281.095	0.50	29.25			C
	ANISOU	335	CB	BLYS	A	50	3826	3445	3842	140	-299	535	C
	ATOM	336	CG	ALYS	A	50	24.919-102.675	280.317	0.50	27.41			C
	ANISOU	336	CG	ALYS	A	50	3645	3079	3690	-365	13	-57	C
	ATOM	337	CG	BLYS	A	50	25.127-102.852	280.472	0.50	34.94			C
25	ANISOU	337	CG	BLYS	A	50	4456	4647	4171	-409	326	-38	C
	ATOM	338	CD	ALYS	A	50	25.387-101.452	281.102	0.50	22.76			C
	ANISOU	338	CD	ALYS	A	50	3705	1704	3235	602	1122	-68	C
	ATOM	339	CD	BLYS	A	50	25.408-103.073	278.985	0.50	32.10			C
	ANISOU	339	CD	BLYS	A	50	3502	5165	3526	19	-961	78	C
30	ATOM	340	CE	ALYS	A	50	25.383-101.562	282.593	0.50	26.46			C
	ANISOU	340	CE	ALYS	A	50	3434	3215	3403	467	818	-830	C
	ATOM	341	CE	BLYS	A	50	24.838-101.930	278.160	0.50	33.83			C
	ANISOU	341	CE	BLYS	A	50	4240	4460	4154	-274	-539	119	C
	ATOM	342	NZ	ALYS	A	50	24.034-101.112	283.043	0.50	19.02			N
35	ANISOU	342	NZ	ALYS	A	50	1625	3179	2422	242	-631	0	N
	ATOM	343	NZ	BLYS	A	50	25.391-100.537	278.227	0.50	29.06			N

	ANISOU	343	NZ	BLYS	A	50	2914	4763	3362	-852	224	792	N
	ATOM	344	C	ALYS	A	50	22.460	-105.647	280.994	0.50	19.34		C
	ANISOU	344	C	ALYS	A	50	2727	1812	2808	281	-132	753	C
	ATOM	345	C	BLYS	A	50	22.459	-105.675	280.962	0.50	19.25		C
5	ANISOU	345	C	BLYS	A	50	2717	1776	2818	323	-180	747	C
	ATOM	346	O	ALYS	A	50	23.111	-106.421	281.691	0.50	19.59		O
	ANISOU	346	O	ALYS	A	50	2052	3012	2377	1894	497	1754	O
	ATOM	347	O	BLYS	A	50	23.105	-106.464	281.644	0.50	19.42		O
	ANISOU	347	O	BLYS	A	50	2023	3024	2332	1900	577	1795	O
10	ATOM	348	N	GLY	A	51	21.139	-105.716	280.923	1.00	15.30		N
	ANISOU	348	N	GLY	A	51	2169	1361	2281	429	131	752	N
	ATOM	349	CA	GLY	A	51	20.348	-106.739	281.679	1.00	15.09		C
	ANISOU	349	CA	GLY	A	51	2213	1700	1820	576	203	808	C
	ATOM	350	C	GLY	A	51	20.048	-106.320	283.139	1.00	14.82		C
15	ANISOU	350	C	GLY	A	51	2037	1542	2050	201	106	-50	C
	ATOM	351	O	GLY	A	51	19.460	-107.109	283.863	1.00	19.94		O
	ANISOU	351	O	GLY	A	51	3405	1607	2564	251	441	734	O
	ATOM	352	N	ARG	A	52	20.370	-105.074	283.544	1.00	13.25		N
	ANISOU	352	N	ARG	A	52	1735	1656	1641	95	-41	336	N
20	ATOM	353	CA	ARG	A	52	20.101	-104.600	284.877	1.00	13.29		C
	ANISOU	353	CA	ARG	A	52	1892	1522	1633	747	-231	15	C
	ATOM	354	CB	ARG	A	52	20.870	-103.379	285.304	1.00	17.96		C
	ANISOU	354	CB	ARG	A	52	2201	2084	2539	-245	-203	593	C
	ATOM	355	CG	ARG	A	52	22.373	-103.438	285.286	1.00	22.01		C
25	ANISOU	355	CG	ARG	A	52	2717	2632	3013	211	-286	-80	C
	ATOM	356	CD	ARG	A	52	22.882	-102.287	286.112	1.00	22.80		C
	ANISOU	356	CD	ARG	A	52	3007	1921	3731	946	-792	98	C
	ATOM	357	NE	ARG	A	52	22.528	-100.968	285.524	1.00	20.42		N
	ANISOU	357	NE	ARG	A	52	2852	1882	3022	528	-184	118	N
30	ATOM	358	CZ	ARG	A	52	22.062	-99.938	286.204	1.00	18.08		C
	ANISOU	358	CZ	ARG	A	52	2321	2079	2468	631	-2	-51	C
	ATOM	359	NH1	ARG	A	52	21.786	-100.010	287.467	1.00	23.15		N
	ANISOU	359	NH1	ARG	A	52	3866	2045	2884	703	-232	310	N
	ATOM	360	NH2	ARG	A	52	21.790	-98.837	285.535	1.00	20.47		N
35	ANISOU	360	NH2	ARG	A	52	3405	1513	2857	-274	518	159	N
	ATOM	361	C	ARG	A	52	18.626	-104.264	285.066	1.00	13.33		C

	ANISOU	361	C	ARG	A	52	1835	1449	1779	389	115	176	C
	ATOM	362	O	ARG	A	52	18.020-103.666	284.171	1.00	14.41			O
	ANISOU	362	O	ARG	A	52	1840	1839	1793	337	0	464	O
	ATOM	363	N	AARG	A	53	18.074-104.605	286.221	0.50	13.96			N
5	ANISOU	363	N	AARG	A	53	2168	1234	1902	824	334	498	N
	ATOM	364	N	BARG	A	53	18.056-104.650	286.206	0.50	15.36			N
	ANISOU	364	N	BARG	A	53	2233	1648	1954	619	346	490	N
	ATOM	365	CA	AARG	A	53	16.681-104.345	286.530	0.50	15.07			C
	ANISOU	365	CA	AARG	A	53	1921	2153	1650	278	3	479	C
10	ATOM	366	CA	BARG	A	53	16.678-104.325	286.572	0.50	16.10			C
	ANISOU	366	CA	BARG	A	53	2014	2379	1724	416	-22	365	C
	ATOM	367	CB	AARG	A	53	16.105-105.554	287.255	0.50	14.59			C
	ANISOU	367	CB	AARG	A	53	1933	1622	1987	656	60	556	C
	ATOM	368	CB	BARG	A	53	16.131-105.369	287.505	0.50	17.71			C
15	ANISOU	368	CB	BARG	A	53	2288	1752	2685	624	79	544	C
	ATOM	369	CG	AARG	A	53	16.097-106.796	286.366	0.50	19.13			C
	ANISOU	369	CG	AARG	A	53	2548	2358	2361	-614	515	225	C
	ATOM	370	CG	BARG	A	53	15.573-106.588	286.856	0.50	24.78			C
	ANISOU	370	CG	BARG	A	53	3335	2950	3129	-924	-63	523	C
20	ATOM	371	CD	AARG	A	53	15.436-107.996	287.026	0.50	18.05			C
	ANISOU	371	CD	AARG	A	53	2716	1641	2501	-202	-84	398	C
	ATOM	372	CD	BARG	A	53	15.262-107.556	287.983	0.50	23.66			C
	ANISOU	372	CD	BARG	A	53	3115	2324	3551	330	-418	1024	C
	ATOM	373	NE	AARG	A	53	14.102-107.756	287.624	0.50	16.39			N
25	ANISOU	373	NE	AARG	A	53	2601	1282	2344	39	-195	1453	N
	ATOM	374	NE	BARG	A	53	13.858-107.583	288.430	0.50	25.94			N
	ANISOU	374	NE	BARG	A	53	3820	2846	3189	-300	539	-476	N
	ATOM	375	CZ	AARG	A	53	12.975-107.741	286.937	0.50	17.71			C
	ANISOU	375	CZ	AARG	A	53	2422	1855	2451	-57	56	682	C
30	ATOM	376	CZ	BARG	A	53	13.476-107.342	289.684	0.50	27.73			C
	ANISOU	376	CZ	BARG	A	53	3751	3250	3535	671	526	-314	C
	ATOM	377	NH1AARG	A	53	13.024-107.825	285.596	0.50	13.74				N
	ANISOU	377	NH1AARG	A	53	2387	526	2306	-217	-271	305		N
	ATOM	378	NH1BARG	A	53	14.383-106.990	290.575	0.50	31.47				N
35	ANISOU	378	NH1BARG	A	53	4778	3605	3572	554	-371	1275		N
	ATOM	379	NH2AARG	A	53	11.843-107.540	287.588	0.50	19.34				N

	ANISOU	379	NH2AARG	A	53	2986	519	3842	-426	621	642	N	
	ATOM	380	NH2BARG	A	53	12.203-107.434	290.029	0.50	24.79			N	
	ANISOU	380	NH2BARG	A	53	3696	1805	3917	1472	651	-700	N	
	ATOM	381	C	AARG	A	53	16.689-103.056	287.332	0.50	12.59		C	
5	ANISOU	381	C	AARG	A	53	1528	1570	1683	227	-24	800	C
	ATOM	382	C	BARG	A	53	16.711-103.030	287.318	0.50	12.99		C	
	ANISOU	382	C	BARG	A	53	1535	1688	1712	263	-46	821	C
	ATOM	383	O	AARG	A	53	17.461-102.886	288.262	0.50	14.36		O	
	ANISOU	383	O	AARG	A	53	1966	1591	1897	514	-335	104	O
10	ATOM	384	O	BARG	A	53	17.465-102.863	288.259	0.50	14.78		O	
	ANISOU	384	O	BARG	A	53	1978	1707	1927	535	-360	122	O
	ATOM	385	N	ILE	A	54	15.852-102.098	286.895	1.00	10.54		N	
	ANISOU	385	N	ILE	A	54	1526	1090	1386	309	-133	72	N
	ATOM	386	CA	ILE	A	54	15.770-100.708	287.362	1.00	10.05		C	
15	ANISOU	386	CA	ILE	A	54	1256	1076	1486	285	-5	64	C
	ATOM	387	CB	ILE	A	54	16.300-99.801	286.285	1.00	11.64		C	
	ANISOU	387	CB	ILE	A	54	1442	1292	1689	-55	8	-24	C
	ATOM	388	CG1	ILE	A	54	17.749-100.125	285.961	1.00	13.17		C	
	ANISOU	388	CG1	ILE	A	54	1778	1180	2045	-169	407	167	C
20	ATOM	389	CD1	ILE	A	54	18.243-99.455	284.669	1.00	18.61		C	
	ANISOU	389	CD1	ILE	A	54	2102	2920	2048	205	55	346	C
	ATOM	390	CG2	ILE	A	54	16.173-98.369	286.772	1.00	12.05		C	
	ANISOU	390	CG2	ILE	A	54	1467	1508	1600	-71	152	76	C
	ATOM	391	C	ILE	A	54	14.361-100.405	287.783	1.00	10.48		C	
25	ANISOU	391	C	ILE	A	54	1443	945	1594	118	-118	245	C
	ATOM	392	O	ILE	A	54	13.434-100.560	286.957	1.00	11.66		O	
	ANISOU	392	O	ILE	A	54	1616	1360	1454	-18	-37	237	O
	ATOM	393	N	TYR	A	55	14.148-99.992	289.032	1.00	10.07		N	
	ANISOU	393	N	TYR	A	55	1282	1209	1335	106	36	146	N
30	ATOM	394	CA	TYR	A	55	12.800-99.734	289.520	1.00	9.33		C	
	ANISOU	394	CA	TYR	A	55	1402	740	1401	123	110	298	C
	ATOM	395	CB	TYR	A	55	12.807-99.560	291.023	1.00	10.38		C	
	ANISOU	395	CB	TYR	A	55	1489	1156	1296	93	101	50	C
	ATOM	396	CG	TYR	A	55	11.421-99.507	291.621	1.00	9.75		C	
35	ANISOU	396	CG	TYR	A	55	1396	972	1335	-155	128	33	C
	ATOM	397	CD1	TYR	A	55	10.732-100.723	291.702	1.00	9.80		C	

	ANISOU	397	CD1	TYR	A	55	1559	1118	1044	-189	98	543	C
	ATOM	398	CE1	TYR	A	55	9.435	-100.719	292.218	1.00	11.21		C
	ANISOU	398	CE1	TYR	A	55	1403	1294	1562	110	188	325	C
	ATOM	399	CZ	TYR	A	55	8.836	-99.540	292.583	1.00	9.10		C
5	ANISOU	399	CZ	TYR	A	55	1304	884	1268	2	-31	149	C
	ATOM	400	OH	TYR	A	55	7.541	-99.495	293.042	1.00	11.13		O
	ANISOU	400	OH	TYR	A	55	1473	1214	1540	-60	49	346	O
	ATOM	401	CE2	TYR	A	55	9.552	-98.359	292.514	1.00	8.86		C
	ANISOU	401	CE2	TYR	A	55	1233	640	1492	187	129	236	C
10	ATOM	402	CD2	TYR	A	55	10.861	-98.313	292.038	1.00	10.10		C
	ANISOU	402	CD2	TYR	A	55	1396	1218	1222	71	152	135	C
	ATOM	403	C	TYR	A	55	12.228	-98.431	288.873	1.00	8.34		C
	ANISOU	403	C	TYR	A	55	1325	828	1014	-36	-126	230	C
	ATOM	404	O	TYR	A	55	12.816	-97.342	288.919	1.00	10.17		O
15	ANISOU	404	O	TYR	A	55	1379	986	1498	-60	-92	224	O
	ATOM	405	N	ASP	A	56	11.009	-98.592	288.347	1.00	8.94		N
	ANISOU	405	N	ASP	A	56	1178	1027	1189	127	86	364	N
	ATOM	406	CA	ASP	A	56	10.316	-97.461	287.665	1.00	9.18		C
	ANISOU	406	CA	ASP	A	56	1313	907	1268	178	136	296	C
20	ATOM	407	CB	ASP	A	56	9.504	-97.913	286.478	1.00	8.95		C
	ANISOU	407	CB	ASP	A	56	1328	363	1706	319	161	195	C
	ATOM	408	CG	ASP	A	56	9.002	-96.803	285.610	1.00	9.26		C
	ANISOU	408	CG	ASP	A	56	1382	1167	967	279	-188	127	C
	ATOM	409	OD1	ASP	A	56	8.868	-95.665	286.109	1.00	10.13		O
25	ANISOU	409	OD1	ASP	A	56	1643	964	1242	-194	69	-53	O
	ATOM	410	OD2	ASP	A	56	8.695	-97.067	284.401	1.00	10.09		O
	ANISOU	410	OD2	ASP	A	56	1574	1112	1145	184	-112	203	O
	ATOM	411	C	ASP	A	56	9.456	-96.675	288.639	1.00	9.90		C
	ANISOU	411	C	ASP	A	56	1264	1269	1228	125	-11	30	C
30	ATOM	412	O	ASP	A	56	8.306	-97.056	288.886	1.00	10.17		O
	ANISOU	412	O	ASP	A	56	1412	1031	1419	12	76	282	O
	ATOM	413	N	SER	A	57	10.021	-95.589	289.191	1.00	8.19		N
	ANISOU	413	N	SER	A	57	1298	831	983	-70	138	394	N
	ATOM	414	CA	SER	A	57	9.336	-94.829	290.221	1.00	8.46		C
35	ANISOU	414	CA	SER	A	57	1357	897	958	101	80	382	C
	ATOM	415	CB	SER	A	57	10.231	-94.253	291.266	1.00	10.44		C

	ANISOU	415	CB	SER	A	57	1294	1313	1359	-256	-108	304	C
	ATOM	416	OG	SER	A	57	11.055	-93.227	290.854	1.00	9.61		O
	ANISOU	416	OG	SER	A	57	1342	1220	1087	25	-127	320	O
	ATOM	417	C	SER	A	57	8.429	-93.671	289.692	1.00	7.57		C
5	ANISOU	417	C	SER	A	57	1188	674	1012	-15	164	216	C
	ATOM	418	O	SER	A	57	7.816	-92.989	290.482	1.00	9.47		O
	ANISOU	418	O	SER	A	57	1309	1166	1120	373	117	391	O
	ATOM	419	N	LEU	A	58	8.313	-93.556	288.344	1.00	8.59		N
	ANISOU	419	N	LEU	A	58	1129	923	1212	121	3	126	N
10	ATOM	420	CA	LEU	A	58	7.405	-92.561	287.746	1.00	8.08		C
	ANISOU	420	CA	LEU	A	58	972	1073	1024	10	2	103	C
	ATOM	421	CB	LEU	A	58	8.159	-91.510	286.950	1.00	8.55		C
	ANISOU	421	CB	LEU	A	58	1035	1076	1137	117	53	136	C
	ATOM	422	CG	LEU	A	58	7.417	-90.161	286.962	1.00	8.11		C
15	ANISOU	422	CG	LEU	A	58	1071	745	1262	-132	149	140	C
	ATOM	423	CD1	LEU	A	58	7.580	-89.300	288.213	1.00	8.80		C
	ANISOU	423	CD1	LEU	A	58	1196	986	1160	119	86	160	C
	ATOM	424	CD2	LEU	A	58	7.796	-89.253	285.735	1.00	9.79		C
	ANISOU	424	CD2	LEU	A	58	1449	973	1297	-227	53	167	C
20	ATOM	425	C	LEU	A	58	6.388	-93.230	286.843	1.00	7.96		C
	ANISOU	425	C	LEU	A	58	1101	840	1083	-26	-11	127	C
	ATOM	426	O	LEU	A	58	5.683	-92.547	286.042	1.00	8.95		O
	ANISOU	426	O	LEU	A	58	1219	1049	1133	-41	194	388	O
	ATOM	427	N	SER	A	59	6.188	-94.563	286.932	1.00	7.96		N
25	ANISOU	427	N	SER	A	59	1207	784	1031	-107	-8	331	N
	ATOM	428	CA	SER	A	59	5.300	-95.195	286.013	1.00	7.43		C
	ANISOU	428	CA	SER	A	59	1192	636	995	98	84	346	C
	ATOM	429	CB	SER	A	59	3.828	-94.956	286.334	1.00	8.86		C
	ANISOU	429	CB	SER	A	59	1220	957	1187	-56	-25	207	C
30	ATOM	430	OG	SER	A	59	3.507	-95.196	287.708	1.00	8.97		O
	ANISOU	430	OG	SER	A	59	1412	771	1223	31	257	366	O
	ATOM	431	C	SER	A	59	5.634	-94.817	284.574	1.00	6.39		C
	ANISOU	431	C	SER	A	59	977	331	1120	133	70	62	C
	ATOM	432	O	SER	A	59	4.712	-94.656	283.740	1.00	9.19		O
35	ANISOU	432	O	SER	A	59	1265	1057	1170	-2	-64	246	O
	ATOM	433	N	GLY	A	60	6.895	-94.745	284.264	1.00	7.70		N

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	ANISOU	433	N	GLY	A	60	1147	661	1116	231	156	402	N
	ATOM	434	CA	GLY	A	60	7.326	-94.355	282.896	1.00	8.03		C
	ANISOU	434	CA	GLY	A	60	1124	884	1040	-47	203	-101	C
	ATOM	435	C	GLY	A	60	7.468	-92.830	282.820	1.00	8.20		C
5	ANISOU	435	C	GLY	A	60	1194	881	1040	22	127	138	C
	ATOM	436	O	GLY	A	60	8.462	-92.220	283.297	1.00	10.55		O
	ANISOU	436	O	GLY	A	60	1377	1262	1367	-25	-68	239	O
	ATOM	437	N	LEU	A	61	6.372	-92.202	282.334	1.00	8.54		N
	ANISOU	437	N	LEU	A	61	1036	1089	1117	-40	46	23	N
10	ATOM	438	CA	LEU	A	61	6.277	-90.728	282.384	1.00	8.78		C
	ANISOU	438	CA	LEU	A	61	1048	1195	1090	-453	82	370	C
	ATOM	439	CB	LEU	A	61	6.594	-90.030	281.101	1.00	11.54		C
	ANISOU	439	CB	LEU	A	61	1424	2127	830	176	87	360	C
	ATOM	440	CG	LEU	A	61	7.879	-89.359	280.895	1.00	16.59		C
15	ANISOU	440	CG	LEU	A	61	2762	1944	1595	-616	9	-7	C
	ATOM	441	CD1	LEU	A	61	7.820	-88.532	279.577	1.00	16.45		C
	ANISOU	441	CD1	LEU	A	61	2731	2178	1341	-714	248	204	C
	ATOM	442	CD2	LEU	A	61	8.428	-88.469	281.930	1.00	11.98		C
	ANISOU	442	CD2	LEU	A	61	1712	1482	1357	-590	-172	282	C
20	ATOM	443	C	LEU	A	61	4.849	-90.406	282.888	1.00	7.61		C
	ANISOU	443	C	LEU	A	61	1165	805	920	141	-10	13	C
	ATOM	444	O	LEU	A	61	4.040	-89.794	282.156	1.00	8.52		O
	ANISOU	444	O	LEU	A	61	1275	894	1069	147	74	221	O
	ATOM	445	N	TRP	A	62	4.511	-90.867	284.098	1.00	7.36		N
25	ANISOU	445	N	TRP	A	62	1164	643	986	36	80	291	N
	ATOM	446	CA	TRP	A	62	3.195	-90.734	284.701	1.00	7.48		C
	ANISOU	446	CA	TRP	A	62	1047	686	1109	298	71	184	C
	ATOM	447	CB	TRP	A	62	2.740	-89.304	284.842	1.00	8.29		C
	ANISOU	447	CB	TRP	A	62	1371	698	1078	205	-69	99	C
30	ATOM	448	CG	TRP	A	62	3.721	-88.301	285.411	1.00	9.08		C
	ANISOU	448	CG	TRP	A	62	1147	1252	1051	-114	29	84	C
	ATOM	449	CD1	TRP	A	62	4.515	-87.438	284.644	1.00	8.74		C
	ANISOU	449	CD1	TRP	A	62	1474	572	1272	145	-25	218	C
	ATOM	450	NE1	TRP	A	62	5.203	-86.586	285.509	1.00	10.10		N
35	ANISOU	450	NE1	TRP	A	62	1365	1175	1297	-109	44	290	N
	ATOM	451	CE2	TRP	A	62	4.868	-86.857	286.823	1.00	8.61		C

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	ANISOU	451	CE2	TRP	A	62	1149	1163	961	-52	-98	119	C
	ATOM	452	CD2	TRP	A	62	3.952	-87.946	286.791	1.00	7.07		C
	ANISOU	452	CD2	TRP	A	62	1067	604	1013	132	7	-36	C
	ATOM	453	CE3	TRP	A	62	3.454	-88.460	288.013	1.00	8.30		C
5	ANISOU	453	CE3	TRP	A	62	1333	605	1212	-76	117	17	C
	ATOM	454	CZ3	TRP	A	62	3.863	-87.837	289.177	1.00	11.49		C
	ANISOU	454	CZ3	TRP	A	62	1559	1630	1177	-104	-11	-33	C
	ATOM	455	CH2	TRP	A	62	4.740	-86.783	289.164	1.00	9.82		C
	ANISOU	455	CH2	TRP	A	62	1425	1092	1211	82	178	-77	C
10	ATOM	456	CZ2	TRP	A	62	5.294	-86.300	287.993	1.00	9.49		C
	ANISOU	456	CZ2	TRP	A	62	1122	1205	1277	-146	-233	139	C
	ATOM	457	C	TRP	A	62	2.153	-91.512	283.873	1.00	8.88		C
	ANISOU	457	C	TRP	A	62	1232	1034	1105	138	28	87	C
	ATOM	458	O	TRP	A	62	0.970	-91.231	283.946	1.00	9.24		O
15	ANISOU	458	O	TRP	A	62	1238	1096	1175	-53	167	22	O
	ATOM	459	N	THR	A	63	2.567	-92.534	283.106	1.00	7.95		N
	ANISOU	459	N	THR	A	63	1006	999	1016	95	-132	28	N
	ATOM	460	CA	THR	A	63	1.734	-93.164	282.093	1.00	6.52		C
	ANISOU	460	CA	THR	A	63	1071	366	1041	62	14	293	C
20	ATOM	461	CB	THR	A	63	2.566	-93.332	280.797	1.00	7.99		C
	ANISOU	461	CB	THR	A	63	1300	787	948	-351	0	245	C
	ATOM	462	OG1	THR	A	63	3.928	-93.700	281.087	1.00	8.48		O
	ANISOU	462	OG1	THR	A	63	1185	921	1116	1	163	-64	O
	ATOM	463	CG2	THR	A	63	2.601	-92.055	280.026	1.00	7.03		C
25	ANISOU	463	CG2	THR	A	63	972	638	1060	6	72	49	C
	ATOM	464	C	THR	A	63	1.253	-94.611	282.416	1.00	6.22		C
	ANISOU	464	C	THR	A	63	1011	312	1037	71	261	109	C
	ATOM	465	O	THR	A	63	0.155	-94.991	281.976	1.00	9.38		O
	ANISOU	465	O	THR	A	63	1266	848	1446	202	-104	186	O
30	ATOM	466	N	CYS	A	64	2.079	-95.426	283.075	1.00	8.93		N
	ANISOU	466	N	CYS	A	64	1138	1184	1069	18	-260	278	N
	ATOM	467	CA	CYS	A	64	1.917	-96.902	283.169	1.00	8.60		C
	ANISOU	467	CA	CYS	A	64	1242	953	1070	-15	22	-13	C
	ATOM	468	CB	CYS	A	64	3.216	-97.571	282.653	1.00	9.48		C
35	ANISOU	468	CB	CYS	A	64	1388	1001	1211	-9	141	188	C
	ATOM	469	SG	CYS	A	64	3.851	-97.049	281.068	1.00	9.53		S

	ANISOU	469	SG	CYS	A	64	1373	929	1316	99	202	103	S
	ATOM	470	C	CYS	A	64	1.577	-97.297	284.568	1.00	8.51		C
	ANISOU	470	C	CYS	A	64	1130	1032	1068	55	146	171	C
	ATOM	471	O	CYS	A	64	2.220	-98.172	285.122	1.00	9.89		O
5	ANISOU	471	O	CYS	A	64	1248	1037	1472	80	32	300	O
	ATOM	472	N	GLY	A	65	0.495	-96.721	285.111	1.00	8.19		N
	ANISOU	472	N	GLY	A	65	1101	907	1104	-11	114	78	N
	ATOM	473	CA	GLY	A	65	0.049	-96.992	286.475	1.00	8.30		C
	ANISOU	473	CA	GLY	A	65	1397	749	1008	-253	121	-102	C
10	ATOM	474	C	GLY	A	65	-0.366	-98.436	286.761	1.00	8.88		C
	ANISOU	474	C	GLY	A	65	1311	757	1305	-128	101	-191	C
	ATOM	475	O	GLY	A	65	-0.336	-98.792	287.916	1.00	9.91		O
	ANISOU	475	O	GLY	A	65	1541	1041	1181	-53	110	209	O
	ATOM	476	N	ALA	A	66	-0.798	-99.162	285.718	1.00	9.29		N
15	ANISOU	476	N	ALA	A	66	1470	1127	930	-162	175	170	N
	ATOM	477	CA	ALA	A	66	-1.121	-100.538	285.907	1.00	9.06		C
	ANISOU	477	CA	ALA	A	66	1302	1083	1054	-222	202	555	C
	ATOM	478	CB	ALA	A	66	-2.134	-101.008	284.846	1.00	9.12		C
	ANISOU	478	CB	ALA	A	66	1490	738	1235	-269	356	-39	C
20	ATOM	479	C	ALA	A	66	0.054	-101.408	285.884	1.00	8.69		C
	ANISOU	479	C	ALA	A	66	1231	960	1108	-74	128	163	C
	ATOM	480	O	ALA	A	66	-0.118	-102.671	286.059	1.00	10.61		O
	ANISOU	480	O	ALA	A	66	1815	758	1458	-147	194	131	O
	ATOM	481	N	GLY	A	67	1.246	-100.893	285.727	1.00	9.11		N
25	ANISOU	481	N	GLY	A	67	1255	688	1515	153	137	134	N
	ATOM	482	CA	GLY	A	67	2.457	-101.669	285.433	1.00	10.28		C
	ANISOU	482	CA	GLY	A	67	1226	1336	1345	132	214	220	C
	ATOM	483	C	GLY	A	67	2.704	-101.755	283.935	1.00	9.24		C
	ANISOU	483	C	GLY	A	67	1253	866	1389	-183	41	66	C
30	ATOM	484	O	GLY	A	67	1.801	-101.635	283.089	1.00	10.29		O
	ANISOU	484	O	GLY	A	67	1433	1053	1422	-53	-2	247	O
	ATOM	485	N	HIS	A	68	3.963	-102.024	283.607	1.00	9.31		N
	ANISOU	485	N	HIS	A	68	1301	907	1327	82	13	-6	N
	ATOM	486	CA	HIS	A	68	4.358	-102.226	282.217	1.00	9.12		C
35	ANISOU	486	CA	HIS	A	68	1233	912	1319	106	152	257	C
	ATOM	487	CB	HIS	A	68	5.881	-102.145	282.078	1.00	9.69		C

	ANISOU	487	CB	HIS	A	68	1309	853	1519	64	35	13	C
	ATOM	488	CG	HIS	A	68	6.397-100.745	282.304	1.00	9.42			C
	ANISOU	488	CG	HIS	A	68	1597	739	1240	94	124	-56	C
	ATOM	489	ND1	HIS	A	68	6.462	-99.812	281.275	1.00	11.75		N
5	ANISOU	489	ND1	HIS	A	68	1697	1527	1239	-136	-14	-16	N
	ATOM	490	CE1	HIS	A	68	7.036	-98.719	281.718	1.00	10.56		C
	ANISOU	490	CE1	HIS	A	68	1479	1201	1332	76	111	-103	C
	ATOM	491	NE2	HIS	A	68	7.366	-98.905	282.992	1.00	10.67		N
	ANISOU	491	NE2	HIS	A	68	1487	1385	1180	100	93	264	N
10	ATOM	492	CD2	HIS	A	68	6.998-100.176	283.368	1.00	10.88			C
	ANISOU	492	CD2	HIS	A	68	1290	1357	1486	-144	73	250	C
	ATOM	493	C	HIS	A	68	3.965-103.562	281.648	1.00	11.45			C
	ANISOU	493	C	HIS	A	68	1301	1594	1454	-218	49	136	C
	ATOM	494	O	HIS	A	68	3.961-104.607	282.282	1.00	12.54			O
15	ANISOU	494	O	HIS	A	68	1613	1181	1968	-27	-101	1	O
	ATOM	495	N	SER	A	69	3.735-103.459	280.329	1.00	13.84			N
	ANISOU	495	N	SER	A	69	1466	1939	1850	141	47	-297	N
	ATOM	496	CA	SER	A	69	3.606-104.537	279.408	1.00	18.43			C
	ANISOU	496	CA	SER	A	69	1862	2575	2565	83	182	-714	C
20	ATOM	497	CB	SER	A	69	5.025-105.104	279.066	1.00	17.85			C
	ANISOU	497	CB	SER	A	69	2291	1648	2843	300	201	440	C
	ATOM	498	OG	SER	A	69	5.972-104.038	278.504	1.00	13.93			O
	ANISOU	498	OG	SER	A	69	2159	1021	2112	25	64	128	O
	ATOM	499	C	SER	A	69	2.522-105.511	279.800	1.00	14.62			C
25	ANISOU	499	C	SER	A	69	1797	1676	2082	236	-144	-160	C
	ATOM	500	O	SER	A	69	2.709-106.672	279.698	1.00	21.86			O
	ANISOU	500	O	SER	A	69	2437	1739	4127	395	-161	-320	O
	ATOM	501	N	ARG	A	70	1.333-105.042	280.175	1.00	12.45			N
	ANISOU	501	N	ARG	A	70	1715	1438	1578	169	29	-144	N
30	ATOM	502	CA	ARG	A	70	0.186-105.841	280.530	1.00	13.59			C
	ANISOU	502	CA	ARG	A	70	1811	1640	1712	149	-157	-37	C
	ATOM	503	CB	ARG	A	70	-0.895-104.951	281.113	1.00	13.50			C
	ANISOU	503	CB	ARG	A	70	1950	1393	1786	87	152	275	C
	ATOM	504	CG	ARG	A	70	-0.459-104.087	282.345	1.00	13.14			C
35	ANISOU	504	CG	ARG	A	70	1780	1642	1570	-176	356	-84	C
	ATOM	505	CD	ARG	A	70	0.241-104.917	283.459	1.00	13.91			C

	ANISOU	505	CD	ARG	A	70	1893	1605	1787	-336	170	311	C
	ATOM	506	NE	ARG	A	70	-0.570	-106.052	283.892	1.00	14.49		N
	ANISOU	506	NE	ARG	A	70	2065	1585	1853	-301	430	-55	N
	ATOM	507	CZ	ARG	A	70	-1.511	-106.052	284.834	1.00	14.66		C
5	ANISOU	507	CZ	ARG	A	70	1767	1566	2236	-631	594	-299	C
	ATOM	508	NH1	ARG	A	70	-1.807	-105.008	285.557	1.00	13.36		N
	ANISOU	508	NH1	ARG	A	70	2016	1314	1743	9	160	-28	N
	ATOM	509	NH2	ARG	A	70	-2.201	-107.144	284.979	1.00	14.84		N
	ANISOU	509	NH2	ARG	A	70	2176	1155	2305	-511	424	291	N
10	ATOM	510	C	ARG	A	70	-0.357	-106.634	279.390	1.00	13.72		C
	ANISOU	510	C	ARG	A	70	1920	1596	1696	143	-58	32	C
	ATOM	511	O	ARG	A	70	-0.624	-106.106	278.319	1.00	13.32		O
	ANISOU	511	O	ARG	A	70	2086	1291	1685	-34	-12	-27	O
	ATOM	512	N	LYS	A	71	-0.609	-107.940	279.652	1.00	13.77		N
15	ANISOU	512	N	LYS	A	71	1819	1614	1796	-44	-65	202	N
	ATOM	513	CA	LYS	A	71	-1.012	-108.894	278.644	1.00	14.60		C
	ANISOU	513	CA	LYS	A	71	1979	1865	1700	12	159	172	C
	ATOM	514	CB	LYS	A	71	-0.972	-110.324	279.267	1.00	20.73		C
	ANISOU	514	CB	LYS	A	71	2915	2146	2816	-318	-51	578	C
20	ATOM	515	CG	LYS	A	71	-1.385	-111.450	278.306	1.00	28.35		C
	ANISOU	515	CG	LYS	A	71	4511	2120	4139	-810	-743	879	C
	ATOM	516	CD	LYS	A	71	-1.308	-112.880	278.930	1.00	37.88		C
	ANISOU	516	CD	LYS	A	71	7321	1774	5295	145	-1251	450	C
	ATOM	517	CE	LYS	A	71	-1.206	-113.937	277.796	1.00	41.86		C
25	ANISOU	517	CE	LYS	A	71	6217	3640	6046	-480	-1356	-1018	C
	ATOM	518	NZ	LYS	A	71	-2.377	-113.899	276.864	1.00	39.17		N
	ANISOU	518	NZ	LYS	A	71	5984	4296	4601	-829	-845	-455	N
	ATOM	519	C	LYS	A	71	-2.363	-108.538	278.058	1.00	12.16		C
	ANISOU	519	C	LYS	A	71	2133	545	1943	-74	13	205	C
30	ATOM	520	O	LYS	A	71	-2.601	-108.664	276.846	1.00	13.08		O
	ANISOU	520	O	LYS	A	71	2309	882	1778	108	172	164	O
	ATOM	521	N	GLU	A	72	-3.277	-108.023	278.858	1.00	14.05		N
	ANISOU	521	N	GLU	A	72	2152	1548	1635	-54	284	273	N
	ATOM	522	CA	GLU	A	72	-4.607	-107.717	278.384	1.00	14.61		C
35	ANISOU	522	CA	GLU	A	72	2215	1425	1910	-111	65	154	C
	ATOM	523	CB	GLU	A	72	-5.490	-107.275	279.520	1.00	16.88		C

	ANISOU	523	CB	GLU	A	72	2171	1940	2301	9	535	373	C
	ATOM	524	CG	GLU	A	72	-5.737	-108.364	280.599	1.00	19.88		C
	ANISOU	524	CG	GLU	A	72	2843	2316	2394	-470	962	303	C
	ATOM	525	CD	GLU	A	72	-4.659	-108.529	281.685	1.00	26.64		C
5	ANISOU	525	CD	GLU	A	72	3605	3356	3160	-903	62	1219	C
	ATOM	526	OE1	GLU	A	72	-3.477	-107.997	281.646	1.00	20.65		O
	ANISOU	526	OE1	GLU	A	72	2893	3142	1808	132	249	63	O
	ATOM	527	OE2	GLU	A	72	-5.043	-109.235	282.665	1.00	35.64		O
	ANISOU	527	OE2	GLU	A	72	6865	2975	3699	-860	1937	1241	O
10	ATOM	528	C	GLU	A	72	-4.538	-106.618	277.317	1.00	13.34		C
	ANISOU	528	C	GLU	A	72	1599	1475	1993	-330	-34	227	C
	ATOM	529	O	GLU	A	72	-5.293	-106.674	276.318	1.00	12.64		O
	ANISOU	529	O	GLU	A	72	2154	608	2038	-215	-9	32	O
	ATOM	530	N	ILE	A	73	-3.680	-105.616	277.524	1.00	12.61		N
15	ANISOU	530	N	ILE	A	73	1787	1442	1563	-220	83	-170	N
	ATOM	531	CA	ILE	A	73	-3.499	-104.555	276.579	1.00	12.43		C
	ANISOU	531	CA	ILE	A	73	1409	1598	1715	-171	99	-50	C
	ATOM	532	CB	ILE	A	73	-2.786	-103.353	277.234	1.00	10.65		C
	ANISOU	532	CB	ILE	A	73	1424	1113	1507	72	39	-6	C
20	ATOM	533	CG1	ILE	A	73	-3.581	-102.810	278.406	1.00	11.75		C
	ANISOU	533	CG1	ILE	A	73	1585	1289	1590	105	152	-86	C
	ATOM	534	CD1	ILE	A	73	-2.918	-101.675	279.229	1.00	12.47		C
	ANISOU	534	CD1	ILE	A	73	1618	1245	1874	4	200	-175	C
	ATOM	535	CG2	ILE	A	73	-2.515	-102.214	276.220	1.00	12.90		C
25	ANISOU	535	CG2	ILE	A	73	1832	1353	1717	-46	173	86	C
	ATOM	536	C	ILE	A	73	-2.810	-105.031	275.339	1.00	11.61		C
	ANISOU	536	C	ILE	A	73	1771	1235	1405	26	-101	-10	C
	ATOM	537	O	ILE	A	73	-3.212	-104.742	274.202	1.00	11.04		O
	ANISOU	537	O	ILE	A	73	1662	852	1678	-22	-112	-10	O
30	ATOM	538	N	ALA	A	74	-1.739	-105.816	275.515	1.00	11.41		N
	ANISOU	538	N	ALA	A	74	1728	1266	1340	108	235	338	N
	ATOM	539	CA	ALA	A	74	-1.018	-106.373	274.396	1.00	13.10		C
	ANISOU	539	CA	ALA	A	74	1916	1438	1620	111	203	132	C
	ATOM	540	CB	ALA	A	74	0.149	-107.212	274.899	1.00	12.56		C
35	ANISOU	540	CB	ALA	A	74	1744	1513	1513	313	280	17	C
	ATOM	541	C	ALA	A	74	-1.886	-107.183	273.479	1.00	13.33		C

	ANISOU	541	C	ALA	A	74	1855	1690	1517	256	156	231	C
	ATOM	542	O	ALA	A	74	-1.847	-107.028	272.248	1.00	12.18		O
	ANISOU	542	O	ALA	A	74	1770	1319	1537	185	-43	102	O
	ATOM	543	N	ASP	A	75	-2.731	-108.014	274.061	1.00	12.96		N
5	ANISOU	543	N	ASP	A	75	1680	1590	1651	45	62	53	N
	ATOM	544	CA	ASP	A	75	-3.559	-108.928	273.319	1.00	14.25		C
	ANISOU	544	CA	ASP	A	75	1844	1781	1788	-22	76	79	C
	ATOM	545	CB	ASP	A	75	-4.251	-109.929	274.265	1.00	14.82		C
	ANISOU	545	CB	ASP	A	75	2077	1283	2269	-367	73	-80	C
10	ATOM	546	CG	ASP	A	75	-3.333	-111.033	274.746	1.00	20.21		C
	ANISOU	546	CG	ASP	A	75	2566	2337	2776	5	304	608	C
	ATOM	547	OD1	ASP	A	75	-2.227	-111.200	274.252	1.00	21.27		O
	ANISOU	547	OD1	ASP	A	75	2966	1777	3336	633	18	212	O
	ATOM	548	OD2	ASP	A	75	-3.769	-111.726	275.651	1.00	22.21		O
15	ANISOU	548	OD2	ASP	A	75	3425	1769	3244	-341	504	688	O
	ATOM	549	C	ASP	A	75	-4.594	-108.104	272.519	1.00	12.55		C
	ANISOU	549	C	ASP	A	75	1713	1417	1636	-33	134	39	C
	ATOM	550	O	ASP	A	75	-4.909	-108.439	271.357	1.00	13.47		O
	ANISOU	550	O	ASP	A	75	1888	1558	1671	151	169	-91	O
20	ATOM	551	N	ALA	A	76	-5.192	-107.118	273.159	1.00	13.10		N
	ANISOU	551	N	ALA	A	76	1924	1327	1724	-49	-67	-164	N
	ATOM	552	CA	ALA	A	76	-6.177	-106.331	272.483	1.00	11.78		C
	ANISOU	552	CA	ALA	A	76	1674	1184	1615	13	-20	-136	C
	ATOM	553	CB	ALA	A	76	-6.752	-105.271	273.402	1.00	13.60		C
25	ANISOU	553	CB	ALA	A	76	1748	1606	1812	195	300	-246	C
	ATOM	554	C	ALA	A	76	-5.581	-105.557	271.267	1.00	12.55		C
	ANISOU	554	C	ALA	A	76	1528	1559	1680	101	-109	-62	C
	ATOM	555	O	ALA	A	76	-6.193	-105.482	270.222	1.00	12.74		O
	ANISOU	555	O	ALA	A	76	1887	1256	1696	-73	-73	254	O
30	ATOM	556	N	VAL	A	77	-4.386	-105.027	271.449	1.00	10.65		N
	ANISOU	556	N	VAL	A	77	1673	706	1665	2	98	-35	N
	ATOM	557	CA	VAL	A	77	-3.695	-104.286	270.389	1.00	13.06		C
	ANISOU	557	CA	VAL	A	77	1608	1871	1482	-66	90	-50	C
	ATOM	558	CB	VAL	A	77	-2.466	-103.561	270.944	1.00	11.66		C
35	ANISOU	558	CB	VAL	A	77	1694	1129	1607	242	-60	-47	C
	ATOM	559	CG1	VAL	A	77	-1.463	-103.165	269.830	1.00	13.85		C

	ANISOU	559	CG1	VAL	A	77	1911	1643	1705	42	13	-185	C
	ATOM	560	CG2	VAL	A	77	-2.947	-102.322	271.716	1.00	11.13		C
	ANISOU	560	CG2	VAL	A	77	1746	803	1677	-234	92	-136	C
	ATOM	561	C	VAL	A	77	-3.325	-105.256	269.255	1.00	12.54		C
5	ANISOU	561	C	VAL	A	77	1784	1325	1656	-56	-234	1	C
	ATOM	562	O	VAL	A	77	-3.529	-104.938	268.049	1.00	11.90		O
	ANISOU	562	O	VAL	A	77	2044	853	1624	-18	19	-193	O
	ATOM	563	N	ALA	A	78	-2.791	-106.449	269.613	1.00	12.22		N
	ANISOU	563	N	ALA	A	78	2058	1191	1392	52	103	-8	N
10	ATOM	564	CA	ALA	A	78	-2.337	-107.420	268.604	1.00	13.29		C
	ANISOU	564	CA	ALA	A	78	1879	1332	1836	274	298	194	C
	ATOM	565	CB	ALA	A	78	-1.742	-108.660	269.290	1.00	12.24		C
	ANISOU	565	CB	ALA	A	78	2066	904	1678	229	290	-116	C
	ATOM	566	C	ALA	A	78	-3.530	-107.823	267.727	1.00	12.86		C
15	ANISOU	566	C	ALA	A	78	2068	1043	1775	248	236	-114	C
	ATOM	567	O	ALA	A	78	-3.431	-107.891	266.467	1.00	14.92		O
	ANISOU	567	O	ALA	A	78	2700	1161	1805	307	-110	79	O
	ATOM	568	N	LYS	A	79	-4.663	-108.102	268.353	1.00	11.21		N
	ANISOU	568	N	LYS	A	79	1695	829	1733	22	2	-36	N
20	ATOM	569	CA	LYS	A	79	-5.889	-108.469	267.601	1.00	13.79		C
	ANISOU	569	CA	LYS	A	79	2188	1094	1956	485	-123	-18	C
	ATOM	570	CB	LYS	A	79	-6.999	-108.917	268.569	1.00	14.94		C
	ANISOU	570	CB	LYS	A	79	2322	1034	2320	-291	-70	-299	C
	ATOM	571	CG	LYS	A	79	-8.338	-109.344	267.870	1.00	23.57		C
25	ANISOU	571	CG	LYS	A	79	2655	2793	3507	55	-105	77	C
	ATOM	572	CD	LYS	A	79	-9.383	-109.732	268.944	1.00	36.68		C
	ANISOU	572	CD	LYS	A	79	3909	5290	4735	-1420	702	-159	C
	ATOM	573	CE	LYS	A	79	-10.703	-110.237	268.385	1.00	52.50		C
	ANISOU	573	CE	LYS	A	79	4859	7418	7669	-736	-1455	-317	C
30	ATOM	574	NZ	LYS	A	79	-10.495	-111.329	267.378	1.00	65.94		N
	ANISOU	574	NZ	LYS	A	79	7436	8380	9238	-924	-456	-386	N
	ATOM	575	C	LYS	A	79	-6.337	-107.278	266.722	1.00	13.68		C
	ANISOU	575	C	LYS	A	79	2455	860	1881	263	-191	-57	C
	ATOM	576	O	LYS	A	79	-6.647	-107.433	265.520	1.00	15.13		O
35	ANISOU	576	O	LYS	A	79	2755	923	2071	-106	-273	-342	O
	ATOM	577	N	GLN	A	80	-6.398	-106.034	267.234	1.00	12.35		N

	ANISOU	577	N	GLN	A	80	1775	1133	1783	-70	35	-482	N
	ATOM	578	CA	GLN	A	80	-6.959	-104.993	266.453	1.00	15.63		C
	ANISOU	578	CA	GLN	A	80	2212	2102	1623	192	184	-457	C
	ATOM	579	CB	GLN	A	80	-7.167	-103.804	267.397	1.00	11.88		C
5	ANISOU	579	CB	GLN	A	80	1694	1442	1378	133	-176	-104	C
	ATOM	580	CG	GLN	A	80	-7.794	-102.640	266.680	1.00	13.10		C
	ANISOU	580	CG	GLN	A	80	1899	1364	1714	329	-175	-139	C
	ATOM	581	CD	GLN	A	80	-9.215	-103.002	266.225	1.00	12.62		C
	ANISOU	581	CD	GLN	A	80	1896	1157	1740	107	16	-156	C
10	ATOM	582	OE1	GLN	A	80	-9.942	-103.679	266.886	1.00	13.98		O
	ANISOU	582	OE1	GLN	A	80	1757	1703	1850	-138	220	330	O
	ATOM	583	NE2	GLN	A	80	-9.589	-102.543	265.024	1.00	11.96		N
	ANISOU	583	NE2	GLN	A	80	1600	1380	1563	-359	113	148	N
	ATOM	584	C	GLN	A	80	-6.115	-104.576	265.288	1.00	10.22		C
15	ANISOU	584	C	GLN	A	80	1748	349	1784	65	-315	-383	C
	ATOM	585	O	GLN	A	80	-6.644	-104.308	264.181	1.00	12.99		O
	ANISOU	585	O	GLN	A	80	2156	1000	1777	4	-99	66	O
	ATOM	586	N	ILE	A	81	-4.799	-104.616	265.401	1.00	12.52		N
	ANISOU	586	N	ILE	A	81	1705	1414	1636	33	-94	-159	N
20	ATOM	587	CA	ILE	A	81	-3.950	-104.069	264.351	1.00	11.88		C
	ANISOU	587	CA	ILE	A	81	1790	929	1795	227	96	-348	C
	ATOM	588	CB	ILE	A	81	-2.533	-103.835	264.821	1.00	10.81		C
	ANISOU	588	CB	ILE	A	81	1834	857	1415	354	310	-313	C
	ATOM	589	CG1	ILE	A	81	-1.764	-102.946	263.789	1.00	13.43		C
25	ANISOU	589	CG1	ILE	A	81	2019	1613	1467	237	358	-110	C
	ATOM	590	CD1	ILE	A	81	-0.491	-102.387	264.304	1.00	15.16		C
	ANISOU	590	CD1	ILE	A	81	2093	1713	1952	419	438	111	C
	ATOM	591	CG2	ILE	A	81	-1.811	-105.102	265.266	1.00	13.53		C
	ANISOU	591	CG2	ILE	A	81	1575	1816	1749	730	24	-151	C
30	ATOM	592	C	ILE	A	81	-4.003	-105.016	263.121	1.00	14.04		C
	ANISOU	592	C	ILE	A	81	2487	1121	1724	-182	278	-396	C
	ATOM	593	O	ILE	A	81	-3.656	-104.612	262.009	1.00	15.81		O
	ANISOU	593	O	ILE	A	81	2834	1481	1691	280	23	-456	O
	ATOM	594	N	GLY	A	82	-4.383	-106.277	263.377	1.00	13.22		N
35	ANISOU	594	N	GLY	A	82	2226	1038	1756	222	-70	-58	N
	ATOM	595	CA	GLY	A	82	-4.519	-107.268	262.262	1.00	17.91		C

	ANISOU	595	CA	GLY	A	82	2769	2062	1972	251	-16	-177	C
	ATOM	596	C	GLY	A	82	-5.871	-107.230	261.634	1.00	17.90		C
	ANISOU	596	C	GLY	A	82	2368	1992	2439	-305	178	-641	C
	ATOM	597	O	GLY	A	82	-6.017	-107.850	260.583	1.00	26.27		O
5	ANISOU	597	O	GLY	A	82	3416	4158	2404	-187	-44	-649	O
	ATOM	598	N	THR	A	83	-6.882	-106.676	262.330	1.00	14.32		N
	ANISOU	598	N	THR	A	83	2019	1785	1636	277	-383	-253	N
	ATOM	599	CA	THR	A	83	-8.262	-106.610	261.877	1.00	12.47		C
	ANISOU	599	CA	THR	A	83	1815	1058	1865	82	-54	-174	C
10	ATOM	600	CB	THR	A	83	-9.194	-106.805	263.077	1.00	14.28		C
	ANISOU	600	CB	THR	A	83	2727	471	2227	410	152	135	C
	ATOM	601	OG1	THR	A	83	-8.964	-108.122	263.612	1.00	17.42		O
	ANISOU	601	OG1	THR	A	83	3278	582	2756	271	-183	343	O
	ATOM	602	CG2	THR	A	83	-10.652	-106.764	262.583	1.00	17.42		C
15	ANISOU	602	CG2	THR	A	83	2244	1541	2831	-298	333	1	C
	ATOM	603	C	THR	A	83	-8.584	-105.276	261.124	1.00	11.09		C
	ANISOU	603	C	THR	A	83	1539	1053	1619	-147	-67	21	C
	ATOM	604	O	THR	A	83	-9.161	-105.273	260.016	1.00	10.44		O
	ANISOU	604	O	THR	A	83	1968	363	1634	-90	17	-263	O
20	ATOM	605	N	LEU	A	84	-8.309	-104.173	261.800	1.00	12.42		N
	ANISOU	605	N	LEU	A	84	1869	1383	1467	-148	-38	-104	N
	ATOM	606	CA	LEU	A	84	-8.505	-102.805	261.283	1.00	11.48		C
	ANISOU	606	CA	LEU	A	84	1497	1502	1360	-113	-72	-179	C
	ATOM	607	CB	LEU	A	84	-9.923	-102.276	261.560	1.00	9.53		C
25	ANISOU	607	CB	LEU	A	84	1530	690	1400	-308	29	-170	C
	ATOM	608	CG	LEU	A	84	-10.153	-100.856	261.186	1.00	9.18		C
	ANISOU	608	CG	LEU	A	84	1461	582	1444	-257	52	-172	C
	ATOM	609	CD1	LEU	A	84	-10.119	-100.637	259.686	1.00	11.00		C
	ANISOU	609	CD1	LEU	A	84	1523	893	1763	214	91	32	C
30	ATOM	610	CD2	LEU	A	84	-11.501	-100.414	261.758	1.00	11.98		C
	ANISOU	610	CD2	LEU	A	84	1753	1247	1550	148	112	98	C
	ATOM	611	C	LEU	A	84	-7.413	-101.918	261.865	1.00	10.43		C
	ANISOU	611	C	LEU	A	84	1410	1205	1349	-174	87	199	C
	ATOM	612	O	LEU	A	84	-7.544	-101.470	263.007	1.00	10.18		O
35	ANISOU	612	O	LEU	A	84	1513	1063	1291	59	21	-133	O
	ATOM	613	N	ASP	A	85	-6.383	-101.723	261.073	1.00	9.79		N

	ANISOU	613	N	ASP	A	85	1340	851	1526	196	216	-263	N
	ATOM	614	CA	ASP	A	85	-5.265	-100.831	261.433	1.00	9.67		C
	ANISOU	614	CA	ASP	A	85	1314	985	1373	207	73	248	C
	ATOM	615	CB	ASP	A	85	-4.112	-101.029	260.436	1.00	11.32		C
5	ANISOU	615	CB	ASP	A	85	1561	1046	1694	-42	76	-192	C
	ATOM	616	CG	ASP	A	85	-4.483	-100.867	258.941	1.00	11.24		C
	ANISOU	616	CG	ASP	A	85	1341	1258	1672	-40	113	-273	C
	ATOM	617	OD1	ASP	A	85	-5.650	-100.636	258.528	1.00	9.99		O
	ANISOU	617	OD1	ASP	A	85	1465	986	1341	179	135	-119	O
10	ATOM	618	OD2	ASP	A	85	-3.453	-100.955	258.166	1.00	13.82		O
	ANISOU	618	OD2	ASP	A	85	1810	1715	1724	226	230	5	O
	ATOM	619	C	ASP	A	85	-5.618	-99.326	261.504	1.00	9.00		C
	ANISOU	619	C	ASP	A	85	1310	836	1273	40	-32	14	C
	ATOM	620	O	ASP	A	85	-5.156	-98.700	262.432	1.00	11.00		O
15	ANISOU	620	O	ASP	A	85	1630	1124	1422	-55	-100	-87	O
	ATOM	621	N	TYR	A	86	-6.495	-98.904	260.615	1.00	8.34		N
	ANISOU	621	N	TYR	A	86	1350	541	1276	-16	-9	-147	N
	ATOM	622	CA	TYR	A	86	-6.729	-97.463	260.413	1.00	7.53		C
	ANISOU	622	CA	TYR	A	86	1374	490	997	17	194	-157	C
20	ATOM	623	CB	TYR	A	86	-5.514	-96.764	259.762	1.00	8.88		C
	ANISOU	623	CB	TYR	A	86	1343	853	1178	386	214	31	C
	ATOM	624	CG	TYR	A	86	-5.789	-95.296	259.636	1.00	8.74		C
	ANISOU	624	CG	TYR	A	86	1250	708	1362	166	-26	-175	C
	ATOM	625	CD1	TYR	A	86	-5.712	-94.432	260.795	1.00	10.22		C
25	ANISOU	625	CD1	TYR	A	86	1821	966	1094	-149	-278	-12	C
	ATOM	626	CE1	TYR	A	86	-6.096	-93.113	260.730	1.00	9.65		C
	ANISOU	626	CE1	TYR	A	86	1555	938	1174	-36	-305	-178	C
	ATOM	627	CZ	TYR	A	86	-6.635	-92.648	259.613	1.00	8.89		C
	ANISOU	627	CZ	TYR	A	86	1316	903	1159	210	-47	-53	C
30	ATOM	628	OH	TYR	A	86	-7.064	-91.320	259.566	1.00	9.29		O
	ANISOU	628	OH	TYR	A	86	1469	764	1297	20	176	-177	O
	ATOM	629	CE2	TYR	A	86	-6.731	-93.407	258.480	1.00	9.64		C
	ANISOU	629	CE2	TYR	A	86	1531	1174	958	-108	129	164	C
	ATOM	630	CD2	TYR	A	86	-6.347	-94.751	258.504	1.00	9.52		C
35	ANISOU	630	CD2	TYR	A	86	1327	1329	961	-49	209	-93	C
	ATOM	631	C	TYR	A	86	-7.952	-97.351	259.522	1.00	9.26		C

	ANISOU	631	C	TYR	A	86	1259	1150	1108	92	242	-65	C
	ATOM	632	O	TYR	A	86	-7.953	-97.865	258.377	1.00	10.20		O
	ANISOU	632	O	TYR	A	86	1450	1024	1399	7	21	-229	O
	ATOM	633	N	ASER	A	87	-8.970	-96.648	260.016	0.50	9.77		N
5	ANISOU	633	N	ASER	A	87	1512	962	1236	239	226	-115	N
	ATOM	634	N	BSER	A	87	-9.067	-96.748	259.985	0.50	9.94		N
	ANISOU	634	N	BSER	A	87	1370	1125	1281	175	208	-169	N
	ATOM	635	CA	ASER	A	87	-10.168	-96.366	259.316	0.50	8.74		C
	ANISOU	635	CA	ASER	A	87	1363	557	1399	55	275	-142	C
10	ATOM	636	CA	BSER	A	87	-10.149	-96.389	259.088	0.50	8.49		C
	ANISOU	636	CA	BSER	A	87	1337	515	1372	-62	256	-187	C
	ATOM	637	CB	ASER	A	87	-11.317	-96.577	260.276	0.50	8.72		C
	ANISOU	637	CB	ASER	A	87	1486	830	996	-208	139	179	C
	ATOM	638	CB	BSER	A	87	-11.551	-96.756	259.592	0.50	8.27		C
15	ANISOU	638	CB	BSER	A	87	1094	841	1207	59	33	-215	C
	ATOM	639	OG	ASER	A	87	-12.551	-96.247	259.673	0.50	8.41		O
	ANISOU	639	OG	ASER	A	87	1191	669	1334	-455	58	-134	O
	ATOM	640	OG	BSER	A	87	-11.702	-96.413	260.944	0.50	9.91		O
	ANISOU	640	OG	BSER	A	87	1872	526	1365	-126	186	-282	O
20	ATOM	641	C	ASER	A	87	-10.122	-94.843	258.906	0.50	7.67		C
	ANISOU	641	C	ASER	A	87	1143	520	1248	-160	121	-202	C
	ATOM	642	C	BSER	A	87	-10.106	-94.866	258.846	0.50	7.75		C
	ANISOU	642	C	BSER	A	87	1161	509	1274	-148	95	-176	C
	ATOM	643	O	ASER	A	87	-9.672	-93.966	259.673	0.50	9.18		O
25	ANISOU	643	O	ASER	A	87	1344	976	1166	-152	-40	-415	O
	ATOM	644	O	BSER	A	87	-9.666	-94.018	259.659	0.50	9.53		O
	ANISOU	644	O	BSER	A	87	1358	1115	1148	-130	-51	-431	O
	ATOM	645	N	PRO	A	88	-10.562	-94.482	257.673	1.00	8.63		N
	ANISOU	645	N	PRO	A	88	1237	867	1175	-249	-27	-332	N
30	ATOM	646	CA	PRO	A	88	-10.518	-93.029	257.318	1.00	8.58		C
	ANISOU	646	CA	PRO	A	88	1075	1029	1155	-72	99	-82	C
	ATOM	647	CB	PRO	A	88	-11.399	-92.874	256.084	1.00	9.65		C
	ANISOU	647	CB	PRO	A	88	1374	1078	1213	-366	99	-376	C
	ATOM	648	CG	PRO	A	88	-11.848	-94.197	255.782	1.00	13.27		C
35	ANISOU	648	CG	PRO	A	88	2275	1078	1689	-472	-299	-232	C
	ATOM	649	CD	PRO	A	88	-11.238	-95.277	256.640	1.00	11.44		C

	ANISOU	649	CD	PRO	A	88	1494	1458	1393	-291	-48	-361	C
	ATOM	650	C	PRO	A	88	-11.037	-92.159	258.466	1.00	8.35		C
	ANISOU	650	C	PRO	A	88	1113	891	1167	-8	156	-206	C
	ATOM	651	O	PRO	A	88	-12.148	-92.337	258.890	1.00	8.49		O
5	ANISOU	651	O	PRO	A	88	1183	814	1228	13	101	-159	O
	ATOM	652	N	GLY	A	89	-10.185	-91.234	258.960	1.00	9.39		N
	ANISOU	652	N	GLY	A	89	1324	967	1276	-243	183	-182	N
	ATOM	653	CA	GLY	A	89	-10.472	-90.640	260.299	1.00	9.64		C
	ANISOU	653	CA	GLY	A	89	1423	1105	1134	-92	-37	97	C
10	ATOM	654	C	GLY	A	89	-11.527	-89.600	260.334	1.00	8.80		C
	ANISOU	654	C	GLY	A	89	1406	876	1061	-29	-61	-62	C
	ATOM	655	O	GLY	A	89	-12.053	-89.294	261.405	1.00	8.50		O
	ANISOU	655	O	GLY	A	89	1443	614	1174	-188	207	-20	O
	ATOM	656	N	PHE	A	90	-11.856	-89.042	259.160	1.00	8.42		N
15	ANISOU	656	N	PHE	A	90	1309	926	963	52	205	-35	N
	ATOM	657	CA	PHE	A	90	-12.753	-87.876	259.091	1.00	7.79		C
	ANISOU	657	CA	PHE	A	90	1108	681	1167	-183	103	-175	C
	ATOM	658	CB	PHE	A	90	-12.093	-86.673	258.437	1.00	7.39		C
	ANISOU	658	CB	PHE	A	90	1178	604	1026	101	-63	138	C
20	ATOM	659	CG	PHE	A	90	-10.812	-86.219	259.064	1.00	8.23		C
	ANISOU	659	CG	PHE	A	90	1281	609	1236	117	-58	-111	C
	ATOM	660	CD1	PHE	A	90	-10.481	-86.425	260.400	1.00	6.78		C
	ANISOU	660	CD1	PHE	A	90	1144	369	1062	-207	112	89	C
	ATOM	661	CE1	PHE	A	90	-9.319	-85.944	260.935	1.00	9.25		C
25	ANISOU	661	CE1	PHE	A	90	1205	1314	995	-155	-98	103	C
	ATOM	662	CZ	PHE	A	90	-8.477	-85.177	260.176	1.00	9.17		C
	ANISOU	662	CZ	PHE	A	90	1388	813	1280	-256	-284	97	C
	ATOM	663	CE2	PHE	A	90	-8.730	-84.955	258.856	1.00	9.92		C
	ANISOU	663	CE2	PHE	A	90	1060	1499	1207	-130	33	58	C
30	ATOM	664	CD2	PHE	A	90	-9.900	-85.489	258.298	1.00	9.00		C
	ANISOU	664	CD2	PHE	A	90	1271	975	1174	49	19	-115	C
	ATOM	665	C	PHE	A	90	-13.971	-88.280	258.270	1.00	9.19		C
	ANISOU	665	C	PHE	A	90	1230	1039	1222	53	-62	-153	C
	ATOM	666	O	PHE	A	90	-13.809	-88.760	257.130	1.00	10.32		O
35	ANISOU	666	O	PHE	A	90	1521	1248	1149	-94	-34	-134	O
	ATOM	667	N	GLN	A	91	-15.172	-88.056	258.782	1.00	9.25		N

	ANISOU	667	N	GLN	A	91	1085	1344	1084	-74	-33	-186	N
	ATOM	668	CA	GLN	A	91	-16.454	-88.320	258.091	1.00	7.71		C
	ANISOU	668	CA	GLN	A	91	1160	508	1259	213	-86	-304	C
	ATOM	669	CB	GLN	A	91	-16.547	-87.832	256.673	1.00	10.11		C
5	ANISOU	669	CB	GLN	A	91	1266	1283	1290	-178	-26	-169	C
	ATOM	670	CG	GLN	A	91	-16.145	-86.394	256.476	1.00	9.53		C
	ANISOU	670	CG	GLN	A	91	1391	1191	1038	84	141	-104	C
	ATOM	671	CD	GLN	A	91	-17.128	-85.306	256.881	1.00	8.86		C
	ANISOU	671	CD	GLN	A	91	1237	927	1200	-124	-129	-146	C
10	ATOM	672	OE1	GLN	A	91	-18.050	-85.521	257.691	1.00	9.92		O
	ANISOU	672	OE1	GLN	A	91	1465	1131	1172	-47	63	-93	O
	ATOM	673	NE2	GLN	A	91	-16.990	-84.115	256.266	1.00	9.02		N
	ANISOU	673	NE2	GLN	A	91	1372	919	1137	305	20	-228	N
	ATOM	674	C	GLN	A	91	-16.863	-89.812	258.187	1.00	7.67		C
15	ANISOU	674	C	GLN	A	91	1297	604	1014	149	-44	-91	C
	ATOM	675	O	GLN	A	91	-17.950	-90.098	257.594	1.00	9.19		O
	ANISOU	675	O	GLN	A	91	1257	950	1284	118	-217	-65	O
	ATOM	676	N	ATYR	A	92	-16.137	-90.729	258.862	0.50	7.75		N
	ANISOU	676	N	ATYR	A	92	1119	707	1118	54	-93	-19	N
20	ATOM	677	N	BTYR	A	92	-16.152	-90.701	258.909	0.50	8.25		N
	ANISOU	677	N	BTYR	A	92	1170	798	1164	117	-113	-27	N
	ATOM	678	CA	ATYR	A	92	-16.451	-92.136	259.069	0.50	8.03		C
	ANISOU	678	CA	ATYR	A	92	1209	777	1062	-214	167	-85	C
	ATOM	679	CA	BTYR	A	92	-16.388	-92.121	259.079	0.50	8.76		C
25	ANISOU	679	CA	BTYR	A	92	1293	865	1168	-247	96	-68	C
	ATOM	680	CB	ATYR	A	92	-15.710	-92.979	258.016	0.50	8.29		C
	ANISOU	680	CB	ATYR	A	92	1315	815	1019	-39	-123	-285	C
	ATOM	681	CB	BTYR	A	92	-15.526	-92.879	258.060	0.50	9.25		C
	ANISOU	681	CB	BTYR	A	92	1425	815	1274	-179	23	-178	C
30	ATOM	682	CG	ATYR	A	92	-15.704	-92.366	256.694	0.50	8.24		C
	ANISOU	682	CG	ATYR	A	92	1169	900	1060	-23	55	-322	C
	ATOM	683	CG	BTYR	A	92	-15.960	-92.656	256.676	0.50	9.27		C
	ANISOU	683	CG	BTYR	A	92	1329	689	1502	47	-86	-273	C
	ATOM	684	CD1ATYR	A	92		-16.809	-92.460	255.856	0.50	8.25		C
35	ANISOU	684	CD1ATYR	A	92		1239	1073	822	-174	77	205	C
	ATOM	685	CD1BTYR	A	92		-16.933	-93.453	256.061	0.50	11.68		C

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	ANISOU	685	CD1BTYR	A	92	1738	1487	1211	-238	-91	-528	C
	ATOM	686	CE1ATYR	A	92	-16.905	-91.814	254.649	0.50	5.42		C
	ANISOU	686	CE1ATYR	A	92	1044	304	709	124	-83	-131	C
	ATOM	687	CE1BTYR	A	92	-17.407	-93.145	254.823	0.50	13.29		C
5	ANISOU	687	CE1BTYR	A	92	2392	837	1820	186	-341	298	C
	ATOM	688	CZ ATYR	A	92	-15.891	-91.034	254.246	0.50	7.29		C
	ANISOU	688	CZ ATYR	A	92	1067	722	978	-12	-56	6	C
	ATOM	689	CZ BTYR	A	92	-16.878	-92.121	254.121	0.50	15.29		C
	ANISOU	689	CZ BTYR	A	92	2222	2009	1576	-625	106	48	C
10	ATOM	690	OH ATYR	A	92	-16.005	-90.288	253.059	0.50	7.66		O
	ANISOU	690	OH ATYR	A	92	1102	839	969	132	-211	16	O
	ATOM	691	OH BTYR	A	92	-17.427	-91.951	252.849	0.50	20.72		O
	ANISOU	691	OH BTYR	A	92	2930	2612	2327	210	-611	381	O
	ATOM	692	CE2ATYR	A	92	-14.812	-90.785	255.118	0.50	5.66		C
15	ANISOU	692	CE2ATYR	A	92	578	630	942	276	56	126	C
	ATOM	693	CE2BTYR	A	92	-15.886	-91.339	254.660	0.50	9.26		C
	ANISOU	693	CE2BTYR	A	92	1528	496	1494	552	114	113	C
	ATOM	694	CD2ATYR	A	92	-14.693	-91.525	256.326	0.50	6.86		C
	ANISOU	694	CD2ATYR	A	92	1020	734	851	216	83	59	C
20	ATOM	695	CD2BTYR	A	92	-15.435	-91.604	255.946	0.50	13.28		C
	ANISOU	695	CD2BTYR	A	92	1821	1787	1435	-380	-87	188	C
	ATOM	696	C ATYR	A	92	-16.032	-92.424	260.458	0.50	9.09		C
	ANISOU	696	C ATYR	A	92	1512	970	969	-373	171	-313	C
	ATOM	697	C BTYR	A	92	-16.016	-92.422	260.477	0.50	9.55		C
25	ANISOU	697	C BTYR	A	92	1589	1008	1029	-420	196	-316	C
	ATOM	698	O ATYR	A	92	-15.394	-91.601	261.152	0.50	8.36		O
	ANISOU	698	O ATYR	A	92	1419	427	1329	-134	248	-431	O
	ATOM	699	O BTYR	A	92	-15.390	-91.611	261.193	0.50	8.53		O
	ANISOU	699	O BTYR	A	92	1450	423	1365	-131	258	-434	O
30	ATOM	700	N GLY	A	93	-16.493	-93.568	260.948	1.00	9.69		N
	ANISOU	700	N GLY	A	93	1364	1111	1205	-199	122	60	N
	ATOM	701	CA GLY	A	93	-16.053	-94.114	262.224	1.00	9.51		C
	ANISOU	701	CA GLY	A	93	1301	1065	1245	-25	173	301	C
	ATOM	702	C GLY	A	93	-15.892	-95.609	262.291	1.00	8.01		C
35	ANISOU	702	C GLY	A	93	1231	838	972	-247	70	-93	C
	ATOM	703	O GLY	A	93	-16.250	-96.275	261.307	1.00	9.84		O

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	ANISOU	703	O	GLY	A	93	1625	907	1203	-208	-61	-149	O
	ATOM	704	N	HIS	A	94	-15.354	-96.032	263.385	1.00	8.41		N
	ANISOU	704	N	HIS	A	94	1119	886	1186	-102	99	-87	N
	ATOM	705	CA	HIS	A	94	-15.356	-97.459	263.693	1.00	8.32		C
5	ANISOU	705	CA	HIS	A	94	1049	961	1148	-329	49	-15	C
	ATOM	706	CB	HIS	A	94	-13.928	-98.100	263.613	1.00	9.47		C
	ANISOU	706	CB	HIS	A	94	1287	1000	1310	36	45	-147	C
	ATOM	707	CG	HIS	A	94	-12.961	-97.427	264.499	1.00	8.89		C
	ANISOU	707	CG	HIS	A	94	1269	913	1196	-149	52	-115	C
10	ATOM	708	ND1	HIS	A	94	-12.895	-97.609	265.854	1.00	9.20		N
	ANISOU	708	ND1	HIS	A	94	1432	775	1289	-196	214	-149	N
	ATOM	709	CE1	HIS	A	94	-12.039	-96.757	266.380	1.00	10.59		C
	ANISOU	709	CE1	HIS	A	94	1420	1361	1241	-524	152	-100	C
	ATOM	710	NE2	HIS	A	94	-11.524	-96.023	265.394	1.00	9.37		N
15	ANISOU	710	NE2	HIS	A	94	1311	1104	1145	-145	-74	-14	N
	ATOM	711	CD2	HIS	A	94	-12.099	-96.389	264.219	1.00	8.33		C
	ANISOU	711	CD2	HIS	A	94	1363	644	1156	-76	12	150	C
	ATOM	712	C	HIS	A	94	-15.970	-97.646	265.104	1.00	9.26		C
	ANISOU	712	C	HIS	A	94	1109	1254	1152	-202	186	-102	C
20	ATOM	713	O	HIS	A	94	-16.102	-96.667	265.843	1.00	9.86		O
	ANISOU	713	O	HIS	A	94	1326	937	1482	-230	106	-220	O
	ATOM	714	N	PRO	A	95	-16.345	-98.886	265.474	1.00	9.52		N
	ANISOU	714	N	PRO	A	95	1215	1128	1274	-56	207	1	N
	ATOM	715	CA	PRO	A	95	-17.102	-98.976	266.755	1.00	9.10		C
25	ANISOU	715	CA	PRO	A	95	1432	873	1153	-123	161	188	C
	ATOM	716	CB	PRO	A	95	-17.497	-100.487	266.774	1.00	10.39		C
	ANISOU	716	CB	PRO	A	95	1488	1067	1391	-433	159	244	C
	ATOM	717	CG	PRO	A	95	-17.536	-100.857	265.335	1.00	10.98		C
	ANISOU	717	CG	PRO	A	95	1498	1066	1606	-214	186	-107	C
30	ATOM	718	CD	PRO	A	95	-16.374	-100.170	264.723	1.00	10.78		C
	ANISOU	718	CD	PRO	A	95	1261	1496	1339	-39	34	-134	C
	ATOM	719	C	PRO	A	95	-16.312	-98.635	267.982	1.00	8.71		C
	ANISOU	719	C	PRO	A	95	1332	521	1455	-54	-21	-31	C
	ATOM	720	O	PRO	A	95	-16.920	-98.341	269.039	1.00	10.40		O
35	ANISOU	720	O	PRO	A	95	1484	1084	1381	-35	173	70	O
	ATOM	721	N	LEU	A	96	-15.005	-98.775	267.974	1.00	8.72		N

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	ANISOU	721	N	LEU	A	96	1262	815	1233	-254	142	-167	N
	ATOM	722	CA	LEU	A	96	-14.238	-98.732	269.208	1.00	8.75		C
	ANISOU	722	CA	LEU	A	96	1200	1032	1091	-192	47	-166	C
	ATOM	723	CB	LEU	A	96	-12.826	-99.276	269.048	1.00	8.10		C
5	ANISOU	723	CB	LEU	A	96	1278	516	1281	-314	57	-67	C
	ATOM	724	CG	LEU	A	96	-12.722	-100.732	268.654	1.00	11.10		C
	ANISOU	724	CG	LEU	A	96	1654	869	1695	-169	337	-507	C
	ATOM	725	CD1	LEU	A	96	-11.249	-101.074	268.680	1.00	14.50		C
	ANISOU	725	CD1	LEU	A	96	1861	1299	2346	-83	151	33	C
10	ATOM	726	CD2	LEU	A	96	-13.504	-101.739	269.480	1.00	15.26		C
	ANISOU	726	CD2	LEU	A	96	2256	1340	2200	-255	221	-1	C
	ATOM	727	C	LEU	A	96	-14.165	-97.309	269.769	1.00	8.73		C
	ANISOU	727	C	LEU	A	96	1115	920	1280	103	20	41	C
	ATOM	728	O	LEU	A	96	-13.962	-97.093	270.996	1.00	9.61		O
15	ANISOU	728	O	LEU	A	96	1517	1022	1112	-155	169	-53	O
	ATOM	729	N	SER	A	97	-14.225	-96.306	268.897	1.00	8.60		N
	ANISOU	729	N	SER	A	97	1217	1003	1047	57	2	-48	N
	ATOM	730	CA	SER	A	97	-14.188	-94.917	269.347	1.00	7.74		C
	ANISOU	730	CA	SER	A	97	974	792	1172	-116	151	100	C
20	ATOM	731	CB	SER	A	97	-14.008	-93.920	268.201	1.00	8.66		C
	ANISOU	731	CB	SER	A	97	1043	1189	1059	1	112	172	C
	ATOM	732	OG	SER	A	97	-15.093	-94.065	267.310	1.00	8.26		O
	ANISOU	732	OG	SER	A	97	1360	555	1222	3	-59	-114	O
	ATOM	733	C	SER	A	97	-15.402	-94.568	270.208	1.00	8.02		C
25	ANISOU	733	C	SER	A	97	913	949	1183	-80	178	126	C
	ATOM	734	O	SER	A	97	-15.292	-93.916	271.245	1.00	9.51		O
	ANISOU	734	O	SER	A	97	1286	1175	1152	-157	53	-2	O
	ATOM	735	N	PHE	A	98	-16.566	-94.977	269.700	1.00	7.91		N
	ANISOU	735	N	PHE	A	98	1200	580	1222	29	59	-45	N
30	ATOM	736	CA	PHE	A	98	-17.809	-94.778	270.400	1.00	9.29		C
	ANISOU	736	CA	PHE	A	98	1186	1121	1221	-100	170	-217	C
	ATOM	737	CB	PHE	A	98	-19.015	-95.109	269.530	1.00	10.06		C
	ANISOU	737	CB	PHE	A	98	1349	1178	1293	-47	-4	68	C
	ATOM	738	CG	PHE	A	98	-19.017	-94.324	268.222	1.00	8.90		C
35	ANISOU	738	CG	PHE	A	98	1092	896	1394	-191	64	-78	C
	ATOM	739	CD1	PHE	A	98	-19.400	-93.019	268.210	1.00	8.91		C

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	ANISOU	739	CD1	PHE	A	98	1308	830	1245	-108	-50	-58	C
	ATOM	740	CE1	PHE	A	98	-19.310	-92.261	267.062	1.00	11.48		C
	ANISOU	740	CE1	PHE	A	98	1725	1169	1465	-393	-3	125	C
	ATOM	741	CZ	PHE	A	98	-18.804	-92.739	265.900	1.00	11.81		C
5	ANISOU	741	CZ	PHE	A	98	1345	1664	1478	-216	8	179	C
	ATOM	742	CE2	PHE	A	98	-18.406	-94.065	265.847	1.00	10.89		C
	ANISOU	742	CE2	PHE	A	98	1365	1488	1282	65	21	-185	C
	ATOM	743	CD2	PHE	A	98	-18.500	-94.846	267.026	1.00	10.82		C
	ANISOU	743	CD2	PHE	A	98	1430	1431	1248	-287	-10	14	C
10	ATOM	744	C	PHE	A	98	-17.800	-95.516	271.697	1.00	9.68		C
	ANISOU	744	C	PHE	A	98	1194	1195	1288	-185	133	63	C
	ATOM	745	O	PHE	A	98	-18.280	-95.025	272.733	1.00	9.75		O
	ANISOU	745	O	PHE	A	98	1378	984	1341	-215	222	102	O
	ATOM	746	N	AGLN	A	99	-17.293	-96.752	271.662	0.50	9.97		N
15	ANISOU	746	N	AGLN	A	99	1375	1212	1201	-39	-113	-8	N
	ATOM	747	N	BGLN	A	99	-17.339	-96.764	271.655	0.50	10.39		N
	ANISOU	747	N	BGLN	A	99	1423	1218	1306	-30	-108	-37	N
	ATOM	748	CA	AGLN	A	99	-17.233	-97.600	272.874	0.50	9.70		C
	ANISOU	748	CA	AGLN	A	99	1113	1225	1347	-53	-62	83	C
20	ATOM	749	CA	BGLN	A	99	-17.265	-97.570	272.880	0.50	10.71		C
	ANISOU	749	CA	BGLN	A	99	1213	1416	1438	-143	-60	101	C
	ATOM	750	CB	AGLN	A	99	-16.825	-99.059	272.500	0.50	11.26		C
	ANISOU	750	CB	AGLN	A	99	1398	1171	1709	-139	284	7	C
	ATOM	751	CB	BGLN	A	99	-16.859	-99.020	272.560	0.50	13.50		C
25	ANISOU	751	CB	BGLN	A	99	1634	1491	2004	12	282	39	C
	ATOM	752	CG	AGLN	A	99	-17.858	-99.753	271.619	0.50	15.14		C
	ANISOU	752	CG	AGLN	A	99	2101	1955	1693	7	14	-27	C
	ATOM	753	CG	BGLN	A	99	-17.980	-99.816	271.926	0.50	18.27		C
	ANISOU	753	CG	BGLN	A	99	2413	2400	2128	-192	198	-180	C
30	ATOM	754	CD	AGLN	A	99	-17.325	-101.063	270.995	0.50	19.73		C
	ANISOU	754	CD	AGLN	A	99	3446	1080	2967	-185	-595	-212	C
	ATOM	755	CD	BGLN	A	99	-17.525	-101.247	271.701	0.50	24.90		C
	ANISOU	755	CD	BGLN	A	99	3518	2144	3798	10	-355	74	C
	ATOM	756	OE1	AGLN	A	99	-16.290	-101.591	271.389	0.50	27.64		O
35	ANISOU	756	OE1	AGLN	A	99	2544	1396	6561	578	484	-1210	O
	ATOM	757	OE1	BGLN	A	99	-16.357	-101.591	271.988	0.50	35.17		O

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	ANISOU	757	OE1BGLN	A	99	2108	1422	9830	-1458	1855	-1869	O	
	ATOM	758	NE2AGLN	A	99	-18.059	-101.581	270.048	0.50	22.33		N	
	ANISOU	758	NE2AGLN	A	99	4019	1766	2700	186	-292	-306	N	
	ATOM	759	NE2BGLN	A	99	-18.429	-102.080	271.228	0.50	26.93		N	
5	ANISOU	759	NE2BGLN	A	99	3596	2501	4136	-1100	973	770	N	
	ATOM	760	C	AGLN	A	99	-16.345	-96.999	273.921	0.50	8.25	C	
	ANISOU	760	C	AGLN	A	99	1236	516	1382	-182	211	-132	C
	ATOM	761	C	BGLN	A	99	-16.377	-96.963	273.910	0.50	8.55	C	
	ANISOU	761	C	BGLN	A	99	1257	539	1452	-176	218	-84	C
10	ATOM	762	O	AGLN	A	99	-16.701	-96.929	275.093	0.50	9.55	O	
	ANISOU	762	O	AGLN	A	99	1703	750	1175	-486	218	-152	O
	ATOM	763	O	BGLN	A	99	-16.782	-96.844	275.066	0.50	11.00	O	
	ANISOU	763	O	BGLN	A	99	1908	1068	1201	-464	227	-118	O
	ATOM	764	N	LEU	A	100	-15.162	-96.558	273.504	1.00	8.28	N	
15	ANISOU	764	N	LEU	A	100	1264	728	1151	-191	76	164	N
	ATOM	765	CA	LEU	A	100	-14.237	-95.989	274.465	1.00	9.84	C	
	ANISOU	765	CA	LEU	A	100	1207	1368	1163	-178	137	-176	C
	ATOM	766	CB	LEU	A	100	-12.846	-95.772	273.832	1.00	8.53	C	
	ANISOU	766	CB	LEU	A	100	1117	1155	968	-15	187	-117	C
20	ATOM	767	CG	LEU	A	100	-11.773	-95.170	274.686	1.00	8.97	C	
	ANISOU	767	CG	LEU	A	100	1044	987	1377	-88	82	128	C
	ATOM	768	CD1	LEU	A	100	-11.573	-95.773	276.006	1.00	11.54	C	
	ANISOU	768	CD1	LEU	A	100	1614	1155	1615	-171	9	276	C
	ATOM	769	CD2	LEU	A	100	-10.458	-95.128	273.909	1.00	9.32	C	
25	ANISOU	769	CD2	LEU	A	100	1230	949	1360	-194	191	258	C
	ATOM	770	C	LEU	A	100	-14.702	-94.612	274.973	1.00	7.83	C	
	ANISOU	770	C	LEU	A	100	974	744	1257	-294	51	306	C
	ATOM	771	O	LEU	A	100	-14.620	-94.303	276.171	1.00	10.52	O	
	ANISOU	771	O	LEU	A	100	1567	1189	1241	-347	122	-94	O
30	ATOM	772	N	ALA	A	101	-15.332	-93.824	274.108	1.00	7.98	N	
	ANISOU	772	N	ALA	A	101	1097	833	1101	12	93	42	N
	ATOM	773	CA	ALA	A	101	-15.844	-92.502	274.510	1.00	7.37	C	
	ANISOU	773	CA	ALA	A	101	1097	647	1054	-207	44	-187	C
	ATOM	774	CB	ALA	A	101	-16.408	-91.764	273.349	1.00	8.94	C	
35	ANISOU	774	CB	ALA	A	101	1239	910	1246	-134	225	2	C
	ATOM	775	C	ALA	A	101	-16.900	-92.617	275.604	1.00	8.55	C	

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	ANISOU	775	C	ALA	A	101	1063	1022	1163	-206	116	-54	C
	ATOM	776	O	ALA	A	101	-16.893	-91.915	276.568	1.00	9.78		O
	ANISOU	776	O	ALA	A	101	1257	1283	1175	-2	79	-268	O
	ATOM	777	N	AGLU	A	102	-17.798	-93.587	275.401	0.50	10.52		N
5	ANISOU	777	N	AGLU	A	102	1485	1129	1380	-520	326	-266	N
	ATOM	778	N	BGLU	A	102	-17.827	-93.552	275.386	0.50	10.21		N
	ANISOU	778	N	BGLU	A	102	1396	1119	1363	-490	353	-271	N
	ATOM	779	CA	AGLU	A	102	-18.815	-93.903	276.409	0.50	10.62		C
	ANISOU	779	CA	AGLU	A	102	1216	1472	1347	-136	303	1	C
10	ATOM	780	CA	BGLU	A	102	-18.853	-93.830	276.394	0.50	9.82		C
	ANISOU	780	CA	BGLU	A	102	1237	1250	1244	-200	301	-20	C
	ATOM	781	CB	AGLU	A	102	-19.712	-95.037	275.922	0.50	13.95		C
	ANISOU	781	CB	AGLU	A	102	1665	1873	1760	-93	543	-882	C
	ATOM	782	CB	BGLU	A	102	-19.883	-94.820	275.824	0.50	12.14		C
15	ANISOU	782	CB	BGLU	A	102	1266	1777	1568	-153	307	-464	C
	ATOM	783	CG	AGLU	A	102	-20.853	-95.363	276.858	0.50	17.21		C
	ANISOU	783	CG	AGLU	A	102	2285	2082	2172	-505	566	416	C
	ATOM	784	CG	BGLU	A	102	-20.957	-95.305	276.790	0.50	12.67		C
	ANISOU	784	CG	BGLU	A	102	1680	1361	1772	-223	305	194	C
20	ATOM	785	CD	AGLU	A	102	-21.942	-96.152	276.173	0.50	25.33		C
	ANISOU	785	CD	AGLU	A	102	2637	3162	3823	-632	14	43	C
	ATOM	786	CD	BGLU	A	102	-21.886	-94.221	277.313	0.50	13.55		C
	ANISOU	786	CD	BGLU	A	102	1602	1566	1981	-12	154	7	C
	ATOM	787	OE1AGLU	A	102		-21.625	-97.231	275.682	0.50	35.24		O
25	ANISOU	787	OE1AGLU	A	102		3853	4082	5455	-524	772	-810	O
	ATOM	788	OE1BGLU	A	102		-21.860	-93.095	276.825	0.50	13.01		O
	ANISOU	788	OE1BGLU	A	102		1342	2161	1440	-241	404	167	O
	ATOM	789	OE2AGLU	A	102		-23.100	-95.697	276.151	0.50	28.75		O
	ANISOU	789	OE2AGLU	A	102		3266	2701	4956	-369	-813	1485	O
30	ATOM	790	OE2BGLU	A	102		-22.645	-94.516	278.300	0.50	17.32		O
	ANISOU	790	OE2BGLU	A	102		2490	1866	2223	-31	877	-217	O
	ATOM	791	C	AGLU	A	102	-18.194	-94.321	277.744	0.50	9.70		C
	ANISOU	791	C	AGLU	A	102	1580	786	1317	-186	363	145	C
	ATOM	792	C	BGLU	A	102	-18.230	-94.321	277.728	0.50	9.45		C
35	ANISOU	792	C	BGLU	A	102	1520	786	1285	-188	348	166	C
	ATOM	793	O	AGLU	A	102	-18.668	-93.920	278.811	0.50	10.66		O

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	ANISOU	793	O	AGLU	A	102	1620	1100	1329	-209	300	-21	O
	ATOM	794	O	BGLU	A	102	-18.689	-93.939	278.807	0.50	10.46		O
	ANISOU	794	O	BGLU	A	102	1605	1057	1312	-173	267	-24	O
	ATOM	795	N	ALYS	A	103	-17.191	-95.214	277.682	0.50	11.18		N
5	ANISOU	795	N	ALYS	A	103	1261	1232	1752	-66	115	-118	N
	ATOM	796	N	BLYS	A	103	-17.214	-95.199	277.666	0.50	11.03		N
	ANISOU	796	N	BLYS	A	103	1252	1216	1719	-52	113	-103	N
	ATOM	797	CA	ALYS	A	103	-16.486	-95.663	278.902	0.50	11.95		C
	ANISOU	797	CA	ALYS	A	103	1292	1510	1737	-303	59	23	C
10	ATOM	798	CA	BLYS	A	103	-16.521	-95.633	278.898	0.50	11.71		C
	ANISOU	798	CA	BLYS	A	103	1331	1431	1685	-302	55	34	C
	ATOM	799	CB	ALYS	A	103	-15.396	-96.739	278.595	0.50	14.10		C
	ANISOU	799	CB	ALYS	A	103	1932	1400	2022	-192	337	-532	C
	ATOM	800	CB	BLYS	A	103	-15.405	-96.653	278.602	0.50	13.41		C
15	ANISOU	800	CB	BLYS	A	103	1961	1046	2089	-157	244	-127	C
	ATOM	801	CG	ALYS	A	103	-15.882	-98.197	278.640	0.50	16.90		C
	ANISOU	801	CG	ALYS	A	103	3085	1029	2305	253	136	-628	C
	ATOM	802	CG	BLYS	A	103	-15.804	-97.953	277.931	0.50	14.89		C
	ANISOU	802	CG	BLYS	A	103	2346	1499	1812	40	352	-564	C
20	ATOM	803	CD	ALYS	A	103	-14.826	-99.353	278.652	0.50	22.75		C
	ANISOU	803	CD	ALYS	A	103	3233	1751	3659	495	-26	-606	C
	ATOM	804	CD	BLYS	A	103	-14.602	-98.871	277.737	0.50	20.05		C
	ANISOU	804	CD	BLYS	A	103	2501	2519	2595	534	287	276	C
	ATOM	805	CE	ALYS	A	103	-15.524	-100.694	278.949	0.50	20.51		C
25	ANISOU	805	CE	ALYS	A	103	2290	2625	2875	83	492	802	C
	ATOM	806	CE	BLYS	A	103	-13.835	-98.879	279.045	0.50	19.76		C
	ANISOU	806	CE	BLYS	A	103	1361	3065	3080	-99	212	409	C
	ATOM	807	NZ	ALYS	A	103	-16.103	-101.052	277.622	0.50	30.68		N
	ANISOU	807	NZ	ALYS	A	103	3693	3307	4656	-395	247	-913	N
30	ATOM	808	NZ	BLYS	A	103	-13.301	-100.196	279.352	0.50	28.79		N
	ANISOU	808	NZ	BLYS	A	103	3881	3137	3918	517	172	-144	N
	ATOM	809	C	ALYS	A	103	-15.873	-94.499	279.649	0.50	10.33		C
	ANISOU	809	C	ALYS	A	103	1640	1011	1274	-176	0	377	C
	ATOM	810	C	BLYS	A	103	-15.899	-94.481	279.648	0.50	10.34		C
35	ANISOU	810	C	BLYS	A	103	1629	1035	1265	-224	0	349	C
	ATOM	811	O	ALYS	A	103	-15.979	-94.400	280.861	0.50	10.89		O

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	ANISOU	811	O	ALYS	A	103	2209	694	1233	-253	141	134	O
	ATOM	812	O	BLYS	A	103	-15.992	-94.389	280.861	0.50	10.77		O
	ANISOU	812	O	BLYS	A	103	2202	676	1214	-261	138	157	O
	ATOM	813	N	ILE	A	104	-15.273	-93.557	278.925	1.00	9.79		N
5	ANISOU	813	N	ILE	A	104	1511	947	1259	-299	83	120	N
	ATOM	814	CA	ILE	A	104	-14.675	-92.319	279.539	1.00	10.15		C
	ANISOU	814	CA	ILE	A	104	1369	1264	1224	-50	-11	-157	C
	ATOM	815	CB	ILE	A	104	-13.803	-91.612	278.512	1.00	9.81		C
	ANISOU	815	CB	ILE	A	104	1505	878	1343	-197	-90	-149	C
10	ATOM	816	CG1	ILE	A	104	-12.530	-92.352	278.170	1.00	10.08		C
	ANISOU	816	CG1	ILE	A	104	1425	1197	1206	24	-72	-200	C
	ATOM	817	CD1	ILE	A	104	-11.763	-91.940	276.924	1.00	10.89		C
	ANISOU	817	CD1	ILE	A	104	1453	1077	1608	-158	47	-181	C
	ATOM	818	CG2	ILE	A	104	-13.472	-90.196	279.021	1.00	10.24		C
15	ANISOU	818	CG2	ILE	A	104	1471	933	1485	-231	-95	-182	C
	ATOM	819	C	ILE	A	104	-15.766	-91.430	280.179	1.00	9.88		C
	ANISOU	819	C	ILE	A	104	1505	795	1452	-295	-25	135	C
	ATOM	820	O	ILE	A	104	-15.605	-91.009	281.299	1.00	11.66		O
	ANISOU	820	O	ILE	A	104	1899	1160	1372	-210	20	49	O
20	ATOM	821	N	ALA	A	105	-16.865	-91.228	279.424	1.00	9.07		N
	ANISOU	821	N	ALA	A	105	1430	626	1390	-181	151	-133	N
	ATOM	822	CA	ALA	A	105	-17.958	-90.415	279.879	1.00	11.63		C
	ANISOU	822	CA	ALA	A	105	1467	1508	1441	101	272	75	C
	ATOM	823	CB	ALA	A	105	-19.002	-90.344	278.790	1.00	11.02		C
25	ANISOU	823	CB	ALA	A	105	1352	1262	1570	-312	346	243	C
	ATOM	824	C	ALA	A	105	-18.568	-90.947	281.151	1.00	11.69		C
	ANISOU	824	C	ALA	A	105	1371	1510	1561	-115	368	113	C
	ATOM	825	O	ALA	A	105	-19.140	-90.156	281.926	1.00	13.83		O
	ANISOU	825	O	ALA	A	105	2214	1344	1695	76	538	-103	O
30	ATOM	826	N	AGLN	A	106	-18.458	-92.253	281.380	0.50	13.68		N
	ANISOU	826	N	AGLN	A	106	2080	1574	1541	16	295	17	N
	ATOM	827	N	BGLN	A	106	-18.487	-92.254	281.378	0.50	13.55		N
	ANISOU	827	N	BGLN	A	106	2053	1567	1526	-6	289	18	N
	ATOM	828	CA	AGLN	A	106	-18.994	-92.821	282.615	0.50	12.86		C
35	ANISOU	828	CA	AGLN	A	106	1789	1492	1605	-414	265	-96	C
	ATOM	829	CA	BGLN	A	106	-19.039	-92.779	282.624	0.50	12.31		C

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	ANISOU	829	CA	BGLN	A	106	1766	1373	1537	-356	314	-195	C
	ATOM	830	CB	AGLN	A	106	-19.278	-94.319	282.416	0.50	14.69		C
	ANISOU	830	CB	AGLN	A	106	2213	1195	2172	-137	665	283	C
	ATOM	831	CB	BGLN	A	106	-19.375	-94.273	282.475	0.50	13.47		C
5	ANISOU	831	CB	BGLN	A	106	2022	1117	1976	-169	566	285	C
	ATOM	832	CG	AGLN	A	106	-20.396	-94.561	281.393	0.50	16.47		C
	ANISOU	832	CG	AGLN	A	106	2298	1846	2113	-935	884	-90	C
	ATOM	833	CG	BGLN	A	106	-20.522	-94.583	281.487	0.50	14.36		C
	ANISOU	833	CG	BGLN	A	106	2213	1379	1864	-836	783	-386	C
10	ATOM	834	CD	AGLN	A	106	-20.637	-96.026	280.996	0.50	23.17		C
	ANISOU	834	CD	AGLN	A	106	3324	1801	3677	-784	799	-405	C
	ATOM	835	CD	BGLN	A	106	-21.912	-94.085	281.939	0.50	17.79		C
	ANISOU	835	CD	BGLN	A	106	2077	2501	2178	-155	498	417	C
	ATOM	836	OE1AGLN	A	106		-19.837	-96.898	281.265	0.50	31.32		O
15	ANISOU	836	OE1AGLN	A	106		4768	2783	4348	-207	-641	-880	O
	ATOM	837	OE1BGLN	A	106		-22.102	-93.585	283.054	0.50	29.90		O
	ANISOU	837	OE1BGLN	A	106		4294	4093	2973	-320	641	-346	O
	ATOM	838	NE2AGLN	A	106		-21.741	-96.254	280.309	0.50	30.87		N
	ANISOU	838	NE2AGLN	A	106		3950	4122	3656	-1184	922	-31	N
20	ATOM	839	NE2BGLN	A	106		-22.854	-94.144	281.044	0.50	26.04		N
	ANISOU	839	NE2BGLN	A	106		2770	3972	3152	-156	294	-100	N
	ATOM	840	C	AGLN	A	106	-18.096	-92.648	283.821	0.50	12.81		C
	ANISOU	840	C	AGLN	A	106	1832	1627	1409	75	324	40	C
	ATOM	841	C	BGLN	A	106	-18.123	-92.569	283.826	0.50	12.78		C
25	ANISOU	841	C	BGLN	A	106	1838	1657	1360	113	333	-32	C
	ATOM	842	O	AGLN	A	106	-18.558	-92.864	284.952	0.50	18.25		O
	ANISOU	842	O	AGLN	A	106	2473	3150	1311	142	763	-33	O
	ATOM	843	O	BGLN	A	106	-18.608	-92.640	284.962	0.50	18.07		O
	ANISOU	843	O	BGLN	A	106	2572	2932	1360	157	757	166	O
30	ATOM	844	N	MET	A	107	-16.866	-92.222	283.602	1.00	12.36		N
	ANISOU	844	N	MET	A	107	1900	1382	1411	-96	-33	-215	N
	ATOM	845	CA	MET	A	107	-15.905	-92.054	284.626	1.00	12.93		C
	ANISOU	845	CA	MET	A	107	1832	1433	1646	-8	-284	-65	C
	ATOM	846	CB	MET	A	107	-14.535	-92.566	284.128	1.00	13.46		C
35	ANISOU	846	CB	MET	A	107	1988	1693	1432	-131	-253	-155	C
	ATOM	847	CG	MET	A	107	-14.560	-94.055	283.971	1.00	14.95		C

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	ANISOU	847	CG	MET	A	107	2192	1650	1837	468	-200	423	C
	ATOM	848	SD	MET	A	107	-12.985	-94.715	283.456	1.00	16.81		S
	ANISOU	848	SD	MET	A	107	2412	1765	2209	6	512	61	S
	ATOM	849	CE	MET	A	107	-12.063	-94.604	285.013	1.00	16.15		C
5	ANISOU	849	CE	MET	A	107	1907	1535	2693	145	138	-134	C
	ATOM	850	C	MET	A	107	-15.726	-90.587	285.079	1.00	11.57		C
	ANISOU	850	C	MET	A	107	1631	1111	1654	-2	-152	194	C
	ATOM	851	O	MET	A	107	-15.056	-90.329	286.071	1.00	15.63		O
	ANISOU	851	O	MET	A	107	2757	1468	1713	93	-470	-71	O
10	ATOM	852	N	THR	A	108	-16.240	-89.653	284.314	1.00	12.20		N
	ANISOU	852	N	THR	A	108	1667	1316	1652	-11	-268	175	N
	ATOM	853	CA	THR	A	108	-16.044	-88.204	284.577	1.00	10.00		C
	ANISOU	853	CA	THR	A	108	1298	1368	1131	-404	1	81	C
	ATOM	854	CB	THR	A	108	-16.008	-87.410	283.292	1.00	11.88		C
15	ANISOU	854	CB	THR	A	108	1568	1500	1445	89	-159	-42	C
	ATOM	855	OG1	THR	A	108	-17.262	-87.643	282.616	1.00	12.63		O
	ANISOU	855	OG1	THR	A	108	1640	1393	1765	-113	-54	258	O
	ATOM	856	CG2	THR	A	108	-14.803	-87.756	282.475	1.00	11.45		C
	ANISOU	856	CG2	THR	A	108	2010	1142	1196	67	33	34	C
20	ATOM	857	C	THR	A	108	-17.214	-87.641	285.423	1.00	10.77		C
	ANISOU	857	C	THR	A	108	1546	1082	1461	3	193	-57	C
	ATOM	858	O	THR	A	108	-18.375	-88.231	285.393	1.00	13.00		O
	ANISOU	858	O	THR	A	108	1650	1496	1790	-300	76	-138	O
	ATOM	859	N	APRO	A	109	-17.017	-86.484	286.090	0.50	10.83		N
25	ANISOU	859	N	APRO	A	109	1408	1374	1333	143	-51	-26	N
	ATOM	860	N	BPRO	A	109	-17.019	-86.473	286.112	0.50	10.87		N
	ANISOU	860	N	BPRO	A	109	1447	1340	1340	195	-47	-39	N
	ATOM	861	CA	APRO	A	109	-18.079	-85.886	286.859	0.50	11.77		C
	ANISOU	861	CA	APRO	A	109	1331	1909	1232	46	171	191	C
30	ATOM	862	CA	BPRO	A	109	-18.148	-85.919	286.816	0.50	11.99		C
	ANISOU	862	CA	BPRO	A	109	1327	1989	1237	81	174	227	C
	ATOM	863	CB	APRO	A	109	-17.343	-84.918	287.779	0.50	13.23		C
	ANISOU	863	CB	APRO	A	109	1500	1785	1739	97	47	-1	C
	ATOM	864	CB	BPRO	A	109	-17.518	-84.929	287.796	0.50	13.57		C
35	ANISOU	864	CB	BPRO	A	109	1653	1728	1773	125	-51	119	C
	ATOM	865	CG	APRO	A	109	-16.072	-84.588	287.080	0.50	9.67		C

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	ANISOU	865	CG	APRO	A	109	1279	1034	1359	178	-129	-122	C
	ATOM	866	CG	BPRO	A	109	-16.121	-85.385	287.961	0.50	12.27		C
	ANISOU	866	CG	BPRO	A	109	1541	1506	1615	25	-33	-73	C
	ATOM	867	CD	APRO	A	109	-15.742	-85.788	286.223	0.50	10.23		C
5	ANISOU	867	CD	APRO	A	109	1503	1057	1325	148	-151	-161	C
	ATOM	868	CD	BPRO	A	109	-15.763	-85.911	286.596	0.50	10.91		C
	ANISOU	868	CD	BPRO	A	109	1527	1035	1581	4	14	47	C
	ATOM	869	C	APRO	A	109	-19.062	-85.178	285.955	0.50	9.41		C
	ANISOU	869	C	APRO	A	109	1392	816	1367	-120	170	84	C
10	ATOM	870	C	BPRO	A	109	-19.099	-85.198	285.914	0.50	9.73		C
	ANISOU	870	C	BPRO	A	109	1395	938	1363	-77	180	101	C
	ATOM	871	O	APRO	A	109	-18.740	-84.912	284.798	0.50	11.12		O
	ANISOU	871	O	APRO	A	109	1516	1218	1491	-275	399	-49	O
	ATOM	872	O	BPRO	A	109	-18.803	-84.917	284.750	0.50	11.18		O
15	ANISOU	872	O	BPRO	A	109	1517	1212	1520	-241	520	-75	O
	ATOM	873	N	GLY	A	110	-20.279	-84.950	286.449	1.00	11.19		N
	ANISOU	873	N	GLY	A	110	1505	1278	1467	356	193	101	N
	ATOM	874	CA	GLY	A	110	-21.164	-84.045	285.824	1.00	10.99		C
	ANISOU	874	CA	GLY	A	110	1557	1349	1268	420	159	40	C
20	ATOM	875	C	GLY	A	110	-21.539	-84.471	284.431	1.00	10.96		C
	ANISOU	875	C	GLY	A	110	1209	1455	1500	192	4	-114	C
	ATOM	876	O	GLY	A	110	-21.726	-85.665	284.161	1.00	11.38		O
	ANISOU	876	O	GLY	A	110	1579	1308	1434	-219	207	57	O
	ATOM	877	N	THR	A	111	-21.664	-83.507	283.558	1.00	11.02		N
25	ANISOU	877	N	THR	A	111	1262	1607	1317	175	92	-144	N
	ATOM	878	CA	THR	A	111	-22.088	-83.725	282.183	1.00	9.64		C
	ANISOU	878	CA	THR	A	111	1258	1167	1235	44	255	270	C
	ATOM	879	CB	THR	A	111	-23.094	-82.654	281.717	1.00	9.90		C
	ANISOU	879	CB	THR	A	111	1528	1290	941	138	18	7	C
30	ATOM	880	OG1	THR	A	111	-22.515	-81.359	281.791	1.00	13.68		O
	ANISOU	880	OG1	THR	A	111	1846	1463	1888	-86	67	-204	O
	ATOM	881	CG2	THR	A	111	-24.391	-82.746	282.600	1.00	16.15		C
	ANISOU	881	CG2	THR	A	111	1265	2638	2234	201	321	98	C
	ATOM	882	C	THR	A	111	-20.884	-83.689	281.208	1.00	8.65		C
35	ANISOU	882	C	THR	A	111	1184	877	1224	-37	57	-88	C
	ATOM	883	O	THR	A	111	-21.089	-83.388	280.013	1.00	8.69		O

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	ANISOU	883	O	THR	A	111	1131	944	1225	43	156	34	O
	ATOM	884	N	LEU	A	112	-19.708	-84.117	281.668	1.00	7.66		N
	ANISOU	884	N	LEU	A	112	1045	921	942	-222	129	108	N
	ATOM	885	CA	LEU	A	112	-18.506	-84.214	280.809	1.00	7.89		C
5	ANISOU	885	CA	LEU	A	112	1042	873	1083	89	79	-5	C
	ATOM	886	CB	LEU	A	112	-17.276	-84.218	281.684	1.00	8.53		C
	ANISOU	886	CB	LEU	A	112	1005	1068	1167	3	96	-154	C
	ATOM	887	CG	LEU	A	112	-17.004	-82.861	282.318	1.00	8.20		C
	ANISOU	887	CG	LEU	A	112	1068	724	1324	-196	94	105	C
10	ATOM	888	CD1	LEU	A	112	-15.926	-82.914	283.332	1.00	10.32		C
	ANISOU	888	CD1	LEU	A	112	1484	1306	1132	-205	-41	-18	C
	ATOM	889	CD2	LEU	A	112	-16.625	-81.841	281.267	1.00	12.73		C
	ANISOU	889	CD2	LEU	A	112	2120	1096	1620	-528	-58	207	C
	ATOM	890	C	LEU	A	112	-18.646	-85.523	280.035	1.00	7.65		C
15	ANISOU	890	C	LEU	A	112	1046	819	1041	-202	199	92	C
	ATOM	891	O	LEU	A	112	-18.023	-86.584	280.337	1.00	9.65		O
	ANISOU	891	O	LEU	A	112	1367	1093	1206	29	28	1	O
	ATOM	892	N	ASP	A	113	-19.426	-85.432	278.963	1.00	7.98		N
	ANISOU	892	N	ASP	A	113	1213	651	1167	-181	60	54	N
20	ATOM	893	CA	ASP	A	113	-19.990	-86.625	278.294	1.00	8.32		C
	ANISOU	893	CA	ASP	A	113	1235	686	1239	-148	311	-144	C
	ATOM	894	CB	ASP	A	113	-21.531	-86.589	278.537	1.00	11.66		C
	ANISOU	894	CB	ASP	A	113	1248	1774	1409	-148	98	-65	C
	ATOM	895	CG	ASP	A	113	-21.847	-86.979	280.026	1.00	12.29		C
25	ANISOU	895	CG	ASP	A	113	1542	1535	1590	158	297	603	C
	ATOM	896	OD1	ASP	A	113	-21.131	-87.940	280.517	1.00	14.15		O
	ANISOU	896	OD1	ASP	A	113	1799	2061	1515	-117	201	540	O
	ATOM	897	OD2	ASP	A	113	-22.921	-86.667	280.453	1.00	17.33		O
	ANISOU	897	OD2	ASP	A	113	2297	2008	2279	-1	738	121	O
30	ATOM	898	C	ASP	A	113	-19.682	-86.774	276.839	1.00	9.55		C
	ANISOU	898	C	ASP	A	113	1217	1181	1228	-334	183	66	C
	ATOM	899	O	ASP	A	113	-20.160	-87.672	276.189	1.00	10.88		O
	ANISOU	899	O	ASP	A	113	1336	1393	1402	-191	202	-223	O
	ATOM	900	N	HIS	A	114	-18.831	-85.887	276.275	1.00	7.78		N
35	ANISOU	900	N	HIS	A	114	1158	799	999	-163	93	18	N
	ATOM	901	CA	HIS	A	114	-18.564	-85.921	274.861	1.00	8.11		C

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	ANISOU	901	CA	HIS	A	114	1108	781	1191	-9	182	76	C
	ATOM	902	CB	HIS	A	114	-19.274	-84.712	274.251	1.00	7.72		C
	ANISOU	902	CB	HIS	A	114	1328	535	1068	48	320	-62	C
	ATOM	903	CG	HIS	A	114	-20.749	-84.719	274.571	1.00	10.30		C
5	ANISOU	903	CG	HIS	A	114	1093	1609	1212	-162	-5	-11	C
	ATOM	904	ND1	HIS	A	114	-21.678	-85.552	273.956	1.00	10.04		N
	ANISOU	904	ND1	HIS	A	114	1492	824	1498	79	111	-142	N
	ATOM	905	CE1	HIS	A	114	-22.851	-85.441	274.590	1.00	11.43		C
	ANISOU	905	CE1	HIS	A	114	1362	1036	1943	63	154	-300	C
10	ATOM	906	NE2	HIS	A	114	-22.729	-84.525	275.542	1.00	10.82		N
	ANISOU	906	NE2	HIS	A	114	1239	1051	1821	4	241	-86	N
	ATOM	907	CD2	HIS	A	114	-21.424	-84.060	275.542	1.00	9.62		C
	ANISOU	907	CD2	HIS	A	114	1258	949	1447	-83	36	86	C
	ATOM	908	C	HIS	A	114	-17.054	-85.797	274.659	1.00	8.29		C
15	ANISOU	908	C	HIS	A	114	980	825	1343	218	168	-37	C
	ATOM	909	O	HIS	A	114	-16.459	-84.793	275.044	1.00	10.93		O
	ANISOU	909	O	HIS	A	114	1168	1403	1582	-219	242	-260	O
	ATOM	910	N	VAL	A	115	-16.492	-86.782	274.007	1.00	6.64		N
	ANISOU	910	N	VAL	A	115	849	502	1170	-133	46	6	N
20	ATOM	911	CA	VAL	A	115	-15.042	-87.017	273.989	1.00	5.63		C
	ANISOU	911	CA	VAL	A	115	779	415	943	-106	192	-247	C
	ATOM	912	CB	VAL	A	115	-14.739	-88.418	274.400	1.00	7.85		C
	ANISOU	912	CB	VAL	A	115	1214	723	1045	5	2	-74	C
	ATOM	913	CG1	VAL	A	115	-13.201	-88.615	274.475	1.00	10.22		C
25	ANISOU	913	CG1	VAL	A	115	1307	1282	1295	75	48	291	C
	ATOM	914	CG2	VAL	A	115	-15.357	-88.754	275.737	1.00	7.38		C
	ANISOU	914	CG2	VAL	A	115	1056	503	1242	-131	173	-263	C
	ATOM	915	C	VAL	A	115	-14.527	-86.744	272.578	1.00	7.31		C
	ANISOU	915	C	VAL	A	115	979	756	1040	-57	42	-10	C
30	ATOM	916	O	VAL	A	115	-14.967	-87.383	271.589	1.00	7.24		O
	ANISOU	916	O	VAL	A	115	1013	784	953	12	24	-13	O
	ATOM	917	N	PHE	A	116	-13.605	-85.799	272.443	1.00	7.42		N
	ANISOU	917	N	PHE	A	116	1121	810	888	-28	315	-127	N
	ATOM	918	CA	PHE	A	116	-12.949	-85.425	271.180	1.00	5.45		C
35	ANISOU	918	CA	PHE	A	116	948	342	780	-88	96	-212	C
	ATOM	919	CB	PHE	A	116	-12.952	-83.908	270.974	1.00	5.61		C

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	ANISOU	919	CB	PHE	A	116	819	325	986	-9	178	-79	C
	ATOM	920	CG	PHE	A	116	-12.437	-83.531	269.612	1.00	5.41		C
	ANISOU	920	CG	PHE	A	116	921	313	822	26	54	-180	C
	ATOM	921	CD1	PHE	A	116	-11.102	-83.498	269.344	1.00	7.18		C
5	ANISOU	921	CD1	PHE	A	116	928	794	1003	-101	84	-255	C
	ATOM	922	CE1	PHE	A	116	-10.650	-83.218	268.065	1.00	8.20		C
	ANISOU	922	CE1	PHE	A	116	1013	858	1243	-219	-15	38	C
	ATOM	923	CZ	PHE	A	116	-11.540	-82.949	267.067	1.00	8.10		C
	ANISOU	923	CZ	PHE	A	116	1272	870	935	-106	222	9	C
10	ATOM	924	CE2	PHE	A	116	-12.911	-82.901	267.331	1.00	7.12		C
	ANISOU	924	CE2	PHE	A	116	1127	578	996	-75	-114	-254	C
	ATOM	925	CD2	PHE	A	116	-13.331	-83.227	268.629	1.00	7.12		C
	ANISOU	925	CD2	PHE	A	116	1019	654	1030	-56	75	-196	C
	ATOM	926	C	PHE	A	116	-11.509	-85.920	271.297	1.00	6.64		C
15	ANISOU	926	C	PHE	A	116	945	747	829	0	63	24	C
	ATOM	927	O	PHE	A	116	-10.760	-85.515	272.143	1.00	7.56		O
	ANISOU	927	O	PHE	A	116	1047	947	877	-103	-5	3	O
	ATOM	928	N	PHE	A	117	-11.196	-86.983	270.514	1.00	7.38		N
	ANISOU	928	N	PHE	A	117	876	846	1079	-61	51	-189	N
20	ATOM	929	CA	PHE	A	117	-9.893	-87.609	270.629	1.00	6.50		C
	ANISOU	929	CA	PHE	A	117	991	505	974	64	177	43	C
	ATOM	930	CB	PHE	A	117	-9.944	-89.096	270.143	1.00	7.08		C
	ANISOU	930	CB	PHE	A	117	964	639	1084	-95	19	-53	C
	ATOM	931	CG	PHE	A	117	-10.781	-90.043	270.962	1.00	6.61		C
25	ANISOU	931	CG	PHE	A	117	1179	346	985	-199	26	-195	C
	ATOM	932	CD1	PHE	A	117	-10.264	-90.555	272.100	1.00	7.96		C
	ANISOU	932	CD1	PHE	A	117	913	1078	1034	0	60	81	C
	ATOM	933	CE1	PHE	A	117	-10.974	-91.461	272.878	1.00	7.93		C
	ANISOU	933	CE1	PHE	A	117	1201	632	1177	3	46	25	C
30	ATOM	934	CZ	PHE	A	117	-12.280	-91.738	272.527	1.00	8.96		C
	ANISOU	934	CZ	PHE	A	117	969	1121	1313	58	188	-86	C
	ATOM	935	CE2	PHE	A	117	-12.857	-91.154	271.398	1.00	9.17		C
	ANISOU	935	CE2	PHE	A	117	1273	769	1441	-405	-88	-126	C
	ATOM	936	CD2	PHE	A	117	-12.117	-90.243	270.622	1.00	8.15		C
35	ANISOU	936	CD2	PHE	A	117	1229	826	1041	-14	-168	116	C
	ATOM	937	C	PHE	A	117	-8.747	-86.863	269.960	1.00	7.10		C

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	ANISOU	937	C	PHE	A	117	956	707	1035	104	-36	13	C
	ATOM	938	O	PHE	A	117	-8.962	-86.212	268.924	1.00	7.29		O
	ANISOU	938	O	PHE	A	117	955	866	946	-102	-60	49	O
	ATOM	939	N	THR	A	118	-7.558	-86.973	270.528	1.00	7.01		N
5	ANISOU	939	N	THR	A	118	890	860	914	85	174	-24	N
	ATOM	940	CA	THR	A	118	-6.338	-86.342	270.041	1.00	6.51		C
	ANISOU	940	CA	THR	A	118	888	564	1019	-65	214	-234	C
	ATOM	941	CB	THR	A	118	-6.001	-85.053	270.820	1.00	6.69		C
	ANISOU	941	CB	THR	A	118	940	566	1035	-197	31	-7	C
10	ATOM	942	OG1	THR	A	118	-5.537	-85.487	272.098	1.00	8.59		O
	ANISOU	942	OG1	THR	A	118	1181	1111	972	-136	-150	31	O
	ATOM	943	CG2	THR	A	118	-7.203	-84.093	270.991	1.00	8.25		C
	ANISOU	943	CG2	THR	A	118	1196	842	1094	-58	73	26	C
	ATOM	944	C	THR	A	118	-5.183	-87.283	270.187	1.00	6.76		C
15	ANISOU	944	C	THR	A	118	972	715	881	-38	-8	96	C
	ATOM	945	O	THR	A	118	-5.415	-88.446	270.570	1.00	7.62		O
	ANISOU	945	O	THR	A	118	1078	739	1076	-219	14	129	O
	ATOM	946	N	GLY	A	119	-3.960	-86.900	269.888	1.00	8.47		N
	ANISOU	946	N	GLY	A	119	1097	1017	1101	238	137	-1	N
20	ATOM	947	CA	GLY	A	119	-2.835	-87.804	270.058	1.00	8.66		C
	ANISOU	947	CA	GLY	A	119	1017	1161	1109	129	210	61	C
	ATOM	948	C	GLY	A	119	-2.085	-87.690	271.353	1.00	8.59		C
	ANISOU	948	C	GLY	A	119	1122	1259	881	-59	245	-113	C
	ATOM	949	O	GLY	A	119	-1.271	-88.572	271.639	1.00	11.02		O
25	ANISOU	949	O	GLY	A	119	1345	1334	1505	-13	178	301	O
	ATOM	950	N	SER	A	120	-2.290	-86.659	272.151	1.00	7.06		N
	ANISOU	950	N	SER	A	120	1059	648	975	-90	102	79	N
	ATOM	951	CA	SER	A	120	-1.383	-86.301	273.221	1.00	7.35		C
	ANISOU	951	CA	SER	A	120	1029	961	800	4	2	215	C
30	ATOM	952	CB	SER	A	120	-0.083	-85.721	272.591	1.00	7.39		C
	ANISOU	952	CB	SER	A	120	1003	546	1256	-40	52	48	C
	ATOM	953	OG	SER	A	120	-0.310	-84.450	271.964	1.00	7.97		O
	ANISOU	953	OG	SER	A	120	1074	703	1251	12	201	114	O
	ATOM	954	C	SER	A	120	-1.959	-85.224	274.115	1.00	7.27		C
35	ANISOU	954	C	SER	A	120	818	1080	862	110	23	112	C
	ATOM	955	O	SER	A	120	-2.869	-84.486	273.692	1.00	7.13		O

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		ANISOU	955	O	SER A 120	928	812	967	69	65	222	O
		ATOM	956	N	GLY A 121	-1.352	-85.006	275.285	1.00	7.00		N
		ANISOU	956	N	GLY A 121	1062	557	1039	0	-148	138	N
		ATOM	957	CA	GLY A 121	-1.682	-83.868	276.088	1.00	7.77		C
5		ANISOU	957	CA	GLY A 121	867	997	1087	-300	135	-162	C
		ATOM	958	C	GLY A 121	-1.388	-82.577	275.447	1.00	7.73		C
		ANISOU	958	C	GLY A 121	761	1203	969	7	116	-1	C
		ATOM	959	O	GLY A 121	-2.139	-81.693	275.671	1.00	8.13		O
		ANISOU	959	O	GLY A 121	1045	877	1165	42	165	110	O
10		ATOM	960	N	SER A 122	-0.331	-82.506	274.644	1.00	5.74		N
		ANISOU	960	N	SER A 122	837	460	882	70	102	-44	N
		ATOM	961	CA	SER A 122	-0.071	-81.260	273.989	1.00	5.86		C
		ANISOU	961	CA	SER A 122	807	559	860	-326	-131	-69	C
		ATOM	962	CB	SER A 122	1.292	-81.398	273.234	1.00	6.58		C
15		ANISOU	962	CB	SER A 122	1049	631	819	-180	-9	88	C
		ATOM	963	OG	SER A 122	2.393	-81.457	274.116	1.00	6.02		O
		ANISOU	963	OG	SER A 122	792	581	912	-136	-35	43	O
		ATOM	964	C	SER A 122	-1.136	-80.874	273.006	1.00	5.60		C
		ANISOU	964	C	SER A 122	769	517	842	-97	11	-137	C
20		ATOM	965	O	SER A 122	-1.552	-79.733	272.869	1.00	8.20		O
		ANISOU	965	O	SER A 122	1107	862	1147	107	-84	130	O
		ATOM	966	N	AGLU A 123	-1.613	-81.852	272.230	0.50	4.92		N
		ANISOU	966	N	AGLU A 123	654	363	851	-106	19	-44	N
		ATOM	967	N	BGLU A 123	-1.655	-81.849	272.245	0.50	5.15		N
25		ANISOU	967	N	BGLU A 123	672	373	911	-124	1	-47	N
		ATOM	968	CA	AGLU A 123	-2.723	-81.618	271.300	0.50	4.82		C
		ANISOU	968	CA	AGLU A 123	705	309	818	-143	2	-77	C
		ATOM	969	CA	BGLU A 123	-2.756	-81.607	271.283	0.50	5.03		C
		ANISOU	969	CA	BGLU A 123	712	305	894	-127	-3	-72	C
30		ATOM	970	CB	AGLU A 123	-2.937	-82.808	270.347	0.50	5.02		C
		ANISOU	970	CB	AGLU A 123	795	356	755	-134	-3	-66	C
		ATOM	971	CB	BGLU A 123	-2.987	-82.814	270.335	0.50	5.84		C
		ANISOU	971	CB	BGLU A 123	947	366	904	-159	-42	-66	C
		ATOM	972	CG	AGLU A 123	-1.818	-82.769	269.299	0.50	6.03		C
35		ANISOU	972	CG	AGLU A 123	701	578	1011	-31	59	-34	C
		ATOM	973	CG	BGLU A 123	-1.884	-82.916	269.245	0.50	8.33		C

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	ANISOU	973	CG	BGLU	A	123	979	841	1344	-34	138	-31	C
	ATOM	974	CD	AGLU	A	123	-1.972	-83.811	268.176	0.50	5.88		C
	ANISOU	974	CD	AGLU	A	123	657	890	686	6	109	-2	C
	ATOM	975	CD	BGLU	A	123	-2.030	-84.199	268.350	0.50	9.66		C
5	ANISOU	975	CD	BGLU	A	123	1229	1177	1264	-157	-127	-202	C
	ATOM	976	OE1AGLU	A	123		-2.569	-84.910	268.357	0.50	7.17		O
	ANISOU	976	OE1AGLU	A	123		1236	755	734	25	130	27	O
	ATOM	977	OE1BGLU	A	123		-3.025	-84.972	268.428	0.50	8.44		O
	ANISOU	977	OE1BGLU	A	123		1355	869	982	51	-66	40	O
10	ATOM	978	OE2AGLU	A	123		-1.293	-83.476	267.161	0.50	5.13		O
	ANISOU	978	OE2AGLU	A	123		623	740	586	258	114	-132	O
	ATOM	979	OE2BGLU	A	123		-1.115	-84.430	267.550	0.50	15.25		O
	ANISOU	979	OE2BGLU	A	123		2046	1916	1829	367	210	-182	O
	ATOM	980	C	AGLU	A	123	-4.008	-81.255	272.032	0.50	6.08		C
15	ANISOU	980	C	AGLU	A	123	791	800	717	-105	51	14	C
	ATOM	981	C	BGLU	A	123	-4.044	-81.255	272.026	0.50	6.29		C
	ANISOU	981	C	BGLU	A	123	830	823	734	-85	63	42	C
	ATOM	982	O	AGLU	A	123	-4.792	-80.459	271.502	0.50	7.56		O
	ANISOU	982	O	AGLU	A	123	805	1080	985	130	37	-36	O
20	ATOM	983	O	BGLU	A	123	-4.868	-80.480	271.505	0.50	7.80		O
	ANISOU	983	O	BGLU	A	123	823	1126	1013	89	-49	-22	O
	ATOM	984	N	CYS	A	124	-4.225	-81.827	273.192	1.00	5.86		N
	ANISOU	984	N	CYS	A	124	949	551	724	4	37	47	N
	ATOM	985	CA	CYS	A	124	-5.369	-81.427	273.997	1.00	5.88		C
25	ANISOU	985	CA	CYS	A	124	783	416	1034	-96	64	323	C
	ATOM	986	CB	CYS	A	124	-5.477	-82.310	275.291	1.00	5.13		C
	ANISOU	986	CB	CYS	A	124	649	530	769	61	156	205	C
	ATOM	987	SG	CYS	A	124	-5.647	-84.034	275.175	1.00	8.26		S
	ANISOU	987	SG	CYS	A	124	1307	596	1235	-152	188	82	S
30	ATOM	988	C	CYS	A	124	-5.390	-79.918	274.293	1.00	5.40		C
	ANISOU	988	C	CYS	A	124	767	397	886	-105	-5	280	C
	ATOM	989	O	CYS	A	124	-6.474	-79.372	274.331	1.00	6.00		O
	ANISOU	989	O	CYS	A	124	949	339	989	-135	147	123	O
	ATOM	990	N	ALA	A	125	-4.232	-79.408	274.642	1.00	5.43		N
35	ANISOU	990	N	ALA	A	125	711	535	815	130	3	-64	N
	ATOM	991	CA	ALA	A	125	-4.222	-77.976	274.939	1.00	5.54		C

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	ANISOU	991	CA	ALA	A	125	860	416	829	42	81	70	C
	ATOM	992	CB	ALA	A	125	-2.808	-77.526	275.377	1.00	7.25		C
	ANISOU	992	CB	ALA	A	125	918	768	1066	120	17	-105	C
	ATOM	993	C	ALA	A	125	-4.756	-77.091	273.812	1.00	5.82		C
5	ANISOU	993	C	ALA	A	125	705	582	923	-44	122	39	C
	ATOM	994	O	ALA	A	125	-5.718	-76.389	273.980	1.00	6.09		O
	ANISOU	994	O	ALA	A	125	824	532	955	-24	-13	-80	O
	ATOM	995	N	ASP	A	126	-4.179	-77.265	272.638	1.00	5.39		N
	ANISOU	995	N	ASP	A	126	928	313	806	74	40	140	N
10	ATOM	996	CA	ASP	A	126	-4.556	-76.505	271.487	1.00	6.15		C
	ANISOU	996	CA	ASP	A	126	824	676	835	160	87	134	C
	ATOM	997	CB	ASP	A	126	-3.607	-76.728	270.284	1.00	6.03		C
	ANISOU	997	CB	ASP	A	126	1008	494	789	-14	85	152	C
	ATOM	998	CG	ASP	A	126	-2.154	-76.371	270.586	1.00	8.58		C
15	ANISOU	998	CG	ASP	A	126	918	1269	1072	69	279	284	C
	ATOM	999	OD1	ASP	A	126	-1.635	-76.870	271.586	1.00	13.77		O
	ANISOU	999	OD1	ASP	A	126	1376	2496	1357	223	165	699	O
	ATOM	1000	OD2	ASP	A	126	-1.559	-75.514	269.821	1.00	6.76		O
	ANISOU	1000	OD2	ASP	A	126	911	734	922	-64	-47	54	O
20	ATOM	1001	C	ASP	A	126	-6.023	-76.759	271.135	1.00	6.38		C
	ANISOU	1001	C	ASP	A	126	836	637	949	158	144	-32	C
	ATOM	1002	O	ASP	A	126	-6.749	-75.820	270.726	1.00	6.84		O
	ANISOU	1002	O	ASP	A	126	988	792	818	107	-63	2	O
	ATOM	1003	N	THR	A	127	-6.424	-78.037	271.133	1.00	6.06		N
25	ANISOU	1003	N	THR	A	127	752	663	887	-48	149	-253	N
	ATOM	1004	CA	THR	A	127	-7.787	-78.399	270.911	1.00	6.73		C
	ANISOU	1004	CA	THR	A	127	868	934	755	-107	-72	-189	C
	ATOM	1005	CB	THR	A	127	-7.983	-79.936	271.028	1.00	7.00		C
	ANISOU	1005	CB	THR	A	127	899	975	784	-60	102	-19	C
30	ATOM	1006	OG1	THR	A	127	-7.163	-80.616	270.049	1.00	6.13		O
	ANISOU	1006	OG1	THR	A	127	941	421	964	80	28	-59	O
	ATOM	1007	CG2	THR	A	127	-9.443	-80.370	270.863	1.00	6.52		C
	ANISOU	1007	CG2	THR	A	127	874	579	1023	72	12	83	C
	ATOM	1008	C	THR	A	127	-8.763	-77.687	271.859	1.00	6.26		C
35	ANISOU	1008	C	THR	A	127	917	469	992	43	-50	-25	C
	ATOM	1009	O	THR	A	127	-9.782	-77.168	271.396	1.00	6.27		O

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		ANISOU	1009	O	THR	A	127	878	568	932	-48	-50	-209	O
		ATOM	1010	N	SER	A	128	-8.451	-77.759	273.164	1.00	6.18		N
		ANISOU	1010	N	SER	A	128	845	691	810	56	54	-18	N
		ATOM	1011	CA	SER	A	128	-9.395	-77.172	274.140	1.00	5.44		C
5		ANISOU	1011	CA	SER	A	128	750	564	751	-88	-59	-309	C
		ATOM	1012	CB	SER	A	128	-8.985	-77.538	275.552	1.00	6.00		C
		ANISOU	1012	CB	SER	A	128	987	520	771	84	85	208	C
		ATOM	1013	OG	SER	A	128	-7.724	-77.003	275.971	1.00	7.60		O
		ANISOU	1013	OG	SER	A	128	964	851	1071	203	-62	-22	O
10		ATOM	1014	C	SER	A	128	-9.608	-75.640	274.017	1.00	6.37		C
		ANISOU	1014	C	SER	A	128	828	747	845	-105	142	35	C
		ATOM	1015	O	SER	A	128	-10.720	-75.189	274.178	1.00	5.98		O
		ANISOU	1015	O	SER	A	128	939	275	1056	-37	57	-131	O
		ATOM	1016	N	ILE	A	129	-8.546	-74.939	273.636	1.00	5.42		N
15		ANISOU	1016	N	ILE	A	129	829	434	796	49	78	31	N
		ATOM	1017	CA	ILE	A	129	-8.688	-73.516	273.543	1.00	5.07		C
		ANISOU	1017	CA	ILE	A	129	779	375	770	52	-125	-172	C
		ATOM	1018	CB	ILE	A	129	-7.385	-72.748	273.864	1.00	7.21		C
		ANISOU	1018	CB	ILE	A	129	920	694	1123	-95	-155	-7	C
20		ATOM	1019	CG1	ILE	A	129	-6.264	-73.038	272.883	1.00	8.72		C
		ANISOU	1019	CG1	ILE	A	129	1180	800	1332	5	42	101	C
		ATOM	1020	CD1	ILE	A	129	-6.264	-72.107	271.659	1.00	9.01		C
		ANISOU	1020	CD1	ILE	A	129	1073	1176	1173	-56	172	-107	C
		ATOM	1021	CG2	ILE	A	129	-6.960	-73.059	275.312	1.00	8.77		C
25		ANISOU	1021	CG2	ILE	A	129	1086	1227	1017	-32	-98	124	C
		ATOM	1022	C	ILE	A	129	-9.333	-73.129	272.268	1.00	5.99		C
		ANISOU	1022	C	ILE	A	129	925	547	800	17	-48	-176	C
		ATOM	1023	O	ILE	A	129	-10.053	-72.132	272.209	1.00	7.29		O
		ANISOU	1023	O	ILE	A	129	1017	649	1101	95	14	-44	O
30		ATOM	1024	N	LYS	A	130	-9.166	-73.888	271.172	1.00	6.30		N
		ANISOU	1024	N	LYS	A	130	825	864	704	39	-40	-96	N
		ATOM	1025	CA	LYS	A	130	-9.912	-73.596	269.975	1.00	5.48		C
		ANISOU	1025	CA	LYS	A	130	765	523	793	134	100	7	C
		ATOM	1026	CB	LYS	A	130	-9.337	-74.404	268.777	1.00	6.78		C
35		ANISOU	1026	CB	LYS	A	130	906	813	857	171	64	-65	C
		ATOM	1027	CG	LYS	A	130	-7.962	-73.918	268.326	1.00	6.41		C

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		ANISOU	1027	CG	LYS	A	130	952	597	885	151	-15	-184	C
		ATOM	1028	CD	LYS	A	130	-7.389	-74.826	267.219	1.00	5.89		C
		ANISOU	1028	CD	LYS	A	130	643	701	893	-66	117	-122	C
		ATOM	1029	CE	LYS	A	130	-8.105	-74.677	265.892	1.00	6.90		C
5		ANISOU	1029	CE	LYS	A	130	833	775	1010	247	-48	-119	C
		ATOM	1030	NZ	LYS	A	130	-7.610	-75.672	264.871	1.00	6.37		N
		ANISOU	1030	NZ	LYS	A	130	971	618	829	72	26	-48	N
		ATOM	1031	C	LYS	A	130	-11.369	-73.867	270.175	1.00	5.87		C
		ANISOU	1031	C	LYS	A	130	787	623	819	44	176	130	C
10		ATOM	1032	O	LYS	A	130	-12.217	-73.143	269.652	1.00	7.22		O
		ANISOU	1032	O	LYS	A	130	1009	844	887	-20	-97	-67	O
		ATOM	1033	N	MET	A	131	-11.660	-74.983	270.856	1.00	5.50		N
		ANISOU	1033	N	MET	A	131	824	254	1008	21	0	-20	N
		ATOM	1034	CA	MET	A	131	-13.069	-75.297	271.255	1.00	5.64		C
15		ANISOU	1034	CA	MET	A	131	828	371	943	249	-1	-82	C
		ATOM	1035	CB	MET	A	131	-13.073	-76.690	271.995	1.00	6.21		C
		ANISOU	1035	CB	MET	A	131	1001	316	1041	198	-25	-96	C
		ATOM	1036	CG	MET	A	131	-14.436	-77.084	272.394	1.00	7.91		C
		ANISOU	1036	CG	MET	A	131	1034	269	1702	17	76	-149	C
20		ATOM	1037	SD	MET	A	131	-14.354	-78.616	273.352	1.00	9.28		S
		ANISOU	1037	SD	MET	A	131	1397	772	1355	-99	155	0	S
		ATOM	1038	CE	MET	A	131	-13.799	-79.845	272.151	1.00	9.70		C
		ANISOU	1038	CE	MET	A	131	1443	672	1570	-60	294	216	C
		ATOM	1039	C	MET	A	131	-13.664	-74.110	272.017	1.00	4.54		C
25		ANISOU	1039	C	MET	A	131	720	253	750	9	-32	-4	C
		ATOM	1040	O	MET	A	131	-14.782	-73.726	271.730	1.00	6.43		O
		ANISOU	1040	O	MET	A	131	708	672	1061	-77	-3	-309	O
		ATOM	1041	N	ALA	A	132	-12.923	-73.680	273.005	1.00	6.55		N
		ANISOU	1041	N	ALA	A	132	958	655	875	249	-195	38	N
30		ATOM	1042	CA	ALA	A	132	-13.456	-72.576	273.822	1.00	7.37		C
		ANISOU	1042	CA	ALA	A	132	1084	650	1063	-55	68	-141	C
		ATOM	1043	CB	ALA	A	132	-12.457	-72.221	274.976	1.00	8.57		C
		ANISOU	1043	CB	ALA	A	132	1073	1107	1077	12	-52	-190	C
		ATOM	1044	C	ALA	A	132	-13.692	-71.230	273.035	1.00	7.32		C
35		ANISOU	1044	C	ALA	A	132	1081	487	1211	-125	-44	-447	C
		ATOM	1045	O	ALA	A	132	-14.752	-70.589	273.161	1.00	9.79		O

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		ANISOU	1045	O	ALA	A	132	975	1367	1377	113	-79	-360	O
		ATOM	1046	N	ARG	A	133	-12.822	-70.904	272.076	1.00	7.06		N
		ANISOU	1046	N	ARG	A	133	1120	270	1289	74	-51	-111	N
		ATOM	1047	CA	ARG	A	133	-12.947	-69.649	271.300	1.00	7.79		C
5		ANISOU	1047	CA	ARG	A	133	1124	603	1231	79	-272	126	C
		ATOM	1048	CB	ARG	A	133	-11.755	-69.454	270.436	1.00	9.28		C
		ANISOU	1048	CB	ARG	A	133	1500	636	1388	-152	-366	105	C
		ATOM	1049	CG	ARG	A	133	-10.454	-68.946	271.137	1.00	15.75		C
		ANISOU	1049	CG	ARG	A	133	1810	1845	2327	-45	-1142	374	C
10		ATOM	1050	CD	ARG	A	133	-10.293	-67.486	271.016	1.00	17.20		C
		ANISOU	1050	CD	ARG	A	133	1809	2696	2027	-251	-576	-721	C
		ATOM	1051	NE	ARG	A	133	-9.070	-67.097	271.620	1.00	14.08		N
		ANISOU	1051	NE	ARG	A	133	1846	1544	1959	-749	-53	-297	N
		ATOM	1052	CZ	ARG	A	133	-8.029	-66.662	270.926	1.00	13.60		C
15		ANISOU	1052	CZ	ARG	A	133	1903	1705	1556	-395	512	-565	C
		ATOM	1053	NH1	ARG	A	133	-7.920	-66.868	269.586	1.00	24.14		N
		ANISOU	1053	NH1	ARG	A	133	2807	3631	2733	-1366	980	-1142	N
		ATOM	1054	NH2	ARG	A	133	-7.033	-66.135	271.610	1.00	14.54		N
		ANISOU	1054	NH2	ARG	A	133	1898	1711	1913	-214	459	-699	N
20		ATOM	1055	C	ARG	A	133	-14.179	-69.832	270.385	1.00	8.83		C
		ANISOU	1055	C	ARG	A	133	1105	991	1258	124	-142	-127	C
		ATOM	1056	O	ARG	A	133	-15.004	-68.908	270.295	1.00	9.81		O
		ANISOU	1056	O	ARG	A	133	1198	939	1588	139	-495	-263	O
		ATOM	1057	N	ALA	A	134	-14.298	-70.984	269.698	1.00	8.57		N
25		ANISOU	1057	N	ALA	A	134	944	917	1395	27	-209	-84	N
		ATOM	1058	CA	ALA	A	134	-15.410	-71.111	268.782	1.00	6.54		C
		ANISOU	1058	CA	ALA	A	134	1032	644	807	-28	13	38	C
		ATOM	1059	CB	ALA	A	134	-15.233	-72.357	267.915	1.00	7.37		C
		ANISOU	1059	CB	ALA	A	134	940	746	1112	37	-54	-56	C
30		ATOM	1060	C	ALA	A	134	-16.743	-71.173	269.561	1.00	6.41		C
		ANISOU	1060	C	ALA	A	134	818	560	1055	22	14	70	C
		ATOM	1061	O	ALA	A	134	-17.762	-70.706	269.074	1.00	7.52		O
		ANISOU	1061	O	ALA	A	134	989	846	1021	-51	-127	35	O
		ATOM	1062	N	TYR	A	135	-16.751	-71.845	270.729	1.00	6.85		N
35		ANISOU	1062	N	TYR	A	135	1046	595	960	178	-23	144	N
		ATOM	1063	CA	TYR	A	135	-17.975	-71.896	271.572	1.00	6.97		C

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		ANISOU	1063	CA	TYR	A	135	956	514	1176	-72	51	-5	C
		ATOM	1064	CB	TYR	A	135	-17.650	-72.516	272.922	1.00	8.33		C
		ANISOU	1064	CB	TYR	A	135	1135	998	1030	-82	-60	6	C
		ATOM	1065	CG	TYR	A	135	-18.720	-72.383	273.937	1.00	7.03		C
5		ANISOU	1065	CG	TYR	A	135	1065	740	866	-64	43	233	C
		ATOM	1066	CD1	TYR	A	135	-19.829	-73.240	273.930	1.00	6.72		C
		ANISOU	1066	CD1	TYR	A	135	1188	350	1013	0	-85	-112	C
		ATOM	1067	CE1	TYR	A	135	-20.839	-73.167	274.876	1.00	8.59		C
		ANISOU	1067	CE1	TYR	A	135	1101	797	1363	-9	67	-254	C
10		ATOM	1068	CZ	TYR	A	135	-20.739	-72.116	275.811	1.00	9.18		C
		ANISOU	1068	CZ	TYR	A	135	1125	1145	1216	113	-16	-272	C
		ATOM	1069	OH	TYR	A	135	-21.730	-72.053	276.793	1.00	10.64		O
		ANISOU	1069	OH	TYR	A	135	1302	1510	1228	221	181	-189	O
		ATOM	1070	CE2	TYR	A	135	-19.645	-71.295	275.855	1.00	9.58		C
15		ANISOU	1070	CE2	TYR	A	135	1188	1395	1055	27	-84	-89	C
		ATOM	1071	CD2	TYR	A	135	-18.633	-71.411	274.947	1.00	9.02		C
		ANISOU	1071	CD2	TYR	A	135	1056	1164	1205	137	-122	-76	C
		ATOM	1072	C	TYR	A	135	-18.521	-70.445	271.735	1.00	7.14		C
		ANISOU	1072	C	TYR	A	135	922	734	1055	-67	16	-78	C
20		ATOM	1073	O	TYR	A	135	-19.712	-70.160	271.507	1.00	7.61		O
		ANISOU	1073	O	TYR	A	135	1045	684	1162	72	-80	-90	O
		ATOM	1074	N	TRP	A	136	-17.698	-69.533	272.227	1.00	8.44		N
		ANISOU	1074	N	TRP	A	136	1036	801	1368	-65	-1	-217	N
		ATOM	1075	CA	TRP	A	136	-18.209	-68.173	272.550	1.00	8.11		C
25		ANISOU	1075	CA	TRP	A	136	1069	950	1059	321	-244	-195	C
		ATOM	1076	CB	TRP	A	136	-17.179	-67.376	273.321	1.00	9.24		C
		ANISOU	1076	CB	TRP	A	136	1196	1110	1202	124	-170	-221	C
		ATOM	1077	CG	TRP	A	136	-17.034	-67.912	274.698	1.00	7.26		C
		ANISOU	1077	CG	TRP	A	136	908	751	1098	-186	-105	19	C
30		ATOM	1078	CD1	TRP	A	136	-15.886	-68.380	275.282	1.00	7.17		C
		ANISOU	1078	CD1	TRP	A	136	927	560	1235	-135	-159	-69	C
		ATOM	1079	NE1	TRP	A	136	-16.151	-68.671	276.610	1.00	9.04		N
		ANISOU	1079	NE1	TRP	A	136	975	1214	1243	170	-41	29	N
		ATOM	1080	CE2	TRP	A	136	-17.469	-68.421	276.902	1.00	6.92		C
35		ANISOU	1080	CE2	TRP	A	136	1161	442	1025	124	7	-70	C
		ATOM	1081	CD2	TRP	A	136	-18.047	-67.914	275.729	1.00	6.55		C

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		ANISOU	1081	CD2	TRP	A	136	894	576	1015	19	-71	-139	C
		ATOM	1082	CE3	TRP	A	136	-19.396	-67.568	275.761	1.00	8.10		C
		ANISOU	1082	CE3	TRP	A	136	1011	719	1347	158	-286	-13	C
		ATOM	1083	CZ3	TRP	A	136	-20.096	-67.716	276.941	1.00	8.85		C
5		ANISOU	1083	CZ3	TRP	A	136	922	1041	1397	216	-32	-213	C
		ATOM	1084	CH2	TRP	A	136	-19.515	-68.265	278.036	1.00	8.17		C
		ANISOU	1084	CH2	TRP	A	136	1228	795	1077	-328	97	86	C
		ATOM	1085	CZ2	TRP	A	136	-18.189	-68.624	278.047	1.00	9.32		C
		ANISOU	1085	CZ2	TRP	A	136	1236	1135	1168	-32	70	-182	C
10		ATOM	1086	C	TRP	A	136	-18.575	-67.450	271.284	1.00	8.45		C
		ANISOU	1086	C	TRP	A	136	1043	887	1280	-164	75	132	C
		ATOM	1087	O	TRP	A	136	-19.531	-66.660	271.288	1.00	9.89		O
		ANISOU	1087	O	TRP	A	136	1254	1061	1443	158	-185	-475	O
		ATOM	1088	N	ARG	A	137	-17.917	-67.723	270.185	1.00	8.05		N
15		ANISOU	1088	N	ARG	A	137	1050	830	1179	-99	-214	-63	N
		ATOM	1089	CA	ARG	A	137	-18.317	-67.138	268.903	1.00	8.48		C
		ANISOU	1089	CA	ARG	A	137	1146	950	1125	-82	-68	14	C
		ATOM	1090	CB	ARG	A	137	-17.367	-67.469	267.797	1.00	9.62		C
		ANISOU	1090	CB	ARG	A	137	1270	1218	1166	-250	-213	-111	C
20		ATOM	1091	CG	ARG	A	137	-17.838	-66.894	266.516	1.00	12.76		C
		ANISOU	1091	CG	ARG	A	137	1588	1820	1438	-52	-264	-51	C
		ATOM	1092	CD	ARG	A	137	-16.824	-66.875	265.540	1.00	18.13		C
		ANISOU	1092	CD	ARG	A	137	1659	3114	2114	-174	62	825	C
		ATOM	1093	NE	ARG	A	137	-17.313	-66.397	264.221	1.00	20.29		N
25		ANISOU	1093	NE	ARG	A	137	2996	2322	2389	-966	171	603	N
		ATOM	1094	CZ	ARG	A	137	-16.502	-65.807	263.384	1.00	18.75		C
		ANISOU	1094	CZ	ARG	A	137	2736	2447	1940	-274	249	174	C
		ATOM	1095	NH1	ARG	A	137	-15.281	-65.581	263.753	1.00	14.12		N
		ANISOU	1095	NH1	ARG	A	137	2029	1244	2088	23	820	-378	N
30		ATOM	1096	NH2	ARG	A	137	-16.941	-65.499	262.197	1.00	17.04		N
		ANISOU	1096	NH2	ARG	A	137	3007	1149	2319	-77	102	182	N
		ATOM	1097	C	ARG	A	137	-19.693	-67.569	268.513	1.00	8.78		C
		ANISOU	1097	C	ARG	A	137	1073	1132	1130	-87	-58	221	C
		ATOM	1098	O	ARG	A	137	-20.576	-66.804	268.087	1.00	10.14		O
35		ANISOU	1098	O	ARG	A	137	1215	1143	1491	-64	-286	-85	O
		ATOM	1099	N	ILE	A	138	-19.990	-68.832	268.675	1.00	7.50		N

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		ANISOU	1099	N	ILE	A	138	925	794	1131	88	-190	-45	N
		ATOM	1100	CA	ILE	A	138	-21.331	-69.371	268.300	1.00	7.64		C
		ANISOU	1100	CA	ILE	A	138	922	1053	926	32	-222	28	C
		ATOM	1101	CB	ILE	A	138	-21.373	-70.953	268.452	1.00	8.39		C
5		ANISOU	1101	CB	ILE	A	138	1070	980	1137	-70	-105	-147	C
		ATOM	1102	CG1	ILE	A	138	-20.395	-71.554	267.407	1.00	8.90		C
		ANISOU	1102	CG1	ILE	A	138	1322	779	1278	-127	-85	-388	C
		ATOM	1103	CD1	ILE	A	138	-20.041	-73.011	267.683	1.00	10.63		C
		ANISOU	1103	CD1	ILE	A	138	1674	947	1417	23	-107	-213	C
10		ATOM	1104	CG2	ILE	A	138	-22.789	-71.535	268.334	1.00	9.27		C
		ANISOU	1104	CG2	ILE	A	138	1176	997	1345	-197	-293	-278	C
		ATOM	1105	C	ILE	A	138	-22.374	-68.727	269.189	1.00	8.15		C
		ANISOU	1105	C	ILE	A	138	1173	783	1139	-5	-89	-92	C
		ATOM	1106	O	ILE	A	138	-23.510	-68.475	268.713	1.00	10.29		O
15		ANISOU	1106	O	ILE	A	138	1213	1113	1580	-29	-141	-237	O
		ATOM	1107	N	LYS	A	139	-22.068	-68.517	270.449	1.00	8.60		N
		ANISOU	1107	N	LYS	A	139	1121	1010	1135	3	-234	-245	N
		ATOM	1108	CA	LYS	A	139	-22.939	-67.762	271.370	1.00	8.54		C
		ANISOU	1108	CA	LYS	A	139	1104	895	1245	-70	129	-27	C
20		ATOM	1109	CB	LYS	A	139	-22.390	-67.934	272.818	1.00	10.06		C
		ANISOU	1109	CB	LYS	A	139	1372	1041	1408	266	-101	-208	C
		ATOM	1110	CG	LYS	A	139	-22.409	-69.338	273.410	1.00	11.19		C
		ANISOU	1110	CG	LYS	A	139	1590	1066	1592	66	131	-152	C
		ATOM	1111	CD	LYS	A	139	-23.803	-69.897	273.525	1.00	16.14		C
25		ANISOU	1111	CD	LYS	A	139	1996	2261	1875	-301	74	-138	C
		ATOM	1112	CE	LYS	A	139	-23.840	-71.073	274.425	1.00	15.24		C
		ANISOU	1112	CE	LYS	A	139	1939	1704	2146	175	227	-81	C
		ATOM	1113	NZ	LYS	A	139	-25.167	-71.799	274.394	1.00	15.41		N
		ANISOU	1113	NZ	LYS	A	139	1693	2121	2041	-98	327	87	N
30		ATOM	1114	C	LYS	A	139	-23.141	-66.258	271.061	1.00	9.13		C
		ANISOU	1114	C	LYS	A	139	1154	1187	1128	166	52	78	C
		ATOM	1115	O	LYS	A	139	-23.912	-65.622	271.733	1.00	13.56		O
		ANISOU	1115	O	LYS	A	139	1694	1615	1844	534	333	-165	O
		ATOM	1116	N	GLY	A	140	-22.472	-65.785	270.063	1.00	8.70		N
35		ANISOU	1116	N	GLY	A	140	1238	642	1425	150	40	-12	N
		ATOM	1117	CA	GLY	A	140	-22.575	-64.374	269.734	1.00	7.96		C

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		ANISOU	1117	CA	GLY	A	140	1168	689	1168	310	-194	-34	C
		ATOM	1118	C	GLY	A	140	-21.656	-63.513	270.563	1.00	8.99		C
		ANISOU	1118	C	GLY	A	140	1087	1119	1208	48	6	-144	C
		ATOM	1119	O	GLY	A	140	-21.902	-62.247	270.639	1.00	8.67		O
5		ANISOU	1119	O	GLY	A	140	1023	1052	1219	134	54	28	O
		ATOM	1120	N	GLN	A	141	-20.625	-64.083	271.163	1.00	7.41		N
		ANISOU	1120	N	GLN	A	141	961	794	1059	34	-105	-48	N
		ATOM	1121	CA	GLN	A	141	-19.701	-63.394	272.068	1.00	7.43		C
		ANISOU	1121	CA	GLN	A	141	942	796	1084	-156	-4	70	C
10		ATOM	1122	CB	GLN	A	141	-19.891	-63.794	273.530	1.00	7.46		C
		ANISOU	1122	CB	GLN	A	141	1076	748	1008	-9	9	-155	C
		ATOM	1123	CG	GLN	A	141	-21.247	-63.337	274.101	1.00	9.68		C
		ANISOU	1123	CG	GLN	A	141	1189	1147	1341	60	39	-141	C
		ATOM	1124	CD	GLN	A	141	-21.397	-63.777	275.557	1.00	10.52		C
15		ANISOU	1124	CD	GLN	A	141	1364	1590	1041	-238	110	-157	C
		ATOM	1125	OE1	GLN	A	141	-20.584	-63.380	276.384	1.00	9.21		O
		ANISOU	1125	OE1	GLN	A	141	1282	818	1397	-18	-96	-46	O
		ATOM	1126	NE2	GLN	A	141	-22.349	-64.660	275.826	1.00	10.56		N
		ANISOU	1126	NE2	GLN	A	141	1771	1031	1207	-152	-32	9	N
20		ATOM	1127	C	GLN	A	141	-18.254	-63.630	271.621	1.00	6.27		C
		ANISOU	1127	C	GLN	A	141	1051	544	787	71	124	-138	C
		ATOM	1128	O	GLN	A	141	-17.391	-64.015	272.397	1.00	8.20		O
		ANISOU	1128	O	GLN	A	141	983	922	1209	100	31	45	O
		ATOM	1129	N	ALA	A	142	-17.998	-63.382	270.340	1.00	6.82		N
25		ANISOU	1129	N	ALA	A	142	955	635	1000	-95	26	73	N
		ATOM	1130	CA	ALA	A	142	-16.671	-63.541	269.806	1.00	7.56		C
		ANISOU	1130	CA	ALA	A	142	1002	837	1033	149	65	134	C
		ATOM	1131	CB	ALA	A	142	-16.615	-63.457	268.262	1.00	7.86		C
		ANISOU	1131	CB	ALA	A	142	1044	777	1162	161	126	-60	C
30		ATOM	1132	C	ALA	A	142	-15.617	-62.652	270.424	1.00	7.82		C
		ANISOU	1132	C	ALA	A	142	1057	843	1069	186	13	-76	C
		ATOM	1133	O	ALA	A	142	-14.374	-62.889	270.229	1.00	9.17		O
		ANISOU	1133	O	ALA	A	142	1082	1324	1077	29	41	-253	O
		ATOM	1134	N	GLN	A	143	-16.045	-61.630	271.145	1.00	7.46		N
35		ANISOU	1134	N	GLN	A	143	879	945	1011	193	-121	-68	N
		ATOM	1135	CA	GLN	A	143	-15.108	-60.878	271.942	1.00	6.69		C

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		ANISOU	1135	CA	GLN	A	143	1036	584	920	-108	114	-80	C
		ATOM	1136	CB	GLN	A	143	-15.749	-59.607	272.570	1.00	6.85		C
		ANISOU	1136	CB	GLN	A	143	1308	429	863	25	-148	-2	C
		ATOM	1137	CG	GLN	A	143	-17.025	-59.843	273.391	1.00	8.41		C
5		ANISOU	1137	CG	GLN	A	143	1247	899	1049	38	-88	-151	C
		ATOM	1138	CD	GLN	A	143	-18.292	-59.755	272.603	1.00	9.33		C
		ANISOU	1138	CD	GLN	A	143	1317	1004	1222	201	-89	-123	C
		ATOM	1139	OE1	GLN	A	143	-18.468	-60.333	271.534	1.00	8.43		O
		ANISOU	1139	OE1	GLN	A	143	1095	1014	1091	45	2	-19	O
10		ATOM	1140	NE2	GLN	A	143	-19.209	-59.006	273.115	1.00	20.50		N
		ANISOU	1140	NE2	GLN	A	143	1888	3519	2380	1181	-325	-1287	N
		ATOM	1141	C	GLN	A	143	-14.382	-61.619	273.031	1.00	7.65		C
		ANISOU	1141	C	GLN	A	143	1083	933	891	45	32	-140	C
		ATOM	1142	O	GLN	A	143	-13.341	-61.172	273.505	1.00	7.95		O
15		ANISOU	1142	O	GLN	A	143	1054	845	1121	68	-81	-173	O
		ATOM	1143	N	LYS	A	144	-14.973	-62.769	273.348	1.00	7.64		N
		ANISOU	1143	N	LYS	A	144	1139	605	1158	28	26	-221	N
		ATOM	1144	CA	LYS	A	144	-14.344	-63.668	274.368	1.00	9.13		C
		ANISOU	1144	CA	LYS	A	144	1117	1309	1042	106	-47	91	C
20		ATOM	1145	CB	LYS	A	144	-15.335	-64.634	275.038	1.00	9.08		C
		ANISOU	1145	CB	LYS	A	144	1257	1184	1008	89	79	155	C
		ATOM	1146	CG	LYS	A	144	-16.211	-63.891	276.033	1.00	11.21		C
		ANISOU	1146	CG	LYS	A	144	1561	1258	1438	275	155	28	C
		ATOM	1147	CD	LYS	A	144	-17.117	-64.836	276.769	1.00	11.40		C
25		ANISOU	1147	CD	LYS	A	144	1456	1350	1524	-22	11	-6	C
		ATOM	1148	CE	LYS	A	144	-17.715	-64.171	278.007	1.00	10.16		C
		ANISOU	1148	CE	LYS	A	144	1251	1112	1497	31	-93	0	C
		ATOM	1149	NZ	LYS	A	144	-16.845	-64.203	279.167	1.00	8.70		N
		ANISOU	1149	NZ	LYS	A	144	1258	934	1110	-159	35	-171	N
30		ATOM	1150	C	LYS	A	144	-13.191	-64.392	273.657	1.00	6.98		C
		ANISOU	1150	C	LYS	A	144	1181	573	897	137	-107	124	C
		ATOM	1151	O	LYS	A	144	-13.364	-65.511	273.156	1.00	9.31		O
		ANISOU	1151	O	LYS	A	144	1500	909	1128	261	-123	-294	O
		ATOM	1152	N	THR	A	145	-12.003	-63.862	273.723	1.00	8.99		N
35		ANISOU	1152	N	THR	A	145	1094	995	1324	289	-184	-234	N
		ATOM	1153	CA	THR	A	145	-10.785	-64.403	273.105	1.00	11.85		C

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		ANISOU	1153	CA	THR	A	145	1015	2223	1263	9	-74	-449	C
		ATOM	1154	CB	THR	A	145	-10.134	-63.494	272.040	1.00	12.58		C
		ANISOU	1154	CB	THR	A	145	1533	1795	1449	479	26	-157	C
		ATOM	1155	OG1	THR	A	145	-9.720	-62.209	272.506	1.00	15.99		O
5		ANISOU	1155	OG1	THR	A	145	2148	2009	1916	-81	228	646	O
		ATOM	1156	CG2	THR	A	145	-11.177	-63.330	270.904	1.00	20.28		C
		ANISOU	1156	CG2	THR	A	145	1859	3625	2219	789	-123	554	C
		ATOM	1157	C	THR	A	145	-9.657	-64.590	274.103	1.00	9.89		C
		ANISOU	1157	C	THR	A	145	1345	1479	933	383	-279	-79	C
10		ATOM	1158	O	THR	A	145	-8.849	-65.487	273.892	1.00	10.59		O
		ANISOU	1158	O	THR	A	145	1364	1351	1306	378	-198	-216	O
		ATOM	1159	N	LYS	A	146	-9.661	-63.914	275.244	1.00	7.04		N
		ANISOU	1159	N	LYS	A	146	1063	638	972	42	21	-35	N
		ATOM	1160	CA	LYS	A	146	-8.535	-64.037	276.137	1.00	6.86		C
15		ANISOU	1160	CA	LYS	A	146	844	835	926	145	83	-156	C
		ATOM	1161	CB	LYS	A	146	-8.548	-62.885	277.158	1.00	7.44		C
		ANISOU	1161	CB	LYS	A	146	1298	541	986	-41	108	-16	C
		ATOM	1162	CG	LYS	A	146	-7.190	-62.659	277.853	1.00	8.79		C
		ANISOU	1162	CG	LYS	A	146	1193	1053	1093	70	-152	-99	C
20		ATOM	1163	CD	LYS	A	146	-6.232	-61.801	276.916	1.00	12.10		C
		ANISOU	1163	CD	LYS	A	146	1608	1658	1329	-274	-41	-356	C
		ATOM	1164	CE	LYS	A	146	-4.915	-61.546	277.580	1.00	13.38		C
		ANISOU	1164	CE	LYS	A	146	1572	1627	1883	-353	181	-19	C
		ATOM	1165	NZ	LYS	A	146	-4.106	-60.691	276.705	1.00	16.05		N
25		ANISOU	1165	NZ	LYS	A	146	1935	1972	2190	-452	254	433	N
		ATOM	1166	C	LYS	A	146	-8.485	-65.392	276.813	1.00	6.37		C
		ANISOU	1166	C	LYS	A	146	886	915	619	-133	-92	9	C
		ATOM	1167	O	LYS	A	146	-9.449	-65.903	277.373	1.00	7.62		O
		ANISOU	1167	O	LYS	A	146	865	1012	1016	-19	138	15	O
30		ATOM	1168	N	LEU	A	147	-7.260	-65.956	276.814	1.00	6.37		N
		ANISOU	1168	N	LEU	A	147	727	725	967	-138	-18	118	N
		ATOM	1169	CA	LEU	A	147	-6.959	-67.269	277.351	1.00	6.48		C
		ANISOU	1169	CA	LEU	A	147	858	667	937	78	60	132	C
		ATOM	1170	CB	LEU	A	147	-6.397	-68.142	276.267	1.00	8.22		C
35		ANISOU	1170	CB	LEU	A	147	989	907	1225	162	44	-82	C
		ATOM	1171	CG	LEU	A	147	-7.303	-68.402	275.112	1.00	8.47		C

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	ANISOU	1171	CG	LEU	A	147	1211	918	1089	166	43	-64	C
	ATOM	1172	CD1	LEU	A	147	-6.519	-69.018	274.007	1.00	10.26		C
	ANISOU	1172	CD1	LEU	A	147	1396	1392	1109	-128	-19	-134	C
	ATOM	1173	CD2	LEU	A	147	-8.492	-69.297	275.498	1.00	10.06		C
5	ANISOU	1173	CD2	LEU	A	147	1163	1379	1279	97	11	130	C
	ATOM	1174	C	LEU	A	147	-5.980	-67.017	278.534	1.00	7.11		C
	ANISOU	1174	C	LEU	A	147	901	804	993	-24	14	-134	C
	ATOM	1175	O	LEU	A	147	-4.975	-66.308	278.336	1.00	8.02		O
	ANISOU	1175	O	LEU	A	147	1161	1006	879	-226	-55	88	O
10	ATOM	1176	N	AILE	A	148	-6.274	-67.574	279.702	0.50	7.18		N
	ANISOU	1176	N	AILE	A	148	888	964	873	-109	-9	-136	N
	ATOM	1177	N	BILE	A	148	-6.263	-67.588	279.698	0.50	7.01		N
	ANISOU	1177	N	BILE	A	148	858	951	854	-97	-10	-139	N
	ATOM	1178	CA	AILE	A	148	-5.501	-67.434	280.908	0.50	6.00		C
15	ANISOU	1178	CA	AILE	A	148	636	692	952	94	-134	352	C
	ATOM	1179	CA	BILE	A	148	-5.490	-67.432	280.904	0.50	5.48		C
	ANISOU	1179	CA	BILE	A	148	574	636	873	98	-80	295	C
	ATOM	1180	CB	AILE	A	148	-6.412	-66.876	282.014	0.50	8.60		C
	ANISOU	1180	CB	AILE	A	148	1169	981	1116	-77	66	3	C
20	ATOM	1181	CB	BILE	A	148	-6.384	-66.765	281.961	0.50	6.61		C
	ANISOU	1181	CB	BILE	A	148	917	636	956	-16	41	84	C
	ATOM	1182	CG1AILE	A	148		-7.152	-65.592	281.542	0.50	10.04		C
	ANISOU	1182	CG1AILE	A	148		1069	1500	1246	163	-174	-12	C
	ATOM	1183	CG1BILE	A	148		-6.712	-65.307	281.542	0.50	6.47		C
25	ANISOU	1183	CG1BILE	A	148		906	642	908	-193	96	236	C
	ATOM	1184	CD1AILE	A	148		-6.228	-64.415	281.427	0.50	11.15		C
	ANISOU	1184	CD1AILE	A	148		1633	1336	1265	109	-127	378	C
	ATOM	1185	CD1BILE	A	148		-7.815	-64.724	282.350	0.50	6.09		C
	ANISOU	1185	CD1BILE	A	148		982	550	780	-118	-42	-131	C
30	ATOM	1186	CG2AILE	A	148		-5.575	-66.705	283.307	0.50	7.63		C
	ANISOU	1186	CG2AILE	A	148		1377	542	978	-73	101	-94	C
	ATOM	1187	CG2BILE	A	148		-5.702	-66.809	283.343	0.50	6.92		C
	ANISOU	1187	CG2BILE	A	148		1166	612	849	-83	69	-4	C
	ATOM	1188	C	AILE	A	148	-4.949	-68.789	281.322	0.50	6.12		C
35	ANISOU	1188	C	AILE	A	148	1049	478	796	72	-36	153	C
	ATOM	1189	C	BILE	A	148	-4.953	-68.785	281.349	0.50	6.12		C

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		ANISOU	1189	C	BILE	A	148	1048	461	816	92	-32	153	C
		ATOM	1190	O	AILE	A	148	-5.714	-69.718	281.544	0.50	8.19		O
		ANISOU	1190	O	AILE	A	148	998	933	1177	-255	-186	-127	O
		ATOM	1191	O	BILE	A	148	-5.723	-69.706	281.611	0.50	8.33		O
5		ANISOU	1191	O	BILE	A	148	998	919	1246	-242	-109	-175	O
		ATOM	1192	N	GLY	A	149	-3.622	-68.867	281.477	1.00	5.57		N
		ANISOU	1192	N	GLY	A	149	920	441	752	-193	30	151	N
		ATOM	1193	CA	GLY	A	149	-2.971	-70.031	282.079	1.00	6.84		C
		ANISOU	1193	CA	GLY	A	149	913	969	717	188	13	239	C
10		ATOM	1194	C	GLY	A	149	-2.440	-69.675	283.436	1.00	6.40		C
		ANISOU	1194	C	GLY	A	149	959	603	870	63	-14	-244	C
		ATOM	1195	O	GLY	A	149	-3.031	-68.771	284.105	1.00	6.08		O
		ANISOU	1195	O	GLY	A	149	1036	384	889	127	46	-45	O
		ATOM	1196	N	ARG	A	150	-1.310	-70.267	283.870	1.00	6.28		N
15		ANISOU	1196	N	ARG	A	150	935	550	901	-47	-61	-67	N
		ATOM	1197	CA	ARG	A	150	-0.834	-70.107	285.220	1.00	6.07		C
		ANISOU	1197	CA	ARG	A	150	1038	440	826	-14	-136	130	C
		ATOM	1198	CB	ARG	A	150	-1.517	-71.132	286.128	1.00	6.86		C
		ANISOU	1198	CB	ARG	A	150	980	731	894	-45	44	276	C
20		ATOM	1199	CG	ARG	A	150	-1.217	-70.840	287.606	1.00	6.53		C
		ANISOU	1199	CG	ARG	A	150	967	621	891	213	-20	-56	C
		ATOM	1200	CD	ARG	A	150	-2.129	-71.617	288.509	1.00	7.43		C
		ANISOU	1200	CD	ARG	A	150	946	942	932	9	-1	-133	C
		ATOM	1201	NE	ARG	A	150	-1.960	-73.077	288.269	1.00	6.96		N
25		ANISOU	1201	NE	ARG	A	150	995	863	786	-7	-13	97	N
		ATOM	1202	CZ	ARG	A	150	-2.643	-74.051	288.892	1.00	6.27		C
		ANISOU	1202	CZ	ARG	A	150	1049	500	831	16	9	-16	C
		ATOM	1203	NH1	ARG	A	150	-3.689	-73.739	289.651	1.00	8.46		N
		ANISOU	1203	NH1	ARG	A	150	1024	1042	1146	-61	221	72	N
30		ATOM	1204	NH2	ARG	A	150	-2.306	-75.304	288.675	1.00	5.74		N
		ANISOU	1204	NH2	ARG	A	150	831	372	976	-40	162	-51	N
		ATOM	1205	C	ARG	A	150	0.700	-70.175	285.170	1.00	7.17		C
		ANISOU	1205	C	ARG	A	150	1122	691	910	74	-211	148	C
		ATOM	1206	O	ARG	A	150	1.265	-71.096	284.521	1.00	7.18		O
35		ANISOU	1206	O	ARG	A	150	957	788	980	156	51	26	O
		ATOM	1207	N	ALA	A	151	1.343	-69.426	286.035	1.00	5.81		N

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		ANISOU	1207	N	ALA	A	151	824	616	767	10	34	10	N
		ATOM	1208	CA	ALA	A	151	2.740	-69.533	286.299	1.00	6.17		C
		ANISOU	1208	CA	ALA	A	151	782	721	839	-46	121	-3	C
		ATOM	1209	CB	ALA	A	151	3.161	-68.597	287.401	1.00	6.04		C
5		ANISOU	1209	CB	ALA	A	151	1028	324	940	98	97	-77	C
		ATOM	1210	C	ALA	A	151	3.031	-71.008	286.718	1.00	6.82		C
		ANISOU	1210	C	ALA	A	151	764	824	1003	98	-187	24	C
		ATOM	1211	O	ALA	A	151	2.283	-71.619	287.471	1.00	7.30		O
		ANISOU	1211	O	ALA	A	151	1004	824	943	13	-32	47	O
10		ATOM	1212	N	ARG	A	152	4.171	-71.520	286.183	1.00	6.59		N
		ANISOU	1212	N	ARG	A	152	947	661	895	26	48	-1	N
		ATOM	1213	CA	ARG	A	152	4.558	-72.917	286.395	1.00	6.32		C
		ANISOU	1213	CA	ARG	A	152	904	618	877	25	26	-140	C
		ATOM	1214	CB	ARG	A	152	5.066	-73.099	287.836	1.00	8.56		C
15		ANISOU	1214	CB	ARG	A	152	1319	1007	925	-66	-175	190	C
		ATOM	1215	CG	ARG	A	152	6.153	-72.117	288.277	1.00	7.80		C
		ANISOU	1215	CG	ARG	A	152	1223	873	864	115	-181	-115	C
		ATOM	1216	CD	ARG	A	152	6.723	-72.500	289.649	1.00	8.29		C
		ANISOU	1216	CD	ARG	A	152	1114	1054	981	11	-117	201	C
20		ATOM	1217	NE	ARG	A	152	7.712	-71.488	290.024	1.00	9.41		N
		ANISOU	1217	NE	ARG	A	152	1418	1046	1108	-187	-248	168	N
		ATOM	1218	CZ	ARG	A	152	8.301	-71.466	291.213	1.00	11.69		C
		ANISOU	1218	CZ	ARG	A	152	1716	1446	1280	-457	-470	320	C
		ATOM	1219	NH1	ARG	A	152	8.075	-72.512	292.013	1.00	13.15		N
25		ANISOU	1219	NH1	ARG	A	152	2089	1547	1360	-449	-475	650	N
		ATOM	1220	NH2	ARG	A	152	9.141	-70.491	291.477	1.00	13.84		N
		ANISOU	1220	NH2	ARG	A	152	2035	1793	1430	-615	-386	390	N
		ATOM	1221	C	ARG	A	152	3.607	-73.930	285.920	1.00	6.28		C
		ANISOU	1221	C	ARG	A	152	852	723	811	-27	-26	-106	C
30		ATOM	1222	O	ARG	A	152	3.788	-75.151	286.149	1.00	8.17		O
		ANISOU	1222	O	ARG	A	152	1272	757	1075	87	15	246	O
		ATOM	1223	N	GLY	A	153	2.623	-73.568	285.106	1.00	6.15		N
		ANISOU	1223	N	GLY	A	153	847	552	936	58	5	51	N
		ATOM	1224	CA	GLY	A	153	1.732	-74.513	284.518	1.00	6.70		C
35		ANISOU	1224	CA	GLY	A	153	882	864	797	-86	-89	105	C
		ATOM	1225	C	GLY	A	153	2.369	-75.221	283.361	1.00	6.46		C

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		ANISOU	1225	C	GLY	A	153	915	755	784	71	-61	199	C
		ATOM	1226	O	GLY	A	153	3.338	-74.728	282.738	1.00	7.56		O
		ANISOU	1226	O	GLY	A	153	1013	774	1082	-38	36	139	O
		ATOM	1227	N	TYR	A	154	1.971	-76.460	283.101	1.00	5.92		N
5		ANISOU	1227	N	TYR	A	154	848	693	708	56	41	-56	N
		ATOM	1228	CA	TYR	A	154	2.406	-77.264	281.953	1.00	6.16		C
		ANISOU	1228	CA	TYR	A	154	904	697	739	-43	26	-126	C
		ATOM	1229	CB	TYR	A	154	3.408	-78.330	282.388	1.00	8.07		C
		ANISOU	1229	CB	TYR	A	154	827	1320	917	151	145	88	C
10		ATOM	1230	CG	TYR	A	154	4.077	-78.981	281.191	1.00	6.34		C
		ANISOU	1230	CG	TYR	A	154	1108	508	792	-67	-10	38	C
		ATOM	1231	CD1	TYR	A	154	5.007	-78.305	280.446	1.00	8.90		C
		ANISOU	1231	CD1	TYR	A	154	1137	1077	1166	-71	319	-33	C
		ATOM	1232	CE1	TYR	A	154	5.614	-78.877	279.364	1.00	7.05		C
15		ANISOU	1232	CE1	TYR	A	154	1288	406	983	-286	185	105	C
		ATOM	1233	CZ	TYR	A	154	5.296	-80.179	278.992	1.00	6.80		C
		ANISOU	1233	CZ	TYR	A	154	1172	451	960	-8	-4	-107	C
		ATOM	1234	OH	TYR	A	154	6.002	-80.716	277.930	1.00	11.09		O
		ANISOU	1234	OH	TYR	A	154	1592	1398	1222	173	480	121	O
20		ATOM	1235	CE2	TYR	A	154	4.345	-80.888	279.696	1.00	9.49		C
		ANISOU	1235	CE2	TYR	A	154	1390	1274	939	4	389	19	C
		ATOM	1236	CD2	TYR	A	154	3.746	-80.272	280.798	1.00	7.60		C
		ANISOU	1236	CD2	TYR	A	154	1423	467	994	2	213	-61	C
		ATOM	1237	C	TYR	A	154	1.252	-77.865	281.234	1.00	7.41		C
25		ANISOU	1237	C	TYR	A	154	1028	1019	768	-157	-49	-22	C
		ATOM	1238	O	TYR	A	154	0.451	-78.617	281.782	1.00	7.63		O
		ANISOU	1238	O	TYR	A	154	1164	795	938	-25	28	92	O
		ATOM	1239	N	HIS	A	155	1.218	-77.565	279.917	1.00	7.12		N
		ANISOU	1239	N	HIS	A	155	1009	770	924	-154	-133	221	N
30		ATOM	1240	CA	HIS	A	155	0.215	-77.996	278.965	1.00	6.25		C
		ANISOU	1240	CA	HIS	A	155	1040	468	867	0	122	143	C
		ATOM	1241	CB	HIS	A	155	-0.784	-76.822	278.704	1.00	5.82		C
		ANISOU	1241	CB	HIS	A	155	924	649	637	-13	93	237	C
		ATOM	1242	CG	HIS	A	155	-1.300	-76.241	279.962	1.00	7.58		C
35		ANISOU	1242	CG	HIS	A	155	911	1096	873	-84	279	-98	C
		ATOM	1243	ND1	HIS	A	155	-2.102	-76.936	280.845	1.00	6.99		N

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		ANISOU	1243	ND1	HIS	A	155	1075	555	1023	-187	211	56	N
		ATOM	1244	CE1	HIS	A	155	-2.330	-76.196	281.925	1.00	8.54		C
		ANISOU	1244	CE1	HIS	A	155	1204	1151	887	148	41	-129	C
		ATOM	1245	NE2	HIS	A	155	-1.755	-75.040	281.752	1.00	9.57		N
5		ANISOU	1245	NE2	HIS	A	155	1325	1456	854	42	32	50	N
		ATOM	1246	CD2	HIS	A	155	-1.092	-75.052	280.547	1.00	6.93		C
		ANISOU	1246	CD2	HIS	A	155	829	757	1047	184	57	152	C
		ATOM	1247	C	HIS	A	155	0.824	-78.507	277.675	1.00	6.20		C
		ANISOU	1247	C	HIS	A	155	1057	485	812	-85	-40	183	C
10		ATOM	1248	O	HIS	A	155	0.247	-78.384	276.614	1.00	6.62		O
		ANISOU	1248	O	HIS	A	155	976	671	866	-78	101	-10	O
		ATOM	1249	N	GLY	A	156	2.014	-79.062	277.769	1.00	7.46		N
		ANISOU	1249	N	GLY	A	156	867	961	1005	-54	54	32	N
		ATOM	1250	CA	GLY	A	156	2.669	-79.571	276.608	1.00	7.28		C
15		ANISOU	1250	CA	GLY	A	156	1141	725	900	-12	44	284	C
		ATOM	1251	C	GLY	A	156	3.417	-78.531	275.843	1.00	6.80		C
		ANISOU	1251	C	GLY	A	156	1096	737	749	-102	-85	24	C
		ATOM	1252	O	GLY	A	156	3.793	-77.450	276.368	1.00	7.00		O
		ANISOU	1252	O	GLY	A	156	1036	785	837	-188	131	-110	O
20		ATOM	1253	N	VAL	A	157	3.724	-78.806	274.578	1.00	5.82		N
		ANISOU	1253	N	VAL	A	157	714	668	830	-202	56	-5	N
		ATOM	1254	CA	VAL	A	157	4.676	-78.039	273.811	1.00	6.24		C
		ANISOU	1254	CA	VAL	A	157	953	828	587	-55	54	121	C
		ATOM	1255	CB	VAL	A	157	5.972	-78.836	273.681	1.00	6.02		C
25		ANISOU	1255	CB	VAL	A	157	908	453	924	-82	58	-121	C
		ATOM	1256	CG1	VAL	A	157	6.640	-79.101	275.041	1.00	6.97		C
		ANISOU	1256	CG1	VAL	A	157	1005	766	878	34	4	63	C
		ATOM	1257	CG2	VAL	A	157	5.810	-80.107	272.903	1.00	6.46		C
		ANISOU	1257	CG2	VAL	A	157	915	415	1122	-91	104	-139	C
30		ATOM	1258	C	VAL	A	157	4.219	-77.557	272.454	1.00	4.92		C
		ANISOU	1258	C	VAL	A	157	656	464	748	52	64	-78	C
		ATOM	1259	O	VAL	A	157	5.044	-76.977	271.714	1.00	6.65		O
		ANISOU	1259	O	VAL	A	157	942	830	755	-62	63	56	O
		ATOM	1260	N	ASN	A	158	2.977	-77.770	272.025	1.00	5.83		N
35		ANISOU	1260	N	ASN	A	158	747	674	792	6	-42	75	N
		ATOM	1261	CA	ASN	A	158	2.493	-77.112	270.848	1.00	5.85		C

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	ANISOU	1261	CA	ASN	A	158	771	866	583	-49	0	-222	C
	ATOM	1262	CB	ASN	A	158	1.186	-77.657	270.344	1.00	5.29		C
	ANISOU	1262	CB	ASN	A	158	935	327	745	81	-102	2	C
	ATOM	1263	CG	ASN	A	158	1.319	-79.093	269.948	1.00	5.65		C
5	ANISOU	1263	CG	ASN	A	158	950	310	884	94	-135	53	C
	ATOM	1264	OD1	ASN	A	158	2.317	-79.480	269.354	1.00	7.48		O
	ANISOU	1264	OD1	ASN	A	158	1085	777	978	18	26	123	O
	ATOM	1265	ND2	ASN	A	158	0.301	-79.869	270.252	1.00	10.06		N
	ANISOU	1265	ND2	ASN	A	158	1139	1519	1164	-340	223	43	N
10	ATOM	1266	C	ASN	A	158	2.458	-75.591	271.205	1.00	6.53		C
	ANISOU	1266	C	ASN	A	158	817	813	849	-82	-124	6	C
	ATOM	1267	O	ASN	A	158	2.663	-75.131	272.301	1.00	6.76		O
	ANISOU	1267	O	ASN	A	158	1113	622	831	-33	-7	97	O
	ATOM	1268	N	VAL	A	159	2.112	-74.804	270.241	1.00	5.96		N
15	ANISOU	1268	N	VAL	A	159	951	526	786	-30	-3	-338	N
	ATOM	1269	CA	VAL	A	159	2.133	-73.345	270.521	1.00	5.52		C
	ANISOU	1269	CA	VAL	A	159	738	448	910	21	54	-1	C
	ATOM	1270	CB	VAL	A	159	1.948	-72.498	269.249	1.00	7.70		C
	ANISOU	1270	CB	VAL	A	159	1084	736	1104	-136	113	213	C
20	ATOM	1271	CG1	VAL	A	159	1.590	-71.038	269.546	1.00	8.53		C
	ANISOU	1271	CG1	VAL	A	159	1315	768	1158	-270	-60	54	C
	ATOM	1272	CG2	VAL	A	159	3.202	-72.578	268.422	1.00	6.66		C
	ANISOU	1272	CG2	VAL	A	159	1089	490	951	209	-30	55	C
	ATOM	1273	C	VAL	A	159	1.136	-72.968	271.651	1.00	6.82		C
25	ANISOU	1273	C	VAL	A	159	806	912	870	11	100	-24	C
	ATOM	1274	O	VAL	A	159	1.478	-72.104	272.461	1.00	7.16		O
	ANISOU	1274	O	VAL	A	159	1139	572	1009	-21	-118	-19	O
	ATOM	1275	N	ALA	A	160	-0.084	-73.500	271.636	1.00	6.94		N
	ANISOU	1275	N	ALA	A	160	949	716	971	23	49	-84	N
30	ATOM	1276	CA	ALA	A	160	-0.986	-73.123	272.740	1.00	7.54		C
	ANISOU	1276	CA	ALA	A	160	994	1003	864	-79	194	-108	C
	ATOM	1277	CB	ALA	A	160	-2.388	-73.695	272.589	1.00	11.97		C
	ANISOU	1277	CB	ALA	A	160	1101	2371	1076	-195	134	-285	C
	ATOM	1278	C	ALA	A	160	-0.403	-73.512	274.084	1.00	6.97		C
35	ANISOU	1278	C	ALA	A	160	962	771	913	-45	116	113	C
	ATOM	1279	O	ALA	A	160	-0.440	-72.692	275.041	1.00	8.29		O

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		ANISOU	1279	O	ALA	A	160	1215	789	1145	-95	59	-96	O
		ATOM	1280	N	GLY	A	161	0.050	-74.728	274.202	1.00	8.26		N
		ANISOU	1280	N	GLY	A	161	1293	734	1111	-45	39	-120	N
		ATOM	1281	CA	GLY	A	161	0.610	-75.178	275.482	1.00	9.52		C
5		ANISOU	1281	CA	GLY	A	161	1560	1145	911	62	189	151	C
		ATOM	1282	C	GLY	A	161	1.809	-74.352	275.880	1.00	8.49		C
		ANISOU	1282	C	GLY	A	161	1504	590	1132	346	-7	205	C
		ATOM	1283	O	GLY	A	161	2.101	-74.136	277.057	1.00	11.12		O
		ANISOU	1283	O	GLY	A	161	2232	927	1063	328	-272	56	O
10		ATOM	1284	N	THR	A	162	2.676	-74.038	274.908	1.00	8.27		N
		ANISOU	1284	N	THR	A	162	1138	720	1283	290	80	-183	N
		ATOM	1285	CA	THR	A	162	3.872	-73.303	275.161	1.00	9.12		C
		ANISOU	1285	CA	THR	A	162	1043	1371	1051	392	-210	-39	C
		ATOM	1286	CB	THR	A	162	4.768	-73.106	273.939	1.00	8.94		C
15		ANISOU	1286	CB	THR	A	162	1225	447	1725	319	-101	-152	C
		ATOM	1287	OG1	THR	A	162	5.051	-74.409	273.399	1.00	8.51		O
		ANISOU	1287	OG1	THR	A	162	1300	620	1310	273	-80	-264	O
		ATOM	1288	CG2	THR	A	162	6.102	-72.484	274.309	1.00	12.03		C
		ANISOU	1288	CG2	THR	A	162	1338	1496	1734	267	-293	-625	C
20		ATOM	1289	C	THR	A	162	3.532	-71.919	275.775	1.00	9.69		C
		ANISOU	1289	C	THR	A	162	1176	1279	1226	135	-154	-70	C
		ATOM	1290	O	THR	A	162	4.103	-71.467	276.779	1.00	10.29		O
		ANISOU	1290	O	THR	A	162	1328	1353	1226	382	-361	-521	O
		ATOM	1291	N	SER	A	163	2.544	-71.248	275.171	1.00	7.23		N
25		ANISOU	1291	N	SER	A	163	1171	720	853	116	-59	-338	N
		ATOM	1292	CA	SER	A	163	2.130	-69.883	275.593	1.00	6.09		C
		ANISOU	1292	CA	SER	A	163	840	468	1003	-90	-34	-88	C
		ATOM	1293	CB	SER	A	163	1.255	-69.329	274.541	1.00	9.16		C
		ANISOU	1293	CB	SER	A	163	1209	1208	1064	92	17	20	C
30		ATOM	1294	OG	SER	A	163	2.002	-69.031	273.360	1.00	12.88		O
		ANISOU	1294	OG	SER	A	163	1891	1856	1144	340	186	286	O
		ATOM	1295	C	SER	A	163	1.341	-69.915	276.910	1.00	7.06		C
		ANISOU	1295	C	SER	A	163	1000	863	817	-127	18	-6	C
		ATOM	1296	O	SER	A	163	1.607	-69.085	277.761	1.00	7.46		O
35		ANISOU	1296	O	SER	A	163	1005	714	1113	-90	90	-28	O
		ATOM	1297	N	LEU	A	164	0.458	-70.923	277.121	1.00	6.46		N

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		ANISOU	1297	N	LEU	A	164	999	535	920	-39	131	-16	N
		ATOM	1298	CA	LEU	A	164	-0.335	-70.986	278.295	1.00	6.69		C
		ANISOU	1298	CA	LEU	A	164	979	726	837	-33	58	149	C
		ATOM	1299	CB	LEU	A	164	-1.661	-71.679	278.018	1.00	7.98		C
5		ANISOU	1299	CB	LEU	A	164	1065	1025	940	-170	156	-39	C
		ATOM	1300	CG	LEU	A	164	-2.595	-70.810	277.158	1.00	10.10		C
		ANISOU	1300	CG	LEU	A	164	1311	1437	1090	-127	67	125	C
		ATOM	1301	CD1	LEU	A	164	-3.701	-71.628	276.524	1.00	12.35		C
		ANISOU	1301	CD1	LEU	A	164	1470	1896	1326	-159	-13	-159	C
10		ATOM	1302	CD2	LEU	A	164	-3.210	-69.636	277.941	1.00	10.99		C
		ANISOU	1302	CD2	LEU	A	164	1261	1475	1437	171	47	186	C
		ATOM	1303	C	LEU	A	164	0.365	-71.582	279.493	1.00	7.07		C
		ANISOU	1303	C	LEU	A	164	938	891	857	130	36	210	C
		ATOM	1304	O	LEU	A	164	0.003	-71.255	280.642	1.00	6.59		O
15		ANISOU	1304	O	LEU	A	164	1081	557	866	-44	91	116	O
		ATOM	1305	N	GLY	A	165	1.338	-72.455	279.220	1.00	6.86		N
		ANISOU	1305	N	GLY	A	165	1103	584	916	20	-39	-172	N
		ATOM	1306	CA	GLY	A	165	2.186	-72.897	280.309	1.00	6.49		C
		ANISOU	1306	CA	GLY	A	165	783	799	883	24	-34	58	C
20		ATOM	1307	C	GLY	A	165	3.044	-71.827	280.875	1.00	7.27		C
		ANISOU	1307	C	GLY	A	165	886	891	984	-156	-21	137	C
		ATOM	1308	O	GLY	A	165	3.134	-70.724	280.242	1.00	6.40		O
		ANISOU	1308	O	GLY	A	165	946	740	743	256	-96	15	O
		ATOM	1309	N	GLY	A	166	3.691	-72.023	281.985	1.00	5.60		N
25		ANISOU	1309	N	GLY	A	166	829	520	776	-1	45	-11	N
		ATOM	1310	CA	GLY	A	166	4.299	-70.965	282.738	1.00	7.27		C
		ANISOU	1310	CA	GLY	A	166	1009	811	940	-57	-31	-226	C
		ATOM	1311	C	GLY	A	166	5.682	-71.276	283.301	1.00	7.63		C
		ANISOU	1311	C	GLY	A	166	1028	968	900	93	66	138	C
30		ATOM	1312	O	GLY	A	166	6.123	-70.616	284.218	1.00	7.74		O
		ANISOU	1312	O	GLY	A	166	1047	1028	864	30	-7	162	O
		ATOM	1313	N	ILE	A	167	6.302	-72.344	282.824	1.00	6.39		N
		ANISOU	1313	N	ILE	A	167	908	633	888	17	-122	58	N
		ATOM	1314	CA	ILE	A	167	7.668	-72.688	283.311	1.00	6.30		C
35		ANISOU	1314	CA	ILE	A	167	785	744	862	43	53	48	C
		ATOM	1315	CB	ILE	A	167	7.882	-74.241	283.249	1.00	7.85		C

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	ANISOU	1315	CB	ILE	A	167	1151	816	1015	3	73	-146	C
	ATOM	1316	CG1	ILE	A	167	6.940	-74.986	284.254	1.00	8.20		C
	ANISOU	1316	CG1	ILE	A	167	1106	874	1135	-115	-166	202	C
	ATOM	1317	CD1	ILE	A	167	6.906	-76.467	284.154	1.00	9.51		C
5	ANISOU	1317	CD1	ILE	A	167	1450	911	1250	3	121	-140	C
	ATOM	1318	CG2	ILE	A	167	9.360	-74.510	283.601	1.00	9.29		C
	ANISOU	1318	CG2	ILE	A	167	1176	1051	1303	70	-121	-103	C
	ATOM	1319	C	ILE	A	167	8.616	-71.949	282.382	1.00	7.80		C
	ANISOU	1319	C	ILE	A	167	959	1187	817	-118	54	-117	C
10	ATOM	1320	O	ILE	A	167	8.630	-72.196	281.187	1.00	7.65		O
	ANISOU	1320	O	ILE	A	167	1040	920	943	9	73	-24	O
	ATOM	1321	N	GLY	A	168	9.427	-71.091	282.946	1.00	7.63		N
	ANISOU	1321	N	GLY	A	168	1049	894	956	-93	-65	224	N
	ATOM	1322	CA	GLY	A	168	10.201	-70.215	282.164	1.00	8.11		C
15	ANISOU	1322	CA	GLY	A	168	1053	844	1183	-147	11	-136	C
	ATOM	1323	C	GLY	A	168	11.076	-70.864	281.151	1.00	8.78		C
	ANISOU	1323	C	GLY	A	168	1212	1263	860	-195	55	-81	C
	ATOM	1324	O	GLY	A	168	11.135	-70.411	279.986	1.00	7.50		O
	ANISOU	1324	O	GLY	A	168	1133	629	1087	-107	34	-92	O
20	ATOM	1325	N	GLY	A	169	11.744	-71.964	281.508	1.00	9.15		N
	ANISOU	1325	N	GLY	A	169	1232	1192	1051	-116	-17	26	N
	ATOM	1326	CA	GLY	A	169	12.664	-72.663	280.629	1.00	9.22		C
	ANISOU	1326	CA	GLY	A	169	851	1386	1266	-130	-169	-37	C
	ATOM	1327	C	GLY	A	169	11.976	-73.256	279.445	1.00	8.97		C
25	ANISOU	1327	C	GLY	A	169	1047	922	1438	87	61	-516	C
	ATOM	1328	O	GLY	A	169	12.651	-73.541	278.430	1.00	13.20		O
	ANISOU	1328	O	GLY	A	169	1309	2329	1375	285	55	-504	O
	ATOM	1329	N	ASN	A	170	10.661	-73.518	279.502	1.00	7.20		N
	ANISOU	1329	N	ASN	A	170	1032	676	1026	17	234	-68	N
30	ATOM	1330	CA	ASN	A	170	9.907	-74.119	278.392	1.00	8.45		C
	ANISOU	1330	CA	ASN	A	170	1112	1070	1027	53	26	235	C
	ATOM	1331	CB	ASN	A	170	8.666	-74.783	278.915	1.00	8.00		C
	ANISOU	1331	CB	ASN	A	170	1083	1010	947	-15	37	-105	C
	ATOM	1332	CG	ASN	A	170	8.923	-76.087	279.735	1.00	8.38		C
35	ANISOU	1332	CG	ASN	A	170	1258	777	1147	-69	31	-239	C
	ATOM	1333	OD1	ASN	A	170	10.038	-76.575	279.688	1.00	9.31		O

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		ANISOU	1333	OD1	ASN	A	170	1350	616	1569	-67	50	101	O
		ATOM	1334	ND2	ASN	A	170	7.958	-76.568	280.439	1.00	8.82		N
		ANISOU	1334	ND2	ASN	A	170	1168	1090	1091	171	42	-13	N
		ATOM	1335	C	ASN	A	170	9.515	-73.034	277.387	1.00	7.22		C
5		ANISOU	1335	C	ASN	A	170	981	808	951	-81	170	-117	C
		ATOM	1336	O	ASN	A	170	9.096	-73.341	276.274	1.00	9.70		O
		ANISOU	1336	O	ASN	A	170	1361	1248	1075	-150	-59	31	O
		ATOM	1337	N	ARG	A	171	9.634	-71.742	277.757	1.00	6.58		N
		ANISOU	1337	N	ARG	A	171	982	630	887	-16	36	-53	N
10		ATOM	1338	CA	ARG	A	171	9.205	-70.626	276.921	1.00	7.60		C
		ANISOU	1338	CA	ARG	A	171	1012	814	1060	-95	23	-26	C
		ATOM	1339	CB	ARG	A	171	8.295	-69.723	277.762	1.00	9.85		C
		ANISOU	1339	CB	ARG	A	171	1107	1317	1318	210	13	162	C
		ATOM	1340	CG	ARG	A	171	7.058	-70.432	278.252	1.00	9.16		C
15		ANISOU	1340	CG	ARG	A	171	1148	734	1597	238	75	369	C
		ATOM	1341	CD	ARG	A	171	6.471	-69.884	279.548	1.00	10.35		C
		ANISOU	1341	CD	ARG	A	171	1118	1593	1219	150	155	454	C
		ATOM	1342	NE	ARG	A	171	6.285	-68.460	279.488	1.00	13.14		N
		ANISOU	1342	NE	ARG	A	171	1421	2162	1407	46	94	47	N
20		ATOM	1343	CZ	ARG	A	171	5.253	-67.844	278.910	1.00	10.37		C
		ANISOU	1343	CZ	ARG	A	171	1209	1432	1297	164	362	-197	C
		ATOM	1344	NH1	ARG	A	171	4.277	-68.534	278.404	1.00	11.13		N
		ANISOU	1344	NH1	ARG	A	171	1367	1664	1198	149	209	-314	N
		ATOM	1345	NH2	ARG	A	171	5.254	-66.541	278.898	1.00	16.38		N
25		ANISOU	1345	NH2	ARG	A	171	2649	1739	1833	-114	-37	151	N
		ATOM	1346	C	ARG	A	171	10.375	-69.763	276.447	1.00	8.07		C
		ANISOU	1346	C	ARG	A	171	1211	681	1172	86	45	96	C
		ATOM	1347	O	ARG	A	171	10.242	-69.082	275.366	1.00	10.81		O
		ANISOU	1347	O	ARG	A	171	1439	1464	1202	-136	-156	128	O
30		ATOM	1348	N	LYS	A	172	11.478	-69.790	277.122	1.00	7.56		N
		ANISOU	1348	N	LYS	A	172	1074	596	1202	-130	-20	158	N
		ATOM	1349	CA	LYS	A	172	12.549	-68.812	276.910	1.00	8.42		C
		ANISOU	1349	CA	LYS	A	172	1149	810	1237	-222	163	-16	C
		ATOM	1350	CB	LYS	A	172	13.734	-69.237	277.769	1.00	10.19		C
35		ANISOU	1350	CB	LYS	A	172	1211	1403	1255	207	38	-79	C
		ATOM	1351	CG	LYS	A	172	15.020	-68.404	277.607	1.00	10.23		C

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		ANISOU	1351	CG	LYS	A	172	1403	1179	1303	191	20	-73	C
		ATOM	1352	CD	LYS	A	172	16.142	-68.862	278.472	1.00	10.60		C
		ANISOU	1352	CD	LYS	A	172	974	1421	1631	142	16	84	C
		ATOM	1353	CE	LYS	A	172	17.388	-68.041	278.213	1.00	10.75		C
5		ANISOU	1353	CE	LYS	A	172	1449	917	1720	-70	-142	-261	C
		ATOM	1354	NZ	LYS	A	172	18.536	-68.548	279.005	1.00	14.15		N
		ANISOU	1354	NZ	LYS	A	172	1538	1586	2252	98	-302	-10	N
		ATOM	1355	C	LYS	A	172	12.973	-68.655	275.507	1.00	8.46		C
		ANISOU	1355	C	LYS	A	172	1207	743	1264	102	48	122	C
10		ATOM	1356	O	LYS	A	172	13.198	-67.503	275.067	1.00	8.97		O
		ANISOU	1356	O	LYS	A	172	1185	972	1248	27	317	-149	O
		ATOM	1357	N	MET	A	173	13.184	-69.762	274.791	1.00	8.98		N
		ANISOU	1357	N	MET	A	173	1092	1090	1229	-73	360	-151	N
		ATOM	1358	CA	MET	A	173	13.953	-69.685	273.525	1.00	9.46		C
15		ANISOU	1358	CA	MET	A	173	1381	978	1234	-161	302	-85	C
		ATOM	1359	CB	MET	A	173	14.805	-70.938	273.303	1.00	10.64		C
		ANISOU	1359	CB	MET	A	173	1529	1267	1246	31	456	-620	C
		ATOM	1360	CG	MET	A	173	15.859	-71.079	274.337	1.00	14.48		C
		ANISOU	1360	CG	MET	A	173	1679	1957	1864	109	285	186	C
20		ATOM	1361	SD	MET	A	173	17.205	-69.835	274.225	1.00	15.94		S
		ANISOU	1361	SD	MET	A	173	1696	2161	2197	-271	367	-358	S
		ATOM	1362	CE	MET	A	173	18.106	-70.443	272.750	1.00	15.95		C
		ANISOU	1362	CE	MET	A	173	1770	1956	2331	264	450	359	C
		ATOM	1363	C	MET	A	173	13.118	-69.506	272.300	1.00	8.83		C
25		ANISOU	1363	C	MET	A	173	1344	811	1199	-143	342	156	C
		ATOM	1364	O	MET	A	173	13.635	-69.418	271.186	1.00	10.73		O
		ANISOU	1364	O	MET	A	173	1453	1344	1277	-159	386	-108	O
		ATOM	1365	N	PHE	A	174	11.797	-69.410	272.419	1.00	8.70		N
		ANISOU	1365	N	PHE	A	174	1189	992	1123	-109	137	-141	N
30		ATOM	1366	CA	PHE	A	174	10.883	-69.524	271.313	1.00	9.97		C
		ANISOU	1366	CA	PHE	A	174	1164	1298	1327	-101	142	127	C
		ATOM	1367	CB	PHE	A	174	9.861	-70.652	271.569	1.00	7.38		C
		ANISOU	1367	CB	PHE	A	174	1096	845	861	47	167	-98	C
		ATOM	1368	CG	PHE	A	174	10.508	-71.945	271.960	1.00	7.89		C
35		ANISOU	1368	CG	PHE	A	174	1095	761	1140	-42	32	88	C
		ATOM	1369	CD1	PHE	A	174	11.390	-72.599	271.041	1.00	7.73		C

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		ANISOU	1369	CD1	PHE	A	174	1090	1047	799	-319	159	213	C
		ATOM	1370	CE1	PHE	A	174	12.107	-73.711	271.364	1.00	9.09		C
		ANISOU	1370	CE1	PHE	A	174	1014	1171	1268	-31	171	-70	C
		ATOM	1371	CZ	PHE	A	174	11.910	-74.300	272.625	1.00	8.25		C
5		ANISOU	1371	CZ	PHE	A	174	1056	958	1117	58	-159	70	C
		ATOM	1372	CE2	PHE	A	174	11.063	-73.728	273.510	1.00	9.00		C
		ANISOU	1372	CE2	PHE	A	174	1312	873	1233	-263	129	131	C
		ATOM	1373	CD2	PHE	A	174	10.371	-72.556	273.221	1.00	8.14		C
		ANISOU	1373	CD2	PHE	A	174	913	1256	924	-52	227	85	C
10		ATOM	1374	C	PHE	A	174	10.186	-68.277	270.732	1.00	10.87		C
		ANISOU	1374	C	PHE	A	174	973	1678	1478	-214	24	-133	C
		ATOM	1375	O	PHE	A	174	9.541	-68.318	269.712	1.00	12.55		O
		ANISOU	1375	O	PHE	A	174	1917	1400	1450	52	153	-4	O
		ATOM	1376	N	GLY	A	175	10.352	-67.165	271.448	1.00	11.25		N
15		ANISOU	1376	N	GLY	A	175	1480	922	1873	-207	199	346	N
		ATOM	1377	CA	GLY	A	175	9.874	-65.875	270.949	1.00	13.22		C
		ANISOU	1377	CA	GLY	A	175	1425	1086	2512	-120	602	226	C
		ATOM	1378	C	GLY	A	175	8.359	-65.666	271.172	1.00	11.31		C
		ANISOU	1378	C	GLY	A	175	1413	761	2121	-83	50	-130	C
20		ATOM	1379	O	GLY	A	175	7.728	-66.550	271.849	1.00	12.04		O
		ANISOU	1379	O	GLY	A	175	1353	1471	1751	-186	366	-337	O
		ATOM	1380	N	APRO	A	176	7.897	-64.489	271.004	0.50	11.29		N
		ANISOU	1380	N	APRO	A	176	903	1322	2062	236	-10	57	N
		ATOM	1381	N	BPRO	A	176	7.783	-64.743	270.229	0.50	12.37		N
25		ANISOU	1381	N	BPRO	A	176	980	1353	2367	-366	342	-179	N
		ATOM	1382	CA	APRO	A	176	6.463	-64.280	271.157	0.50	6.99		C
		ANISOU	1382	CA	APRO	A	176	933	773	949	-41	68	-226	C
		ATOM	1383	CA	BPRO	A	176	6.386	-64.252	270.336	0.50	13.27		C
		ANISOU	1383	CA	BPRO	A	176	1383	1175	2483	-125	474	-133	C
30		ATOM	1384	CB	APRO	A	176	6.313	-62.777	270.877	0.50	7.22		C
		ANISOU	1384	CB	APRO	A	176	1198	734	811	-195	-104	76	C
		ATOM	1385	CB	BPRO	A	176	6.299	-63.083	269.323	0.50	18.27		C
		ANISOU	1385	CB	BPRO	A	176	2139	1755	3046	1659	268	-100	C
		ATOM	1386	CG	APRO	A	176	7.609	-62.334	270.356	0.50	8.65		C
35		ANISOU	1386	CG	APRO	A	176	998	952	1334	56	-199	111	C
		ATOM	1387	CG	BPRO	A	176	7.440	-63.250	268.335	0.50	17.70		C

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	ANISOU	1387	CG	BPRO	A	176	2397	1937	2388	-213	419	440	C
	ATOM	1388	CD	APRO	A	176	8.626	-63.362	270.416	0.50	11.22		C
	ANISOU	1388	CD	APRO	A	176	1310	1296	1657	264	-3	177	C
	ATOM	1389	CD	BPRO	A	176	8.485	-64.052	269.092	0.50	18.34		C
5	ANISOU	1389	CD	BPRO	A	176	2034	2417	2517	91	112	202	C
	ATOM	1390	C	APRO	A	176	5.608	-65.188	270.205	0.50	9.70		C
	ANISOU	1390	C	APRO	A	176	1159	1435	1089	-251	-243	-246	C
	ATOM	1391	C	BPRO	A	176	5.466	-65.337	269.897	0.50	13.44		C
	ANISOU	1391	C	BPRO	A	176	1565	1614	1927	-342	-5	60	C
10	ATOM	1392	O	APRO	A	176	5.890	-65.267	269.046	0.50	8.02		O
	ANISOU	1392	O	APRO	A	176	1048	846	1150	73	195	-22	O
	ATOM	1393	O	BPRO	A	176	5.540	-65.782	268.720	0.50	15.36		O
	ANISOU	1393	O	BPRO	A	176	1522	2336	1977	473	806	409	O
	ATOM	1394	N	LEU	A	177	4.545	-65.753	270.758	1.00	12.80		N
15	ANISOU	1394	N	LEU	A	177	1522	1905	1436	-457	137	-381	N
	ATOM	1395	CA	LEU	A	177	3.656	-66.716	270.179	1.00	9.85		C
	ANISOU	1395	CA	LEU	A	177	1471	1054	1219	-136	-17	-130	C
	ATOM	1396	CB	LEU	A	177	3.900	-68.097	270.746	1.00	13.08		C
	ANISOU	1396	CB	LEU	A	177	1590	1256	2122	-130	-72	334	C
20	ATOM	1397	CG	LEU	A	177	5.317	-68.690	270.498	1.00	16.11		C
	ANISOU	1397	CG	LEU	A	177	1509	2052	2558	-355	-79	-167	C
	ATOM	1398	CD1	LEU	A	177	5.506	-69.790	271.506	1.00	18.70		C
	ANISOU	1398	CD1	LEU	A	177	1687	2017	3398	156	-130	77	C
	ATOM	1399	CD2	LEU	A	177	5.543	-69.090	269.083	1.00	22.88		C
25	ANISOU	1399	CD2	LEU	A	177	3191	2294	3208	-561	639	-80	C
	ATOM	1400	C	LEU	A	177	2.207	-66.164	270.407	1.00	11.55		C
	ANISOU	1400	C	LEU	A	177	1266	1211	1911	-172	-332	220	C
	ATOM	1401	O	LEU	A	177	1.780	-65.136	269.785	1.00	15.95		O
	ANISOU	1401	O	LEU	A	177	1940	1725	2392	-357	-134	733	O
30	ATOM	1402	N	MET	A	178	1.405	-66.648	271.256	1.00	9.87		N
	ANISOU	1402	N	MET	A	178	1472	1077	1201	138	-53	-160	N
	ATOM	1403	CA	MET	A	178	0.050	-66.195	271.400	1.00	11.52		C
	ANISOU	1403	CA	MET	A	178	1458	1392	1524	92	-112	35	C
	ATOM	1404	CB	MET	A	178	-0.907	-67.299	272.003	1.00	15.72		C
35	ANISOU	1404	CB	MET	A	178	1748	2207	2014	-150	-172	36	C
	ATOM	1405	CG	MET	A	178	-0.888	-68.434	271.197	1.00	15.51		C

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		ANISOU	1405	CG	MET	A	178	2226	1660	2005	27	363	-49	
		ATOM	1406	SD	MET	A	178	-2.005	-69.675	271.579	1.00	13.93		S
		ANISOU	1406	SD	MET	A	178	2301	1364	1625	-144	135	-139	S
		ATOM	1407	CE	MET	A	178	-3.553	-68.968	271.606	1.00	22.35		C
5		ANISOU	1407	CE	MET	A	178	2072	2958	3459	-1055	336	-313	C
		ATOM	1408	C	MET	A	178	0.004	-65.147	272.488	1.00	9.66		C
		ANISOU	1408	C	MET	A	178	951	1468	1252	-142	362	-80	C
		ATOM	1409	O	MET	A	178	0.786	-65.183	273.422	1.00	14.10		O
		ANISOU	1409	O	MET	A	178	1516	2366	1475	424	-306	106	O
10		ATOM	1410	N	AASP	A	179	-0.975	-64.256	272.415	0.50	8.90		N
		ANISOU	1410	N	AASP	A	179	1303	920	1159	-222	-298	181	N
		ATOM	1411	N	BASP	A	179	-1.003	-64.290	272.415	0.50	9.66		N
		ANISOU	1411	N	BASP	A	179	1379	992	1299	-175	-369	310	N
		ATOM	1412	CA	AASP	A	179	-1.286	-63.204	273.432	0.50	9.72		C
15		ANISOU	1412	CA	AASP	A	179	1118	1572	1001	-270	62	99	C
		ATOM	1413	CA	BASP	A	179	-1.271	-63.257	273.433	0.50	11.69		C
		ANISOU	1413	CA	BASP	A	179	1303	2047	1090	-419	124	109	C
		ATOM	1414	CB	AASP	A	179	-2.048	-62.064	272.731	0.50	10.30		C
		ANISOU	1414	CB	AASP	A	179	1299	1650	964	-8	1	-572	C
20		ATOM	1415	CB	BASP	A	179	-1.926	-62.021	272.861	0.50	15.79		C
		ANISOU	1415	CB	BASP	A	179	1766	2088	2145	-254	-153	-660	C
		ATOM	1416	CG	AASP	A	179	-2.073	-60.719	273.512	0.50	9.69		C
		ANISOU	1416	CG	AASP	A	179	1082	1102	1495	120	104	-226	C
		ATOM	1417	CG	BASP	A	179	-2.950	-61.483	273.819	0.50	25.22		C
25		ANISOU	1417	CG	BASP	A	179	3278	3533	2770	154	601	-455	C
		ATOM	1418	OD1AASP	A	179	-1.919	-60.701	274.737	0.50	8.54		O	
		ANISOU	1418	OD1AASP	A	179	1471	458	1315	-79	324	-463	O	
		ATOM	1419	OD1BASP	A	179	-3.424	-62.333	274.592	0.50	24.56		O	
		ANISOU	1419	OD1BASP	A	179	1468	7341	520	264	568	36	O	
30		ATOM	1420	OD2AASP	A	179	-2.308	-59.695	272.751	0.50	13.57		O	
		ANISOU	1420	OD2AASP	A	179	1934	1276	1946	-152	60	-512	O	
		ATOM	1421	OD2BASP	A	179	-3.338	-60.334	273.733	0.50	28.46		O	
		ANISOU	1421	OD2BASP	A	179	4366	3605	2840	439	691	-2783	O	
		ATOM	1422	C	AASP	A	179	-2.069	-64.093	274.476	0.50	12.02		C
35		ANISOU	1422	C	AASP	A	179	1294	2229	1045	-392	-34	449	C
		ATOM	1423	C	BASP	A	179	-2.158	-63.904	274.531	0.50	12.15		C

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	ANISOU	1423	C	BASP	A	179	1689	1908	1019	-881	-159	304	C
	ATOM	1424	O	AASP	A	179	-2.951	-64.932	274.106	0.50	18.37		O
	ANISOU	1424	O	AASP	A	179	2128	3459	1392	-773	-118	-455	O
	ATOM	1425	O	BASP	A	179	-3.320	-64.209	274.299	0.50	23.03		O
5	ANISOU	1425	O	BASP	A	179	1317	6340	1093	-1421	-316	891	O
	ATOM	1426	N	VAL	A	180	-1.596	-64.096	275.722	1.00	8.36		N
	ANISOU	1426	N	VAL	A	180	1174	1041	959	-13	-113	-135	N
	ATOM	1427	CA	VAL	A	180	-2.253	-64.771	276.823	1.00	9.25		C
	ANISOU	1427	CA	VAL	A	180	1005	1368	1140	-393	49	-73	C
10	ATOM	1428	CB	VAL	A	180	-1.881	-66.236	276.928	1.00	10.13		C
	ANISOU	1428	CB	VAL	A	180	1374	1332	1143	-286	302	-120	C
	ATOM	1429	CG1	VAL	A	180	-2.279	-67.005	275.679	1.00	12.76		C
	ANISOU	1429	CG1	VAL	A	180	1691	1341	1814	-560	450	-536	C
	ATOM	1430	CG2	VAL	A	180	-0.408	-66.398	277.199	1.00	11.43		C
15	ANISOU	1430	CG2	VAL	A	180	1681	1274	1385	274	238	38	C
	ATOM	1431	C	VAL	A	180	-1.872	-64.037	278.108	1.00	10.46		C
	ANISOU	1431	C	VAL	A	180	1428	1494	1051	-428	-3	-118	C
	ATOM	1432	O	VAL	A	180	-1.144	-63.027	278.038	1.00	10.57		O
	ANISOU	1432	O	VAL	A	180	1742	1243	1028	-233	1	118	O
20	ATOM	1433	N	ASP	A	181	-2.459	-64.416	279.234	1.00	7.00		N
	ANISOU	1433	N	ASP	A	181	925	882	851	0	-97	-24	N
	ATOM	1434	CA	ASP	A	181	-2.007	-63.895	280.521	1.00	7.09		C
	ANISOU	1434	CA	ASP	A	181	953	1007	734	74	-96	144	C
	ATOM	1435	CB	ASP	A	181	-2.898	-62.768	280.957	1.00	7.88		C
25	ANISOU	1435	CB	ASP	A	181	763	1178	1053	-78	-140	-86	C
	ATOM	1436	CG	ASP	A	181	-2.226	-61.811	281.875	1.00	6.92		C
	ANISOU	1436	CG	ASP	A	181	1063	621	944	121	-64	-44	C
	ATOM	1437	OD1	ASP	A	181	-1.139	-62.004	282.420	1.00	4.73		O
	ANISOU	1437	OD1	ASP	A	181	815	261	720	-42	-88	-39	O
30	ATOM	1438	OD2	ASP	A	181	-2.821	-60.644	282.010	1.00	9.39		O
	ANISOU	1438	OD2	ASP	A	181	1270	752	1545	182	-259	-344	O
	ATOM	1439	C	ASP	A	181	-2.054	-65.061	281.501	1.00	5.87		C
	ANISOU	1439	C	ASP	A	181	940	268	1023	-35	28	14	C
	ATOM	1440	O	ASP	A	181	-2.497	-66.220	281.181	1.00	6.73		O
35	ANISOU	1440	O	ASP	A	181	1145	522	888	-252	-38	-78	O
	ATOM	1441	N	HIS	A	182	-1.428	-64.863	282.681	1.00	5.65		N

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		ANISOU	1441	N	HIS	A	182	984	391	769	-106	-12	75	N
		ATOM	1442	CA	HIS	A	182	-1.183	-65.957	283.643	1.00	6.11		C
		ANISOU	1442	CA	HIS	A	182	1148	352	821	8	89	162	C
		ATOM	1443	CB	HIS	A	182	0.324	-66.282	283.613	1.00	6.60		C
5		ANISOU	1443	CB	HIS	A	182	1013	707	788	-117	0	72	C
		ATOM	1444	CG	HIS	A	182	0.794	-66.924	282.345	1.00	7.41		C
		ANISOU	1444	CG	HIS	A	182	927	931	954	41	87	-4	C
		ATOM	1445	ND1	HIS	A	182	1.075	-66.201	281.199	1.00	8.08		N
		ANISOU	1445	ND1	HIS	A	182	1151	980	939	-135	29	-34	N
10		ATOM	1446	CE1	HIS	A	182	1.452	-66.981	280.219	1.00	6.17		C
		ANISOU	1446	CE1	HIS	A	182	1045	495	801	-16	99	358	C
		ATOM	1447	NE2	HIS	A	182	1.423	-68.248	280.686	1.00	6.05		N
		ANISOU	1447	NE2	HIS	A	182	1033	302	962	179	194	115	N
		ATOM	1448	CD2	HIS	A	182	1.011	-68.216	282.010	1.00	7.27		C
15		ANISOU	1448	CD2	HIS	A	182	1201	640	921	-6	186	164	C
		ATOM	1449	C	HIS	A	182	-1.606	-65.634	285.063	1.00	6.85		C
		ANISOU	1449	C	HIS	A	182	1121	653	827	-127	23	111	C
		ATOM	1450	O	HIS	A	182	-1.111	-64.641	285.608	1.00	7.82		O
		ANISOU	1450	O	HIS	A	182	1307	902	760	-252	96	-108	O
20		ATOM	1451	N	LEU	A	183	-2.263	-66.566	285.713	1.00	7.06		N
		ANISOU	1451	N	LEU	A	183	985	875	822	-64	81	288	N
		ATOM	1452	CA	LEU	A	183	-2.483	-66.486	287.152	1.00	5.99		C
		ANISOU	1452	CA	LEU	A	183	1042	552	682	10	-91	-90	C
		ATOM	1453	CB	LEU	A	183	-3.502	-67.605	287.503	1.00	7.05		C
25		ANISOU	1453	CB	LEU	A	183	1242	576	859	-179	-25	-248	C
		ATOM	1454	CG	LEU	A	183	-4.955	-67.274	287.122	1.00	7.63		C
		ANISOU	1454	CG	LEU	A	183	1224	635	1039	-138	2	-113	C
		ATOM	1455	CD1	LEU	A	183	-5.749	-68.519	287.113	1.00	9.17		C
		ANISOU	1455	CD1	LEU	A	183	1079	815	1591	-254	-55	-139	C
30		ATOM	1456	CD2	LEU	A	183	-5.511	-66.259	288.064	1.00	9.81		C
		ANISOU	1456	CD2	LEU	A	183	1040	1342	1344	302	105	-152	C
		ATOM	1457	C	LEU	A	183	-1.174	-66.850	287.870	1.00	7.03		C
		ANISOU	1457	C	LEU	A	183	874	883	912	38	-52	-118	C
		ATOM	1458	O	LEU	A	183	-0.301	-67.504	287.305	1.00	6.84		O
35		ANISOU	1458	O	LEU	A	183	1069	620	909	96	169	126	O
		ATOM	1459	N	APRO	A	184	-1.048	-66.467	289.156	0.50	7.35		N

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	ANISOU	1459	N	APRO	A	184	1143	847	803	51	-5	-11	N
	ATOM	1460	N	BPRO	A	184	-1.049	-66.431	289.140	0.50	7.93		N
	ANISOU	1460	N	BPRO	A	184	1261	953	795	45	-3	-12	N
	ATOM	1461	CA	APRO	A	184	0.044	-66.943	289.963	0.50	6.66		C
5	ANISOU	1461	CA	APRO	A	184	881	767	881	-164	34	-53	C
	ATOM	1462	CA	BPRO	A	184	-0.025	-66.916	290.028	0.50	7.22		C
	ANISOU	1462	CA	BPRO	A	184	960	793	991	-119	19	-50	C
	ATOM	1463	CB	APRO	A	184	-0.037	-66.023	291.172	0.50	6.94		C
	ANISOU	1463	CB	APRO	A	184	1188	636	811	96	29	96	C
10	ATOM	1464	CB	BPRO	A	184	-0.204	-66.023	291.273	0.50	7.72		C
	ANISOU	1464	CB	BPRO	A	184	1307	668	959	11	-49	71	C
	ATOM	1465	CG	APRO	A	184	-1.500	-65.917	291.375	0.50	6.79		C
	ANISOU	1465	CG	APRO	A	184	1084	615	878	-106	-86	-144	C
	ATOM	1466	CG	BPRO	A	184	-1.000	-64.858	290.866	0.50	7.94		C
15	ANISOU	1466	CG	BPRO	A	184	994	1013	1009	53	58	288	C
	ATOM	1467	CD	APRO	A	184	-2.033	-65.744	289.992	0.50	6.86		C
	ANISOU	1467	CD	APRO	A	184	979	639	987	46	-129	68	C
	ATOM	1468	CD	BPRO	A	184	-1.860	-65.384	289.780	0.50	8.92		C
	ANISOU	1468	CD	BPRO	A	184	1240	1041	1107	80	43	3	C
20	ATOM	1469	C	APRO	A	184	-0.130	-68.438	290.300	0.50	6.82		C
	ANISOU	1469	C	APRO	A	184	1026	584	981	-65	-55	-354	C
	ATOM	1470	C	BPRO	A	184	-0.157	-68.435	290.325	0.50	7.15		C
	ANISOU	1470	C	BPRO	A	184	1016	641	1060	-70	-55	-348	C
	ATOM	1471	O	APRO	A	184	-1.242	-68.947	290.407	0.50	8.71		O
25	ANISOU	1471	O	APRO	A	184	928	1208	1173	-118	-139	96	O
	ATOM	1472	O	BPRO	A	184	-1.278	-68.955	290.428	0.50	9.09		O
	ANISOU	1472	O	BPRO	A	184	990	1218	1243	-197	-172	148	O
	ATOM	1473	N	HIS	A	185	1.012	-69.068	290.548	1.00	7.49		N
	ANISOU	1473	N	HIS	A	185	1012	892	939	3	54	185	N
30	ATOM	1474	CA	HIS	A	185	1.030	-70.468	291.001	1.00	7.26		C
	ANISOU	1474	CA	HIS	A	185	1101	687	968	-77	-93	-45	C
	ATOM	1475	CB	HIS	A	185	2.363	-71.148	290.751	1.00	9.38		C
	ANISOU	1475	CB	HIS	A	185	1188	1433	940	66	49	-89	C
	ATOM	1476	CG	HIS	A	185	3.484	-70.552	291.454	1.00	7.32		C
35	ANISOU	1476	CG	HIS	A	185	1196	596	986	-29	54	-31	C
	ATOM	1477	ND1	HIS	A	185	3.608	-70.616	292.848	1.00	9.90		N

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		ANISOU 1477	ND1 HIS A 185	1530	1215	1014	-162	-92	151	N
		ATOM 1478	CE1 HIS A 185	4.677	-69.951	293.220	1.00	10.65		C
		ANISOU 1478	CE1 HIS A 185	1226	1604	1217	-255	-88	214	C
		ATOM 1479	NE2 HIS A 185	5.263	-69.449	292.132	1.00	9.14		N
5		ANISOU 1479	NE2 HIS A 185	1256	1052	1163	-134	-179	144	N
		ATOM 1480	CD2 HIS A 185	4.513	-69.801	291.025	1.00	8.64		C
		ANISOU 1480	CD2 HIS A 185	1257	1062	961	-5	42	193	C
		ATOM 1481	C HIS A 185	0.676	-70.538	292.498	1.00	7.68		C
		ANISOU 1481	C HIS A 185	934	1070	911	-9	5	-82	C
10		ATOM 1482	O HIS A 185	0.546	-69.450	293.139	1.00	9.01		O
		ANISOU 1482	O HIS A 185	1342	977	1104	160	136	97	O
		ATOM 1483	N THR A 186	0.386	-71.771	292.964	1.00	9.29		N
		ANISOU 1483	N THR A 186	1237	1297	993	-148	91	86	N
		ATOM 1484	CA THR A 186	-0.040	-71.947	294.350	1.00	8.07		C
15		ANISOU 1484	CA THR A 186	1333	830	902	-74	96	9	C
		ATOM 1485	CB THR A 186	-1.346	-72.775	294.412	1.00	8.42		C
		ANISOU 1485	CB THR A 186	1054	1065	1078	121	0	223	C
		ATOM 1486	OG1 THR A 186	-1.072	-74.166	294.240	1.00	8.94		O
		ANISOU 1486	OG1 THR A 186	1315	1024	1055	177	66	-25	O
20		ATOM 1487	CG2 THR A 186	-2.384	-72.384	293.412	1.00	8.73		C
		ANISOU 1487	CG2 THR A 186	1123	1120	1075	36	-53	18	C
		ATOM 1488	C THR A 186	0.985	-72.470	295.345	1.00	8.95		C
		ANISOU 1488	C THR A 186	1165	1042	1193	-67	-106	-208	C
		ATOM 1489	O THR A 186	0.602	-73.053	296.376	1.00	10.41		O
25		ANISOU 1489	O THR A 186	1549	1142	1263	-230	94	278	O
		ATOM 1490	N ALEU A 187	2.266	-72.322	295.014	0.50	9.10		N
		ANISOU 1490	N ALEU A 187	1201	1090	1164	-80	-136	138	N
		ATOM 1491	N BLEU A 187	2.259	-72.315	295.012	0.50	9.59		N
		ANISOU 1491	N BLEU A 187	1240	1165	1238	-85	-96	145	N
30		ATOM 1492	CA ALEU A 187	3.362	-72.663	295.960	0.50	9.49		C
		ANISOU 1492	CA ALEU A 187	1301	1085	1218	67	-150	246	C
		ATOM 1493	CA BLEU A 187	3.352	-72.646	295.945	0.50	10.80		C
		ANISOU 1493	CA BLEU A 187	1501	1235	1366	57	-225	268	C
		ATOM 1494	CB ALEU A 187	4.665	-72.977	295.237	0.50	11.29		C
35		ANISOU 1494	CB ALEU A 187	1289	1409	1591	-125	-43	203	C
		ATOM 1495	CB BLEU A 187	4.639	-72.930	295.171	0.50	13.77		C

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		ANISOU	1495	CB	BLEU	A	187	1596	1738	1897	-183	20	293	C
		ATOM	1496	CG	ALEU	A	187	5.784	-73.490	296.173	0.50	11.96		C
		ANISOU	1496	CG	ALEU	A	187	968	1722	1852	-99	52	300	C
		ATOM	1497	CG	BLEU	A	187	5.765	-73.685	295.892	0.50	19.23		C
5		ANISOU	1497	CG	BLEU	A	187	1884	2717	2704	458	-8	450	C
		ATOM	1498	CD1	ALEU	A	187	5.590	-74.859	296.784	0.50	14.43		C
		ANISOU	1498	CD1	ALEU	A	187	2049	1775	1655	4	307	498	C
		ATOM	1499	CD1	BLEU	A	187	6.793	-74.254	294.902	0.50	14.06		C
		ANISOU	1499	CD1	BLEU	A	187	2615	369	2356	280	-206	392	C
10		ATOM	1500	CD2	ALEU	A	187	7.107	-73.524	295.375	0.50	11.56		C
		ANISOU	1500	CD2	ALEU	A	187	1408	2041	943	-244	132	498	C
		ATOM	1501	CD2	BLEU	A	187	6.510	-72.745	296.815	0.50	28.97		C
		ANISOU	1501	CD2	BLEU	A	187	4407	2513	4088	692	-562	-447	C
		ATOM	1502	C	ALEU	A	187	3.574	-71.454	296.846	0.50	10.76		C
15		ANISOU	1502	C	ALEU	A	187	1474	1192	1422	-265	-14	33	C
		ATOM	1503	C	BLEU	A	187	3.500	-71.421	296.833	0.50	11.67		C
		ANISOU	1503	C	BLEU	A	187	1693	1343	1398	-413	-85	101	C
		ATOM	1504	O	ALEU	A	187	4.024	-70.377	296.389	0.50	12.35		O
		ANISOU	1504	O	ALEU	A	187	2126	1475	1088	-443	-150	303	O
20		ATOM	1505	O	BLEU	A	187	3.790	-70.293	296.363	0.50	12.50		O
		ANISOU	1505	O	BLEU	A	187	2196	1436	1115	-684	-16	19	O
		ATOM	1506	N	GLN	A	188	3.242	-71.564	298.125	1.00	12.50		N
		ANISOU	1506	N	GLN	A	188	1957	1416	1375	-335	57	186	N
		ATOM	1507	CA	GLN	A	188	3.246	-70.416	299.025	1.00	13.12		C
25		ANISOU	1507	CA	GLN	A	188	1838	1402	1743	146	7	111	C
		ATOM	1508	CB	GLN	A	188	2.039	-70.535	299.951	1.00	12.42		C
		ANISOU	1508	CB	GLN	A	188	1773	1656	1288	52	25	-62	C
		ATOM	1509	CG	GLN	A	188	0.717	-70.314	299.234	1.00	10.47		C
		ANISOU	1509	CG	GLN	A	188	1580	1173	1225	-251	16	78	C
30		ATOM	1510	CD	GLN	A	188	-0.470	-70.448	300.164	1.00	13.19		C
		ANISOU	1510	CD	GLN	A	188	1624	1828	1559	96	58	165	C
		ATOM	1511	OE1	GLN	A	188	-1.016	-71.607	300.417	1.00	15.37		O
		ANISOU	1511	OE1	GLN	A	188	2305	2013	1519	-253	-170	86	O
		ATOM	1512	NE2	GLN	A	188	-0.855	-69.384	300.655	1.00	13.81		N
35		ANISOU	1512	NE2	GLN	A	188	1852	1579	1815	-260	125	-51	N
		ATOM	1513	C	GLN	A	188	4.494	-70.436	299.899	1.00	12.89		C

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	ANISOU	1513	C	GLN	A	188	1742	1510	1644	63	-59	-25	C
	ATOM	1514	O	GLN	A	188	4.920	-71.559	300.299	1.00	14.83		O
	ANISOU	1514	O	GLN	A	188	2123	1539	1972	132	-328	292	O
	ATOM	1515	N	PRO	A	189	5.000	-69.254	300.261	1.00	15.30		N
5	ANISOU	1515	N	PRO	A	189	1931	2171	1708	-299	-411	143	N
	ATOM	1516	CA	PRO	A	189	6.179	-69.244	301.129	1.00	16.06		C
	ANISOU	1516	CA	PRO	A	189	1956	2287	1859	-173	-490	-345	C
	ATOM	1517	CB	PRO	A	189	6.656	-67.789	301.054	1.00	23.81		C
	ANISOU	1517	CB	PRO	A	189	3499	2679	2867	-751	-474	240	C
10	ATOM	1518	CG	PRO	A	189	5.433	-66.991	300.709	1.00	24.00		C
	ANISOU	1518	CG	PRO	A	189	3203	2145	3769	-782	-158	-253	C
	ATOM	1519	CD	PRO	A	189	4.567	-67.921	299.818	1.00	17.67		C
	ANISOU	1519	CD	PRO	A	189	2050	2211	2450	-569	-230	306	C
	ATOM	1520	C	PRO	A	189	5.807	-69.700	302.528	1.00	16.66		C
15	ANISOU	1520	C	PRO	A	189	2062	2320	1946	-361	-449	-284	C
	ATOM	1521	O	PRO	A	189	4.671	-69.516	302.993	1.00	17.39		O
	ANISOU	1521	O	PRO	A	189	2117	2343	2144	153	-555	303	O
	ATOM	1522	N	GLY	A	190	6.831	-70.156	303.266	1.00	15.28		N
	ANISOU	1522	N	GLY	A	190	2255	1231	2318	585	-220	-29	N
20	ATOM	1523	CA	GLY	A	190	6.641	-70.319	304.702	1.00	18.13		C
	ANISOU	1523	CA	GLY	A	190	2554	2084	2250	-240	33	254	C
	ATOM	1524	C	GLY	A	190	5.902	-71.609	305.081	1.00	16.83		C
	ANISOU	1524	C	GLY	A	190	2576	1913	1903	-87	205	502	C
	ATOM	1525	O	GLY	A	190	5.466	-71.771	306.199	1.00	20.76		O
25	ANISOU	1525	O	GLY	A	190	3502	2100	2285	630	157	236	O
	ATOM	1526	N	AMET	A	191	5.775	-72.507	304.115	0.50	18.40		N
	ANISOU	1526	N	AMET	A	191	2403	1938	2647	128	166	-3	N
	ATOM	1527	N	BMET	A	191	5.730	-72.498	304.122	0.50	18.41		N
	ANISOU	1527	N	BMET	A	191	2348	1947	2701	205	268	-118	N
30	ATOM	1528	CA	AMET	A	191	4.999	-73.732	304.207	0.50	22.21		C
	ANISOU	1528	CA	AMET	A	191	2778	2258	3403	-39	190	41	C
	ATOM	1529	CA	BMET	A	191	4.960	-73.709	304.295	0.50	23.41		C
	ANISOU	1529	CA	BMET	A	191	3195	2275	3424	-91	116	-99	C
	ATOM	1530	CB	AMET	A	191	3.877	-73.670	303.201	0.50	24.86		C
35	ANISOU	1530	CB	AMET	A	191	3594	2379	3472	-529	97	881	C
	ATOM	1531	CB	BMET	A	191	3.670	-73.587	303.482	0.50	29.47		C

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		ANISOU	1531	CB	BMET	A	191	3201	3130	4864	-386	-93	416	C
		ATOM	1532	CG	AMET	A	191	2.950	-72.602	303.545	0.50	26.78		C
		ANISOU	1532	CG	AMET	A	191	2906	3762	3504	-173	-1159	768	C
		ATOM	1533	CG	BMET	A	191	2.870	-72.341	303.779	0.50	33.69		C
5		ANISOU	1533	CG	BMET	A	191	4073	4510	4218	-109	-1373	-132	C
		ATOM	1534	SD	AMET	A	191	1.404	-73.091	302.886	0.50	20.68		S
		ANISOU	1534	SD	AMET	A	191	2595	3044	2216	-414	-302	741	S
		ATOM	1535	SD	BMET	A	191	1.367	-72.621	302.882	0.50	29.55		S
		ANISOU	1535	SD	BMET	A	191	3300	5055	2872	-1439	-440	1768	S
10		ATOM	1536	CE	AMET	A	191	0.609	-71.581	303.468	0.50	18.98		C
		ANISOU	1536	CE	AMET	A	191	2732	2597	1882	-297	-386	475	C
		ATOM	1537	CE	BMET	A	191	1.193	-74.334	303.403	0.50	35.34		C
		ANISOU	1537	CE	BMET	A	191	3892	4173	5362	150	-423	401	C
		ATOM	1538	C	AMET	A	191	5.730	-74.985	303.839	0.50	18.27		C
15		ANISOU	1538	C	AMET	A	191	2231	1932	2776	-195	-233	21	C
		ATOM	1539	C	BMET	A	191	5.710	-74.966	303.850	0.50	18.75		C
		ANISOU	1539	C	BMET	A	191	2231	2004	2889	-223	-260	8	C
		ATOM	1540	O	AMET	A	191	5.108	-75.954	303.389	0.50	16.88		O
		ANISOU	1540	O	AMET	A	191	1714	1877	2822	-104	-143	-50	O
20		ATOM	1541	O	BMET	A	191	5.080	-75.929	303.393	0.50	17.04		O
		ANISOU	1541	O	BMET	A	191	1745	1872	2854	-71	-139	-76	O
		ATOM	1542	N	ALA	A	192	7.027	-74.997	304.021	1.00	15.96		N
		ANISOU	1542	N	ALA	A	192	2066	1308	2689	158	311	236	N
		ATOM	1543	CA	ALA	A	192	7.781	-76.098	303.560	1.00	12.52		C
25		ANISOU	1543	CA	ALA	A	192	1828	1417	1510	0	-72	161	C
		ATOM	1544	CB	ALA	A	192	9.236	-75.871	303.726	1.00	13.98		C
		ANISOU	1544	CB	ALA	A	192	1871	1405	2035	-226	380	77	C
		ATOM	1545	C	ALA	A	192	7.334	-77.320	304.363	1.00	13.13		C
		ANISOU	1545	C	ALA	A	192	1824	1339	1825	1	-2	132	C
30		ATOM	1546	O	ALA	A	192	6.991	-77.258	305.541	1.00	16.35		O
		ANISOU	1546	O	ALA	A	192	2411	2205	1596	-170	183	109	O
		ATOM	1547	N	PHE	A	193	7.380	-78.443	303.666	1.00	10.83		N
		ANISOU	1547	N	PHE	A	193	1639	1267	1207	163	-98	68	N
		ATOM	1548	CA	PHE	A	193	7.139	-79.816	304.209	1.00	10.17		C
35		ANISOU	1548	CA	PHE	A	193	1329	1272	1262	-129	-190	126	C
		ATOM	1549	CB	PHE	A	193	8.117	-80.119	305.352	1.00	11.18		C

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		ANISOU	1549	CB	PHE	A	193	1674	1403	1169	218	-174	260	C
		ATOM	1550	CG	PHE	A	193	9.563	-79.926	304.944	1.00	11.10		C
		ANISOU	1550	CG	PHE	A	193	1640	1343	1232	131	-197	390	C
		ATOM	1551	CD1	PHE	A	193	10.192	-80.833	304.086	1.00	12.10		C
5		ANISOU	1551	CD1	PHE	A	193	1529	1687	1381	-36	-320	210	C
		ATOM	1552	CE1	PHE	A	193	11.496	-80.585	303.652	1.00	12.45		C
		ANISOU	1552	CE1	PHE	A	193	1632	1863	1234	10	-128	142	C
		ATOM	1553	CZ	PHE	A	193	12.193	-79.451	304.141	1.00	13.38		C
		ANISOU	1553	CZ	PHE	A	193	2006	1421	1657	-96	31	491	C
10		ATOM	1554	CE2	PHE	A	193	11.577	-78.625	305.044	1.00	15.31		C
		ANISOU	1554	CE2	PHE	A	193	2035	1186	2594	-97	-155	167	C
		ATOM	1555	CD2	PHE	A	193	10.245	-78.811	305.381	1.00	15.83		C
		ANISOU	1555	CD2	PHE	A	193	2014	1990	2009	-274	-227	16	C
		ATOM	1556	C	PHE	A	193	5.673	-79.967	304.673	1.00	12.04		C
15		ANISOU	1556	C	PHE	A	193	1283	1897	1393	21	-217	182	C
		ATOM	1557	O	PHE	A	193	5.370	-80.776	305.580	1.00	14.80		O
		ANISOU	1557	O	PHE	A	193	1835	1979	1808	93	129	630	O
		ATOM	1558	N	THR	A	194	4.760	-79.290	303.983	1.00	11.00		N
		ANISOU	1558	N	THR	A	194	1421	1328	1428	136	32	273	N
20		ATOM	1559	CA	THR	A	194	3.349	-79.522	304.149	1.00	9.82		C
		ANISOU	1559	CA	THR	A	194	1560	1151	1019	-2	-152	173	C
		ATOM	1560	CB	THR	A	194	2.549	-78.331	303.560	1.00	11.16		C
		ANISOU	1560	CB	THR	A	194	1507	1480	1253	176	59	146	C
		ATOM	1561	OG1	THR	A	194	2.825	-77.129	304.210	1.00	15.05		O
25		ANISOU	1561	OG1	THR	A	194	1889	1850	1977	109	-137	182	O
		ATOM	1562	CG2	THR	A	194	1.078	-78.594	303.596	1.00	14.09		C
		ANISOU	1562	CG2	THR	A	194	1614	2041	1698	-157	94	-53	C
		ATOM	1563	C	THR	A	194	2.989	-80.808	303.482	1.00	9.15		C
		ANISOU	1563	C	THR	A	194	1315	985	1174	306	28	45	C
30		ATOM	1564	O	THR	A	194	3.454	-81.125	302.359	1.00	12.08		O
		ANISOU	1564	O	THR	A	194	1626	1807	1157	-30	18	320	O
		ATOM	1565	N	LYS	A	195	2.183	-81.628	304.120	1.00	12.31		N
		ANISOU	1565	N	LYS	A	195	1586	1673	1415	-229	181	189	N
		ATOM	1566	CA	LYS	A	195	1.645	-82.891	303.605	1.00	13.14		C
35		ANISOU	1566	CA	LYS	A	195	1716	1410	1866	244	-84	374	C
		ATOM	1567	CB	LYS	A	195	1.465	-83.932	304.717	1.00	15.80		C

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		ANISOU	1567	CB	LYS	A	195	2049	2258	1695	38	89	602	C
		ATOM	1568	CG	LYS	A	195	2.824	-84.437	305.263	1.00	14.33		C
		ANISOU	1568	CG	LYS	A	195	1895	1773	1775	21	126	196	C
		ATOM	1569	CD	LYS	A	195	2.707	-85.324	306.503	1.00	21.04		C
5		ANISOU	1569	CD	LYS	A	195	3487	3025	1482	-85	71	374	C
		ATOM	1570	CE	LYS	A	195	4.095	-85.793	306.978	1.00	27.67		C
		ANISOU	1570	CE	LYS	A	195	3161	4559	2794	320	309	730	C
		ATOM	1571	NZ	LYS	A	195	3.946	-87.076	307.811	1.00	40.84		N
		ANISOU	1571	NZ	LYS	A	195	4624	6840	4052	-363	465	1932	N
10		ATOM	1572	C	LYS	A	195	0.312	-82.658	302.927	1.00	13.18		C
		ANISOU	1572	C	LYS	A	195	1708	2029	1269	54	-13	222	C
		ATOM	1573	O	LYS	A	195	-0.592	-82.068	303.521	1.00	13.92		O
		ANISOU	1573	O	LYS	A	195	1986	1881	1421	235	-97	-220	O
		ATOM	1574	N	GLY	A	196	0.193	-83.021	301.653	1.00	10.58		N
15		ANISOU	1574	N	GLY	A	196	1458	1140	1419	121	51	38	N
		ATOM	1575	CA	GLY	A	196	-1.024	-82.753	300.922	1.00	10.29		C
		ANISOU	1575	CA	GLY	A	196	1440	1083	1387	-291	325	162	C
		ATOM	1576	C	GLY	A	196	-1.196	-81.254	300.697	1.00	9.77		C
		ANISOU	1576	C	GLY	A	196	1369	1134	1206	-37	55	-6	C
20		ATOM	1577	O	GLY	A	196	-0.277	-80.450	300.494	1.00	11.16		O
		ANISOU	1577	O	GLY	A	196	1503	1468	1269	97	109	203	O
		ATOM	1578	N	ALA	A	197	-2.481	-80.861	300.703	1.00	10.05		N
		ANISOU	1578	N	ALA	A	197	1430	1086	1300	-74	93	424	N
		ATOM	1579	CA	ALA	A	197	-2.852	-79.448	300.441	1.00	8.73		C
25		ANISOU	1579	CA	ALA	A	197	1196	761	1357	-322	265	135	C
		ATOM	1580	CB	ALA	A	197	-4.276	-79.429	299.903	1.00	10.81		C
		ANISOU	1580	CB	ALA	A	197	1641	1234	1230	149	173	144	C
		ATOM	1581	C	ALA	A	197	-2.783	-78.592	301.675	1.00	9.94		C
		ANISOU	1581	C	ALA	A	197	1204	1398	1171	-92	-126	7	C
30		ATOM	1582	O	ALA	A	197	-3.109	-79.035	302.789	1.00	13.93		O
		ANISOU	1582	O	ALA	A	197	2008	2031	1252	-204	287	156	O
		ATOM	1583	N	ALA	A	198	-2.334	-77.386	301.471	1.00	12.71		N
		ANISOU	1583	N	ALA	A	198	1779	1702	1349	-28	295	-20	N
		ATOM	1584	CA	ALA	A	198	-2.294	-76.331	302.545	1.00	11.20		C
35		ANISOU	1584	CA	ALA	A	198	1618	1156	1481	-13	93	-7	C
		ATOM	1585	CB	ALA	A	198	-1.559	-75.107	302.056	1.00	12.97		C

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		ANISOU	1585	CB	ALA	A	198	1931	1527	1470	-89	40	17	C
		ATOM	1586	C	ALA	A	198	-3.688	-75.972	302.955	1.00	12.60		C
		ANISOU	1586	C	ALA	A	198	1547	1797	1443	114	-88	-158	C
		ATOM	1587	O	ALA	A	198	-4.616	-75.868	302.146	1.00	12.40		O
5		ANISOU	1587	O	ALA	A	198	1613	1876	1220	71	62	148	O
		ATOM	1588	N	GLU	A	199	-3.840	-75.647	304.243	1.00	12.11		N
		ANISOU	1588	N	GLU	A	199	1777	1699	1126	187	30	307	N
		ATOM	1589	CA	GLU	A	199	-5.139	-75.298	304.739	1.00	12.42		C
		ANISOU	1589	CA	GLU	A	199	1823	1562	1334	282	-41	-192	C
10		ATOM	1590	CB	GLU	A	199	-5.144	-75.393	306.287	1.00	15.44		C
		ANISOU	1590	CB	GLU	A	199	2466	2180	1217	197	505	-149	C
		ATOM	1591	CG	GLU	A	199	-4.991	-76.828	306.720	1.00	23.13		C
		ANISOU	1591	CG	GLU	A	199	3999	2417	2369	178	615	74	C
		ATOM	1592	CD	GLU	A	199	-6.239	-77.652	306.503	1.00	28.38		C
15		ANISOU	1592	CD	GLU	A	199	3667	3821	3294	-22	1143	495	C
		ATOM	1593	OE1	GLU	A	199	-7.349	-77.096	306.482	1.00	35.30		O
		ANISOU	1593	OE1	GLU	A	199	3954	5492	3964	440	906	1547	O
		ATOM	1594	OE2	GLU	A	199	-6.107	-78.902	306.309	1.00	42.21		O
		ANISOU	1594	OE2	GLU	A	199	7065	4087	4885	51	1634	632	O
20		ATOM	1595	C	GLU	A	199	-5.518	-73.851	304.381	1.00	11.08		C
		ANISOU	1595	C	GLU	A	199	1659	1541	1009	44	-10	-78	C
		ATOM	1596	O	GLU	A	199	-6.721	-73.575	304.250	1.00	14.27		O
		ANISOU	1596	O	GLU	A	199	1932	1755	1732	137	32	28	O
		ATOM	1597	N	THR	A	200	-4.532	-72.987	304.236	1.00	11.34		N
25		ANISOU	1597	N	THR	A	200	1675	1564	1069	91	-147	-144	N
		ATOM	1598	CA	THR	A	200	-4.742	-71.523	304.055	1.00	12.79		C
		ANISOU	1598	CA	THR	A	200	1745	1640	1475	-180	-15	302	C
		ATOM	1599	CB	THR	A	200	-4.025	-70.677	305.105	1.00	15.36		C
		ANISOU	1599	CB	THR	A	200	2394	1813	1628	239	-51	14	C
30		ATOM	1600	OG1	THR	A	200	-2.626	-70.883	305.020	1.00	17.55		O
		ANISOU	1600	OG1	THR	A	200	2446	2566	1655	-52	-339	-497	O
		ATOM	1601	CG2	THR	A	200	-4.549	-71.018	306.518	1.00	19.49		C
		ANISOU	1601	CG2	THR	A	200	2922	2878	1605	42	317	-92	C
		ATOM	1602	C	THR	A	200	-4.310	-71.066	302.651	1.00	12.06		C
35		ANISOU	1602	C	THR	A	200	1790	1410	1379	116	-20	-105	C
		ATOM	1603	O	THR	A	200	-3.406	-71.649	302.058	1.00	12.24		O

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		ANISOU	1603	O	THR	A	200	1746	1630	1271	292	53	105	O
		ATOM	1604	N	GLY	A	201	-4.826	-69.917	302.237	1.00	12.97		N
		ANISOU	1604	N	GLY	A	201	1832	1877	1215	116	113	50	N
		ATOM	1605	CA	GLY	A	201	-4.381	-69.216	301.050	1.00	12.69		C
5		ANISOU	1605	CA	GLY	A	201	1948	1360	1513	11	-223	121	C
		ATOM	1606	C	GLY	A	201	-5.169	-69.485	299.784	1.00	11.47		C
		ANISOU	1606	C	GLY	A	201	1866	1106	1386	-190	9	-37	C
		ATOM	1607	O	GLY	A	201	-4.945	-68.806	298.767	1.00	12.45		O
		ANISOU	1607	O	GLY	A	201	1803	1575	1351	-7	-64	-180	O
10		ATOM	1608	N	GLY	A	202	-6.057	-70.479	299.803	1.00	11.12		N
		ANISOU	1608	N	GLY	A	202	1635	1330	1258	-22	-129	259	N
		ATOM	1609	CA	GLY	A	202	-6.698	-70.869	298.587	1.00	10.13		C
		ANISOU	1609	CA	GLY	A	202	1772	689	1388	-82	41	-200	C
		ATOM	1610	C	GLY	A	202	-7.599	-69.837	297.960	1.00	12.14		C
15		ANISOU	1610	C	GLY	A	202	1604	1848	1158	199	64	110	C
		ATOM	1611	O	GLY	A	202	-7.526	-69.594	296.740	1.00	10.17		O
		ANISOU	1611	O	GLY	A	202	1538	1194	1130	-73	-84	24	O
		ATOM	1612	N	VAL	A	203	-8.532	-69.328	298.728	1.00	11.02		N
		ANISOU	1612	N	VAL	A	203	1634	1004	1550	281	170	209	N
20		ATOM	1613	CA	VAL	A	203	-9.406	-68.294	298.200	1.00	10.97		C
		ANISOU	1613	CA	VAL	A	203	1602	1373	1192	365	71	2	C
		ATOM	1614	CB	VAL	A	203	-10.527	-67.952	299.223	1.00	12.58		C
		ANISOU	1614	CB	VAL	A	203	1890	1557	1332	176	235	222	C
		ATOM	1615	CG1	VAL	A	203	-11.251	-66.682	298.840	1.00	14.22		C
25		ANISOU	1615	CG1	VAL	A	203	2193	1622	1586	246	362	-54	C
		ATOM	1616	CG2	VAL	A	203	-11.434	-69.181	299.449	1.00	16.52		C
		ANISOU	1616	CG2	VAL	A	203	2432	1947	1899	-141	346	171	C
		ATOM	1617	C	VAL	A	203	-8.656	-67.069	297.692	1.00	13.03		C
		ANISOU	1617	C	VAL	A	203	1835	1842	1272	-59	-218	-83	C
30		ATOM	1618	O	VAL	A	203	-8.983	-66.556	296.610	1.00	10.78		O
		ANISOU	1618	O	VAL	A	203	1631	1219	1245	95	-19	-96	O
		ATOM	1619	N	AGLU	A	204	-7.666	-66.564	298.424	0.50	11.74		N
		ANISOU	1619	N	AGLU	A	204	1561	1547	1352	-85	-124	96	N
		ATOM	1620	N	BGLU	A	204	-7.686	-66.550	298.430	0.50	12.25		N
35		ANISOU	1620	N	BGLU	A	204	1631	1596	1427	-95	-194	85	N
		ATOM	1621	CA	AGLU	A	204	-6.890	-65.412	298.034	0.50	11.52		C

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		ANISOU	1621	CA	AGLU	A	204	1507	1302	1566	51	-11	-187	C
		ATOM	1622	CA	BGLU	A	204	-6.924	-65.409	298.011	0.50	12.19		C
		ANISOU	1622	CA	BGLU	A	204	1586	1382	1662	62	15	-184	C
		ATOM	1623	CB	AGLU	A	204	-5.923	-65.045	299.164	0.50	15.98		C
5		ANISOU	1623	CB	AGLU	A	204	2080	2223	1766	-14	-302	-197	C
		ATOM	1624	CB	BGLU	A	204	-5.980	-65.009	299.130	0.50	18.00		C
		ANISOU	1624	CB	BGLU	A	204	2353	2402	2083	-19	-452	-252	C
		ATOM	1625	CG	AGLU	A	204	-5.009	-63.870	298.845	0.50	17.66		C
		ANISOU	1625	CG	AGLU	A	204	2781	1970	1956	-145	-336	169	C
10		ATOM	1626	CG	BGLU	A	204	-6.714	-64.811	300.447	0.50	25.04		C
		ANISOU	1626	CG	BGLU	A	204	3838	2703	2971	327	599	-532	C
		ATOM	1627	CD	AGLU	A	204	-4.086	-63.411	299.990	0.50	22.40		C
		ANISOU	1627	CD	AGLU	A	204	2680	2981	2848	-299	-751	-24	C
		ATOM	1628	CD	BGLU	A	204	-5.811	-64.560	301.671	0.50	47.52		C
15		ANISOU	1628	CD	BGLU	A	204	5115	7490	5451	1391	-861	-1146	C
		ATOM	1629	OE1AGLU	A	204	-3.546	-64.235	300.781	0.50	23.22			O
		ANISOU	1629	OE1AGLU	A	204	3234	2927	2661	-200	-212	-458		O
		ATOM	1630	OE1BGLU	A	204	-4.780	-65.262	301.890	0.50	36.81			O
		ANISOU	1630	OE1BGLU	A	204	2793	7439	3753	1129	-2860	-2637		O
20		ATOM	1631	OE2AGLU	A	204	-3.821	-62.200	300.025	0.50	30.73			O
		ANISOU	1631	OE2AGLU	A	204	4026	3699	3950	-1182	-1492	-425		O
		ATOM	1632	OE2BGLU	A	204	-6.169	-63.657	302.464	0.50	52.09			O
		ANISOU	1632	OE2BGLU	A	204	7924	6004	5860	3425	1898	-826		O
		ATOM	1633	C	AGLU	A	204	-6.124	-65.663	296.706	0.50	11.99		C
25		ANISOU	1633	C	AGLU	A	204	1604	1623	1327	274	-161	-42	C
		ATOM	1634	C	BGLU	A	204	-6.162	-65.674	296.689	0.50	12.33		C
		ANISOU	1634	C	BGLU	A	204	1609	1669	1404	272	-143	-13	C
		ATOM	1635	O	AGLU	A	204	-6.090	-64.829	295.807	0.50	11.52		O
		ANISOU	1635	O	AGLU	A	204	1744	1074	1559	-78	70	-297	O
30		ATOM	1636	O	BGLU	A	204	-6.182	-64.855	295.774	0.50	11.72		O
		ANISOU	1636	O	BGLU	A	204	1790	1026	1635	-22	41	-250	O
		ATOM	1637	N	LEU	A	205	-5.535	-66.845	296.561	1.00	10.66		N
		ANISOU	1637	N	LEU	A	205	1675	1147	1228	-118	161	-129	N
		ATOM	1638	CA	LEU	A	205	-4.828	-67.168	295.336	1.00	9.71		C
35		ANISOU	1638	CA	LEU	A	205	1308	1101	1278	144	-103	120	C
		ATOM	1639	CB	LEU	A	205	-4.015	-68.461	295.481	1.00	8.63		C

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		ANISOU	1639	CB	LEU	A	205	1307	859	1113	128	30	-220	C
		ATOM	1640	CG	LEU	A	205	-2.629	-68.206	296.191	1.00	11.13		C
		ANISOU	1640	CG	LEU	A	205	1475	1566	1187	4	-100	-124	C
		ATOM	1641	CD1	LEU	A	205	-2.139	-69.556	296.748	1.00	14.06		C
5		ANISOU	1641	CD1	LEU	A	205	1977	1766	1597	-106	-407	-76	C
		ATOM	1642	CD2	LEU	A	205	-1.629	-67.570	295.224	1.00	12.71		C
		ANISOU	1642	CD2	LEU	A	205	1698	1306	1825	93	-57	187	C
		ATOM	1643	C	LEU	A	205	-5.773	-67.314	294.145	1.00	9.96		C
		ANISOU	1643	C	LEU	A	205	1100	1405	1278	165	-14	-166	C
10		ATOM	1644	O	LEU	A	205	-5.418	-66.892	293.009	1.00	11.24		O
		ANISOU	1644	O	LEU	A	205	1516	1316	1437	-39	-1	222	O
		ATOM	1645	N	ALA	A	206	-6.949	-67.849	294.345	1.00	8.78		N
		ANISOU	1645	N	ALA	A	206	1225	953	1156	97	36	106	N
		ATOM	1646	CA	ALA	A	206	-7.961	-67.953	293.281	1.00	9.16		C
15		ANISOU	1646	CA	ALA	A	206	1474	1003	1002	61	-26	-60	C
		ATOM	1647	CB	ALA	A	206	-9.127	-68.831	293.689	1.00	8.62		C
		ANISOU	1647	CB	ALA	A	206	1302	787	1184	48	-33	-181	C
		ATOM	1648	C	ALA	A	206	-8.460	-66.522	292.947	1.00	9.31		C
		ANISOU	1648	C	ALA	A	206	1175	1290	1072	-17	-36	-169	C
20		ATOM	1649	O	ALA	A	206	-8.794	-66.225	291.765	1.00	8.07		O
		ANISOU	1649	O	ALA	A	206	1275	818	973	28	-43	-69	O
		ATOM	1650	N	ASN	A	207	-8.661	-65.666	293.948	1.00	9.23		N
		ANISOU	1650	N	ASN	A	207	1400	855	1249	187	143	-117	N
		ATOM	1651	CA	ASN	A	207	-9.120	-64.299	293.758	1.00	8.41		C
25		ANISOU	1651	CA	ASN	A	207	1194	907	1090	-9	-9	205	C
		ATOM	1652	CB	ASN	A	207	-9.415	-63.620	295.081	1.00	9.91		C
		ANISOU	1652	CB	ASN	A	207	1529	1304	931	-18	57	279	C
		ATOM	1653	CG	ASN	A	207	-10.773	-63.993	295.665	1.00	11.32		C
		ANISOU	1653	CG	ASN	A	207	1399	1470	1431	-101	8	-25	C
30		ATOM	1654	OD1	ASN	A	207	-11.613	-64.560	295.002	1.00	11.15		O
		ANISOU	1654	OD1	ASN	A	207	1364	1464	1408	-226	244	-253	O
		ATOM	1655	ND2	ASN	A	207	-10.931	-63.697	296.960	1.00	12.81		N
		ANISOU	1655	ND2	ASN	A	207	2051	1288	1528	265	302	-444	N
		ATOM	1656	C	ASN	A	207	-8.226	-63.479	292.867	1.00	7.57		C
35		ANISOU	1656	C	ASN	A	207	1213	747	916	23	-157	-16	C
		ATOM	1657	O	ASN	A	207	-8.619	-62.369	292.384	1.00	8.29		O

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		ANISOU	1657	O	ASN	A	207	1337	809	1001	153	127	-4	O
		ATOM	1658	N	GLU	A	208	-7.007	-63.880	292.642	1.00	8.41		N
		ANISOU	1658	N	GLU	A	208	1032	994	1168	-98	104	91	N
		ATOM	1659	CA	GLU	A	208	-6.190	-63.223	291.636	1.00	7.69		C
5		ANISOU	1659	CA	GLU	A	208	1029	834	1059	-42	-92	-2	C
		ATOM	1660	CB	GLU	A	208	-4.796	-63.904	291.592	1.00	9.29		C
		ANISOU	1660	CB	GLU	A	208	1065	1116	1345	-107	145	95	C
		ATOM	1661	CG	GLU	A	208	-3.980	-63.641	292.857	1.00	10.29		C
		ANISOU	1661	CG	GLU	A	208	1145	1556	1209	171	17	136	C
10		ATOM	1662	CD	GLU	A	208	-3.436	-62.253	292.924	1.00	13.68		C
		ANISOU	1662	CD	GLU	A	208	1963	1802	1430	-390	369	325	C
		ATOM	1663	OE1	GLU	A	208	-3.145	-61.624	291.915	1.00	12.36		O
		ANISOU	1663	OE1	GLU	A	208	1734	1356	1605	-267	180	-9	O
		ATOM	1664	OE2	GLU	A	208	-3.522	-61.641	294.004	1.00	26.78		O
15		ANISOU	1664	OE2	GLU	A	208	4523	3542	2108	-1200	-383	-444	O
		ATOM	1665	C	GLU	A	208	-6.879	-63.235	290.290	1.00	7.33		C
		ANISOU	1665	C	GLU	A	208	1308	464	1012	40	24	-84	C
		ATOM	1666	O	GLU	A	208	-6.624	-62.280	289.442	1.00	8.50		O
		ANISOU	1666	O	GLU	A	208	1245	902	1081	16	-8	31	O
20		ATOM	1667	N	LEU	A	209	-7.750	-64.156	289.976	1.00	7.83		N
		ANISOU	1667	N	LEU	A	209	1095	876	1001	20	-63	32	N
		ATOM	1668	CA	LEU	A	209	-8.502	-64.123	288.761	1.00	7.28		C
		ANISOU	1668	CA	LEU	A	209	1064	671	1030	85	200	-117	C
		ATOM	1669	CB	LEU	A	209	-9.331	-65.405	288.556	1.00	8.40		C
25		ANISOU	1669	CB	LEU	A	209	1309	972	909	-204	45	-95	C
		ATOM	1670	CG	LEU	A	209	-10.115	-65.487	287.266	1.00	6.44		C
		ANISOU	1670	CG	LEU	A	209	1077	271	1097	39	62	-86	C
		ATOM	1671	CD1	LEU	A	209	-9.255	-65.424	286.029	1.00	9.19		C
		ANISOU	1671	CD1	LEU	A	209	1222	1134	1134	-29	50	-208	C
30		ATOM	1672	CD2	LEU	A	209	-10.815	-66.836	287.285	1.00	8.41		C
		ANISOU	1672	CD2	LEU	A	209	1325	590	1279	-262	89	141	C
		ATOM	1673	C	LEU	A	209	-9.326	-62.846	288.655	1.00	7.08		C
		ANISOU	1673	C	LEU	A	209	1065	947	676	70	-127	56	C
		ATOM	1674	O	LEU	A	209	-9.575	-62.323	287.535	1.00	6.36		O
35		ANISOU	1674	O	LEU	A	209	1138	382	895	-71	-14	10	O
		ATOM	1675	N	LEU	A	210	-9.847	-62.312	289.754	1.00	8.10		N

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		ANISOU	1675	N	LEU	A	210	1108	992	977	-8	118	51	N
		ATOM	1676	CA	LEU	A	210	-10.640	-61.112	289.680	1.00	8.94		C
		ANISOU	1676	CA	LEU	A	210	1007	1111	1276	-58	-77	-78	C
		ATOM	1677	CB	LEU	A	210	-11.264	-60.772	291.087	1.00	9.93		C
5		ANISOU	1677	CB	LEU	A	210	1379	962	1431	78	4	-328	C
		ATOM	1678	CG	LEU	A	210	-12.290	-61.820	291.580	1.00	13.48		C
		ANISOU	1678	CG	LEU	A	210	1759	1331	2032	89	267	34	C
		ATOM	1679	CD1	LEU	A	210	-12.600	-61.637	293.047	1.00	14.77		C
		ANISOU	1679	CD1	LEU	A	210	2094	1657	1858	319	415	322	C
10		ATOM	1680	CD2	LEU	A	210	-13.489	-61.760	290.758	1.00	12.83		C
		ANISOU	1680	CD2	LEU	A	210	1764	1326	1784	-255	414	-355	C
		ATOM	1681	C	LEU	A	210	-9.802	-59.938	289.247	1.00	6.84		C
		ANISOU	1681	C	LEU	A	210	1069	650	880	207	-165	-119	C
		ATOM	1682	O	LEU	A	210	-10.334	-59.000	288.599	1.00	7.74		O
15		ANISOU	1682	O	LEU	A	210	1129	802	1008	165	-142	66	O
		ATOM	1683	N	ALYS	A	211	-8.512	-59.897	289.530	0.50	6.47		N
		ANISOU	1683	N	ALYS	A	211	1070	496	890	60	99	-56	N
		ATOM	1684	N	BLYS	A	211	-8.529	-59.895	289.531	0.50	6.51		N
		ANISOU	1684	N	BLYS	A	211	1069	495	908	76	86	-67	N
20		ATOM	1685	CA	ALYS	A	211	-7.603	-58.849	289.044	0.50	7.66		C
		ANISOU	1685	CA	ALYS	A	211	1234	726	950	-170	-4	-94	C
		ATOM	1686	CA	BLYS	A	211	-7.670	-58.839	289.045	0.50	7.92		C
		ANISOU	1686	CA	BLYS	A	211	1294	743	972	-198	-49	-84	C
		ATOM	1687	CB	ALYS	A	211	-6.249	-58.861	289.788	0.50	7.85		C
25		ANISOU	1687	CB	ALYS	A	211	1319	599	1063	1	13	42	C
		ATOM	1688	CB	BLYS	A	211	-6.337	-58.838	289.788	0.50	8.28		C
		ANISOU	1688	CB	BLYS	A	211	1316	697	1131	7	3	0	C
		ATOM	1689	CG	ALYS	A	211	-6.429	-58.774	291.314	0.50	10.31		C
		ANISOU	1689	CG	ALYS	A	211	1433	1450	1034	115	-43	-36	C
30		ATOM	1690	CG	BLYS	A	211	-6.515	-58.627	291.303	0.50	11.26		C
		ANISOU	1690	CG	BLYS	A	211	1662	1511	1103	93	-6	-54	C
		ATOM	1691	CD	ALYS	A	211	-5.115	-58.755	292.070	0.50	10.67		C
		ANISOU	1691	CD	ALYS	A	211	1491	1532	1028	-113	-180	-34	C
		ATOM	1692	CD	BLYS	A	211	-5.169	-58.575	292.006	0.50	13.48		C
35		ANISOU	1692	CD	BLYS	A	211	1789	1747	1585	-214	-354	-66	C
		ATOM	1693	CE	ALYS	A	211	-5.340	-59.156	293.546	0.50	9.10		C

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		ANISOU 1693	CE	ALYS	A	211	1140	1280	1037	-40	-26	59	C
		ATOM 1694	CE	BLYS	A	211	-5.275	-58.236	293.500	0.50	14.43		C
		ANISOU 1694	CE	BLYS	A	211	2174	1666	1640	-701	-518	20	C
		ATOM 1695	NZ	ALYS	A	211	-4.109	-58.859	294.285	0.50	12.78		N
5		ANISOU 1695	NZ	ALYS	A	211	1721	1571	1561	-90	-475	-164	N
		ATOM 1696	NZ	BLYS	A	211	-6.349	-58.703	294.273	0.50	16.68		N
		ANISOU 1696	NZ	BLYS	A	211	2280	2427	1628	-11	118	-24	N
		ATOM 1697	C	ALYS	A	211	-7.429	-58.932	287.535	0.50	7.71		C
		ANISOU 1697	C	ALYS	A	211	1224	671	1033	-43	193	-122	C
10		ATOM 1698	C	BLYS	A	211	-7.493	-58.934	287.533	0.50	7.73		C
		ANISOU 1698	C	BLYS	A	211	1184	687	1063	11	175	-127	C
		ATOM 1699	O	ALYS	A	211	-7.381	-57.902	286.855	0.50	7.45		O
		ANISOU 1699	O	ALYS	A	211	1054	820	955	-66	47	-89	O
		ATOM 1700	O	BLYS	A	211	-7.495	-57.906	286.850	0.50	7.46		O
15		ANISOU 1700	O	BLYS	A	211	1021	862	951	-54	-25	-112	O
		ATOM 1701	N	LEU	A	212	-7.312	-60.145	287.013	1.00	6.36		N
		ANISOU 1701	N	LEU	A	212	999	611	805	53	-124	-102	N
		ATOM 1702	CA	LEU	A	212	-7.261	-60.305	285.544	1.00	6.74		C
		ANISOU 1702	CA	LEU	A	212	855	821	885	117	44	-31	C
20		ATOM 1703	CB	LEU	A	212	-6.882	-61.783	285.232	1.00	7.28		C
		ANISOU 1703	CB	LEU	A	212	1267	692	804	19	42	-25	C
		ATOM 1704	CG	LEU	A	212	-5.411	-62.047	285.584	1.00	8.20		C
		ANISOU 1704	CG	LEU	A	212	1278	731	1104	34	164	37	C
		ATOM 1705	CD1	LEU	A	212	-5.185	-63.545	285.336	1.00	9.73		C
25		ANISOU 1705	CD1	LEU	A	212	1290	963	1443	329	57	-253	C
		ATOM 1706	CD2	LEU	A	212	-4.472	-61.100	284.894	1.00	19.42		C
		ANISOU 1706	CD2	LEU	A	212	1747	1975	3653	-31	653	874	C
		ATOM 1707	C	LEU	A	212	-8.560	-59.941	284.880	1.00	6.77		C
		ANISOU 1707	C	LEU	A	212	957	812	804	37	-14	117	C
30		ATOM 1708	O	LEU	A	212	-8.568	-59.329	283.784	1.00	7.17		O
		ANISOU 1708	O	LEU	A	212	1050	808	863	-28	51	-24	O
		ATOM 1709	N	ILE	A	213	-9.667	-60.183	285.546	1.00	6.05		N
		ANISOU 1709	N	ILE	A	213	904	498	894	-28	119	-3	N
		ATOM 1710	CA	ILE	A	213	-10.986	-59.825	285.039	1.00	7.15		C
35		ANISOU 1710	CA	ILE	A	213	910	787	1016	-81	98	-31	C
		ATOM 1711	CB	ILE	A	213	-12.119	-60.432	285.857	1.00	7.55		C

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		ANISOU	1711	CB	ILE	A	213	868	921	1077	-112	89	-134	C
		ATOM	1712	CG1	ILE	A	213	-12.273	-61.918	285.500	1.00	8.29		C
		ANISOU	1712	CG1	ILE	A	213	1220	788	1140	-26	8	-66	C
		ATOM	1713	CD1	ILE	A	213	-13.008	-62.709	286.525	1.00	9.68		C
5		ANISOU	1713	CD1	ILE	A	213	1375	1094	1210	-218	129	18	C
		ATOM	1714	CG2	ILE	A	213	-13.459	-59.717	285.637	1.00	8.62		C
		ANISOU	1714	CG2	ILE	A	213	1179	1045	1048	18	-66	-9	C
		ATOM	1715	C	ILE	A	213	-11.082	-58.274	284.966	1.00	7.65		C
		ANISOU	1715	C	ILE	A	213	895	1043	966	-47	-18	-52	C
10		ATOM	1716	O	ILE	A	213	-11.594	-57.680	283.983	1.00	7.65		O
		ANISOU	1716	O	ILE	A	213	972	897	1035	-9	31	-127	O
		ATOM	1717	N	GLU	A	214	-10.586	-57.534	286.006	1.00	7.25		N
		ANISOU	1717	N	GLU	A	214	1137	635	981	27	12	-126	N
		ATOM	1718	CA	GLU	A	214	-10.606	-56.047	285.934	1.00	6.59		C
15		ANISOU	1718	CA	GLU	A	214	921	753	830	-88	198	9	C
		ATOM	1719	CB	GLU	A	214	-10.070	-55.495	287.283	1.00	6.95		C
		ANISOU	1719	CB	GLU	A	214	1184	541	914	-149	167	111	C
		ATOM	1720	CG	GLU	A	214	-10.179	-53.957	287.225	1.00	7.10		C
		ANISOU	1720	CG	GLU	A	214	850	672	1175	-57	-58	96	C
20		ATOM	1721	CD	GLU	A	214	-9.502	-53.314	288.410	1.00	9.64		C
		ANISOU	1721	CD	GLU	A	214	1088	1353	1222	-266	-5	-114	C
		ATOM	1722	OE1	GLU	A	214	-9.721	-53.690	289.603	1.00	9.77		O
		ANISOU	1722	OE1	GLU	A	214	1700	926	1085	-68	194	-183	O
		ATOM	1723	OE2	GLU	A	214	-8.610	-52.430	288.109	1.00	8.21		O
25		ANISOU	1723	OE2	GLU	A	214	1397	728	993	-57	145	-40	O
		ATOM	1724	C	GLU	A	214	-9.765	-55.594	284.774	1.00	7.13		C
		ANISOU	1724	C	GLU	A	214	946	869	894	149	39	269	C
		ATOM	1725	O	GLU	A	214	-10.165	-54.633	284.069	1.00	6.98		O
		ANISOU	1725	O	GLU	A	214	1040	586	1024	197	89	59	O
30		ATOM	1726	N	LEU	A	215	-8.581	-56.158	284.579	1.00	6.84		N
		ANISOU	1726	N	LEU	A	215	829	764	1004	25	91	6	N
		ATOM	1727	CA	LEU	A	215	-7.707	-55.712	283.563	1.00	7.12		C
		ANISOU	1727	CA	LEU	A	215	1037	807	859	3	19	-46	C
		ATOM	1728	CB	LEU	A	215	-6.350	-56.445	283.731	1.00	6.75		C
35		ANISOU	1728	CB	LEU	A	215	1007	657	901	84	-76	81	C
		ATOM	1729	CG	LEU	A	215	-5.187	-56.230	282.793	1.00	7.17		C

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		ANISOU	1729	CG	LEU	A	215	1063	683	977	-89	53	-108	C
		ATOM	1730	CD1	LEU	A	215	-4.822	-54.731	282.787	1.00	8.08		C
		ANISOU	1730	CD1	LEU	A	215	1063	934	1073	83	14	46	C
		ATOM	1731	CD2	LEU	A	215	-3.995	-57.093	283.126	1.00	8.24		C
5		ANISOU	1731	CD2	LEU	A	215	950	1073	1107	-126	94	29	C
		ATOM	1732	C	LEU	A	215	-8.221	-55.949	282.154	1.00	7.32		C
		ANISOU	1732	C	LEU	A	215	936	897	948	198	73	175	C
		ATOM	1733	O	LEU	A	215	-8.080	-55.038	281.296	1.00	8.54		O
		ANISOU	1733	O	LEU	A	215	1178	1114	950	-180	29	51	O
10		ATOM	1734	N	HIS	A	216	-8.723	-57.116	281.842	1.00	8.11		N
		ANISOU	1734	N	HIS	A	216	1073	1061	946	-41	-60	-146	N
		ATOM	1735	CA	HIS	A	216	-9.106	-57.485	280.527	1.00	7.55		C
		ANISOU	1735	CA	HIS	A	216	1014	882	972	69	-88	-65	C
		ATOM	1736	CB	HIS	A	216	-8.688	-58.897	280.198	1.00	6.83		C
15		ANISOU	1736	CB	HIS	A	216	1051	636	905	-71	31	-55	C
		ATOM	1737	CG	HIS	A	216	-7.235	-59.118	280.330	1.00	7.26		C
		ANISOU	1737	CG	HIS	A	216	1021	792	943	10	62	-352	C
		ATOM	1738	ND1	HIS	A	216	-6.351	-58.471	279.506	1.00	9.83		N
		ANISOU	1738	ND1	HIS	A	216	1345	1118	1271	135	170	224	N
20		ATOM	1739	CE1	HIS	A	216	-5.123	-58.826	279.827	1.00	8.50		C
		ANISOU	1739	CE1	HIS	A	216	1048	883	1295	-88	298	-65	C
		ATOM	1740	NE2	HIS	A	216	-5.173	-59.659	280.838	1.00	8.15		N
		ANISOU	1740	NE2	HIS	A	216	1155	896	1045	98	108	-16	N
		ATOM	1741	CD2	HIS	A	216	-6.485	-59.853	281.162	1.00	7.67		C
25		ANISOU	1741	CD2	HIS	A	216	1119	764	1028	73	70	27	C
		ATOM	1742	C	HIS	A	216	-10.613	-57.313	280.212	1.00	7.85		C
		ANISOU	1742	C	HIS	A	216	1032	1028	921	-67	13	-101	C
		ATOM	1743	O	HIS	A	216	-10.944	-57.278	279.014	1.00	8.23		O
		ANISOU	1743	O	HIS	A	216	1074	1197	853	33	32	13	O
30		ATOM	1744	N	ASP	A	217	-11.429	-57.267	281.242	1.00	6.09		N
		ANISOU	1744	N	ASP	A	217	805	655	854	-5	73	-107	N
		ATOM	1745	CA	ASP	A	217	-12.897	-57.301	281.254	1.00	6.83		C
		ANISOU	1745	CA	ASP	A	217	828	707	1059	127	112	31	C
		ATOM	1746	CB	ASP	A	217	-13.526	-56.319	280.235	1.00	7.43		C
35		ANISOU	1746	CB	ASP	A	217	1009	776	1035	-143	-72	-15	C
		ATOM	1747	CG	ASP	A	217	-14.950	-56.040	280.626	1.00	8.03		C

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		ANISOU	1747	CG	ASP	A	217	1034	916	1099	48	-98	-88	C
		ATOM	1748	OD1	ASP	A	217	-15.163	-55.046	281.399	1.00	9.56		O
		ANISOU	1748	OD1	ASP	A	217	1373	549	1708	72	110	-224	O
		ATOM	1749	OD2	ASP	A	217	-15.877	-56.726	280.197	1.00	8.64		O
5		ANISOU	1749	OD2	ASP	A	217	1132	807	1343	-39	-64	-74	O
		ATOM	1750	C	ASP	A	217	-13.396	-58.729	281.122	1.00	7.39		C
		ANISOU	1750	C	ASP	A	217	967	804	1035	75	88	-79	C
		ATOM	1751	O	ASP	A	217	-12.965	-59.415	280.206	1.00	7.36		O
		ANISOU	1751	O	ASP	A	217	1044	786	965	166	-27	-101	O
10		ATOM	1752	N	ALA	A	218	-14.378	-59.128	281.917	1.00	7.70		N
		ANISOU	1752	N	ALA	A	218	1062	885	978	63	150	89	N
		ATOM	1753	CA	ALA	A	218	-14.899	-60.454	281.803	1.00	7.97		C
		ANISOU	1753	CA	ALA	A	218	1301	846	882	-124	-15	125	C
		ATOM	1754	CB	ALA	A	218	-16.022	-60.654	282.851	1.00	7.77		C
15		ANISOU	1754	CB	ALA	A	218	1137	734	1079	28	114	47	C
		ATOM	1755	C	ALA	A	218	-15.423	-60.728	280.398	1.00	6.39		C
		ANISOU	1755	C	ALA	A	218	945	592	888	-78	24	42	C
		ATOM	1756	O	ALA	A	218	-15.391	-61.887	279.934	1.00	7.93		O
		ANISOU	1756	O	ALA	A	218	1265	680	1068	-44	-96	-19	O
20		ATOM	1757	N	SER	A	219	-16.009	-59.711	279.753	1.00	8.19		N
		ANISOU	1757	N	SER	A	219	1290	950	870	89	1	-22	N
		ATOM	1758	CA	SER	A	219	-16.624	-59.833	278.459	1.00	6.66		C
		ANISOU	1758	CA	SER	A	219	869	531	1127	-99	-2	98	C
		ATOM	1759	CB	SER	A	219	-17.292	-58.563	278.022	1.00	9.19		C
25		ANISOU	1759	CB	SER	A	219	1046	1183	1263	301	-238	-80	C
		ATOM	1760	OG	SER	A	219	-16.347	-57.537	277.708	1.00	9.84		O
		ANISOU	1760	OG	SER	A	219	1504	977	1255	126	-158	-3	O
		ATOM	1761	C	SER	A	219	-15.637	-60.323	277.425	1.00	7.01		C
		ANISOU	1761	C	SER	A	219	1015	698	948	-163	-109	58	C
30		ATOM	1762	O	SER	A	219	-16.058	-60.744	276.341	1.00	7.62		O
		ANISOU	1762	O	SER	A	219	1083	881	929	58	0	-127	O
		ATOM	1763	N	ASN	A	220	-14.350	-60.176	277.676	1.00	6.83		N
		ANISOU	1763	N	ASN	A	220	881	724	989	221	10	-26	N
		ATOM	1764	CA	ASN	A	220	-13.312	-60.529	276.729	1.00	7.41		C
35		ANISOU	1764	CA	ASN	A	220	1027	914	871	25	-48	248	C
		ATOM	1765	CB	ASN	A	220	-12.311	-59.350	276.633	1.00	7.36		C

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		ANISOU 1765	CB	ASN A 220	1278	713	804	-3	27	81	C
		ATOM 1766	CG	ASN A 220	-12.886	-58.099	276.061	1.00	7.37		C
		ANISOU 1766	CG	ASN A 220	1021	805	972	-80	33	8	C
		ATOM 1767	OD1	ASN A 220	-13.690	-58.186	275.136	1.00	9.88		O
5		ANISOU 1767	OD1	ASN A 220	1625	838	1287	96	-335	-53	O
		ATOM 1768	ND2	ASN A 220	-12.601	-56.960	276.626	1.00	7.82		N
		ANISOU 1768	ND2	ASN A 220	1027	955	988	-44	-78	-183	N
		ATOM 1769	C	ASN A 220	-12.593	-61.848	277.025	1.00	6.84		C
		ANISOU 1769	C	ASN A 220	921	853	825	171	-161	-195	C
10		ATOM 1770	O	ASN A 220	-11.632	-62.140	276.323	1.00	8.27		O
		ANISOU 1770	O	ASN A 220	1110	1153	877	204	31	79	O
		ATOM 1771	N	ILE A 221	-12.891	-62.465	278.150	1.00	7.63		N
		ANISOU 1771	N	ILE A 221	1145	823	929	66	-25	15	N
		ATOM 1772	CA	ILE A 221	-12.175	-63.691	278.567	1.00	5.44		C
15		ANISOU 1772	CA	ILE A 221	886	331	850	-42	207	-32	C
		ATOM 1773	CB	ILE A 221	-11.824	-63.684	280.089	1.00	6.86		C
		ANISOU 1773	CB	ILE A 221	1197	583	825	-29	268	-19	C
		ATOM 1774	CG1	ILE A 221	-11.018	-62.377	280.417	1.00	7.78		C
		ANISOU 1774	CG1	ILE A 221	1219	793	941	-124	89	11	C
20		ATOM 1775	CD1	ILE A 221	-10.897	-62.089	281.892	1.00	8.69		C
		ANISOU 1775	CD1	ILE A 221	1466	813	1022	37	34	-100	C
		ATOM 1776	CG2	ILE A 221	-11.165	-64.965	280.480	1.00	8.46		C
		ANISOU 1776	CG2	ILE A 221	1161	1031	1021	296	51	219	C
		ATOM 1777	C	ILE A 221	-12.927	-64.954	278.215	1.00	6.61		C
25		ANISOU 1777	C	ILE A 221	963	648	899	-197	-55	-40	C
		ATOM 1778	O	ILE A 221	-14.111	-65.089	278.532	1.00	7.60		O
		ANISOU 1778	O	ILE A 221	993	788	1105	-138	120	-40	O
		ATOM 1779	N	ALA A 222	-12.287	-65.810	277.447	1.00	7.10		N
		ANISOU 1779	N	ALA A 222	1042	870	783	96	70	181	N
30		ATOM 1780	CA	ALA A 222	-12.855	-67.130	277.016	1.00	7.28		C
		ANISOU 1780	CA	ALA A 222	854	1005	905	60	124	-37	C
		ATOM 1781	CB	ALA A 222	-12.226	-67.559	275.709	1.00	7.58		C
		ANISOU 1781	CB	ALA A 222	916	1148	815	-38	-49	43	C
		ATOM 1782	C	ALA A 222	-12.713	-68.221	278.052	1.00	6.85		C
35		ANISOU 1782	C	ALA A 222	956	683	963	-49	-143	-63	C
		ATOM 1783	O	ALA A 222	-13.652	-69.008	278.285	1.00	7.20		O

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		ANISOU	1783	O	ALA	A	222	965	677	1091	-173	-77	-187	O
		ATOM	1784	N	ALA	A	223	-11.486	-68.387	278.588	1.00	5.80		N
		ANISOU	1784	N	ALA	A	223	827	331	1042	91	-84	-10	N
		ATOM	1785	CA	ALA	A	223	-11.199	-69.628	279.347	1.00	5.67		C
5		ANISOU	1785	CA	ALA	A	223	718	343	1090	107	51	111	C
		ATOM	1786	CB	ALA	A	223	-10.935	-70.804	278.456	1.00	7.30		C
		ANISOU	1786	CB	ALA	A	223	1002	784	987	-151	-35	-170	C
		ATOM	1787	C	ALA	A	223	-10.010	-69.438	280.252	1.00	7.26		C
		ANISOU	1787	C	ALA	A	223	877	861	1021	-27	57	-169	C
10		ATOM	1788	O	ALA	A	223	-9.084	-68.657	279.907	1.00	6.62		O
		ANISOU	1788	O	ALA	A	223	916	626	973	68	-54	-38	O
		ATOM	1789	N	VAL	A	224	-10.001	-70.168	281.350	1.00	6.94		N
		ANISOU	1789	N	VAL	A	224	871	999	764	3	34	-15	N
		ATOM	1790	CA	VAL	A	224	-8.864	-70.366	282.203	1.00	6.60		C
15		ANISOU	1790	CA	VAL	A	224	884	751	872	16	-70	290	C
		ATOM	1791	CB	VAL	A	224	-9.258	-70.009	283.676	1.00	7.68		C
		ANISOU	1791	CB	VAL	A	224	992	821	1103	-189	55	-62	C
		ATOM	1792	CG1	VAL	A	224	-8.245	-70.483	284.696	1.00	8.32		C
		ANISOU	1792	CG1	VAL	A	224	1144	845	1169	-251	-161	-209	C
20		ATOM	1793	CG2	VAL	A	224	-9.496	-68.517	283.791	1.00	8.80		C
		ANISOU	1793	CG2	VAL	A	224	1205	969	1168	28	177	83	C
		ATOM	1794	C	VAL	A	224	-8.511	-71.865	282.145	1.00	6.28		C
		ANISOU	1794	C	VAL	A	224	866	707	814	32	-132	180	C
		ATOM	1795	O	VAL	A	224	-9.398	-72.717	282.249	1.00	7.86		O
25		ANISOU	1795	O	VAL	A	224	1014	781	1191	-94	35	50	O
		ATOM	1796	N	ILE	A	225	-7.205	-72.118	281.980	1.00	5.21		N
		ANISOU	1796	N	ILE	A	225	817	451	711	-95	36	107	N
		ATOM	1797	CA	ILE	A	225	-6.766	-73.528	281.970	1.00	5.88		C
		ANISOU	1797	CA	ILE	A	225	920	410	902	-49	73	117	C
30		ATOM	1798	CB	ILE	A	225	-6.104	-73.976	280.625	1.00	7.07		C
		ANISOU	1798	CB	ILE	A	225	967	737	982	-100	122	150	C
		ATOM	1799	CG1	ILE	A	225	-5.759	-75.500	280.595	1.00	6.52		C
		ANISOU	1799	CG1	ILE	A	225	912	536	1029	-180	-70	-35	C
		ATOM	1800	CD1	ILE	A	225	-5.310	-76.034	279.247	1.00	8.91		C
35		ANISOU	1800	CD1	ILE	A	225	1061	1043	1279	59	120	-118	C
		ATOM	1801	CG2	ILE	A	225	-4.922	-73.018	280.230	1.00	6.81		C

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		ANISOU	1801	CG2	ILE	A	225	1268	410	909	-257	107	50	C
		ATOM	1802	C	ILE	A	225	-5.781	-73.729	283.145	1.00	6.90		C
		ANISOU	1802	C	ILE	A	225	837	853	930	-123	-36	-152	C
		ATOM	1803	O	ILE	A	225	-4.794	-72.952	283.282	1.00	6.52		O
5		ANISOU	1803	O	ILE	A	225	973	565	939	-259	72	-43	O
		ATOM	1804	N	VAL	A	226	-6.074	-74.720	284.001	1.00	7.42		N
		ANISOU	1804	N	VAL	A	226	1115	807	895	40	-17	96	N
		ATOM	1805	CA	VAL	A	226	-5.171	-75.111	285.069	1.00	5.80		C
		ANISOU	1805	CA	VAL	A	226	795	747	661	-61	74	101	C
10		ATOM	1806	CB	VAL	A	226	-5.582	-74.564	286.486	1.00	6.25		C
		ANISOU	1806	CB	VAL	A	226	1037	500	834	74	-66	-60	C
		ATOM	1807	CG1	VAL	A	226	-5.473	-73.075	286.494	1.00	7.18		C
		ANISOU	1807	CG1	VAL	A	226	1002	607	1119	-71	-33	-208	C
		ATOM	1808	CG2	VAL	A	226	-7.026	-74.901	286.823	1.00	8.63		C
15		ANISOU	1808	CG2	VAL	A	226	1252	956	1068	137	208	-298	C
		ATOM	1809	C	VAL	A	226	-5.116	-76.656	285.159	1.00	6.02		C
		ANISOU	1809	C	VAL	A	226	880	717	690	-95	56	25	C
		ATOM	1810	O	VAL	A	226	-6.099	-77.326	284.914	1.00	7.39		O
		ANISOU	1810	O	VAL	A	226	955	832	1021	-28	0	115	O
20		ATOM	1811	N	GLU	A	227	-3.932	-77.058	285.612	1.00	5.36		N
		ANISOU	1811	N	GLU	A	227	798	368	870	-72	-34	-9	N
		ATOM	1812	CA	GLU	A	227	-3.842	-78.461	286.081	1.00	6.08		C
		ANISOU	1812	CA	GLU	A	227	1045	362	903	-45	-61	67	C
		ATOM	1813	CB	GLU	A	227	-2.324	-78.822	286.208	1.00	7.24		C
25		ANISOU	1813	CB	GLU	A	227	1084	741	925	-70	59	-9	C
		ATOM	1814	CG	GLU	A	227	-1.558	-78.863	284.866	1.00	7.61		C
		ANISOU	1814	CG	GLU	A	227	1048	821	1022	-151	73	172	C
		ATOM	1815	CD	GLU	A	227	-0.089	-78.670	285.106	1.00	7.34		C
		ANISOU	1815	CD	GLU	A	227	1025	1044	720	-94	156	37	C
30		ATOM	1816	OE1	GLU	A	227	0.641	-79.593	285.279	1.00	7.75		O
		ANISOU	1816	OE1	GLU	A	227	1081	852	1010	10	-20	9	O
		ATOM	1817	OE2	GLU	A	227	0.293	-77.461	285.222	1.00	7.58		O
		ANISOU	1817	OE2	GLU	A	227	1028	970	882	-187	108	23	O
		ATOM	1818	C	GLU	A	227	-4.425	-78.487	287.494	1.00	7.67		C
35		ANISOU	1818	C	GLU	A	227	951	1008	954	-36	57	34	C
		ATOM	1819	O	GLU	A	227	-4.065	-77.674	288.309	1.00	8.70		O

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		ANISOU	1819	O	GLU	A	227	1144	1003	1158	-218	42	60	O
		ATOM	1820	N	PRO	A	228	-5.170	-79.532	287.879	1.00	6.94		N
		ANISOU	1820	N	PRO	A	228	1059	711	865	-42	56	101	N
		ATOM	1821	CA	PRO	A	228	-5.677	-79.547	289.254	1.00	8.05		C
5		ANISOU	1821	CA	PRO	A	228	1217	1035	807	47	23	-89	C
		ATOM	1822	CB	PRO	A	228	-6.527	-80.838	289.297	1.00	8.14		C
		ANISOU	1822	CB	PRO	A	228	1049	1087	955	-57	158	13	C
		ATOM	1823	CG	PRO	A	228	-7.086	-80.926	287.875	1.00	9.02		C
		ANISOU	1823	CG	PRO	A	228	1242	991	1194	-207	18	405	C
10		ATOM	1824	CD	PRO	A	228	-5.870	-80.561	287.021	1.00	7.79		C
		ANISOU	1824	CD	PRO	A	228	1109	971	879	-204	21	52	C
		ATOM	1825	C	PRO	A	228	-4.549	-79.519	290.299	1.00	7.91		C
		ANISOU	1825	C	PRO	A	228	845	1150	1010	-131	72	-10	C
		ATOM	1826	O	PRO	A	228	-4.640	-78.821	291.319	1.00	8.15		O
15		ANISOU	1826	O	PRO	A	228	1215	888	993	-51	112	33	O
		ATOM	1827	N	MET	A	229	-3.468	-80.240	290.010	1.00	7.75		N
		ANISOU	1827	N	MET	A	229	1247	817	878	-98	69	64	N
		ATOM	1828	CA	MET	A	229	-2.205	-80.076	290.694	1.00	8.10		C
		ANISOU	1828	CA	MET	A	229	1074	941	1059	51	14	95	C
20		ATOM	1829	CB	MET	A	229	-1.929	-81.127	291.766	1.00	10.05		C
		ANISOU	1829	CB	MET	A	229	1305	1145	1366	310	135	290	C
		ATOM	1830	CG	MET	A	229	-1.627	-82.468	291.350	1.00	12.15		C
		ANISOU	1830	CG	MET	A	229	1830	1232	1552	4	364	98	C
		ATOM	1831	SD	MET	A	229	0.230	-82.666	291.037	1.00	12.46		S
25		ANISOU	1831	SD	MET	A	229	1689	1458	1588	149	-61	293	S
		ATOM	1832	CE	MET	A	229	0.104	-84.102	289.995	1.00	15.08		C
		ANISOU	1832	CE	MET	A	229	1713	1361	2654	376	-472	229	C
		ATOM	1833	C	MET	A	229	-1.150	-80.049	289.568	1.00	8.02		C
		ANISOU	1833	C	MET	A	229	966	858	1221	163	-105	99	C
30		ATOM	1834	O	MET	A	229	-1.327	-80.776	288.543	1.00	10.09		O
		ANISOU	1834	O	MET	A	229	1227	1425	1179	14	-21	201	O
		ATOM	1835	N	SER	A	230	-0.117	-79.234	289.734	1.00	8.40		N
		ANISOU	1835	N	SER	A	230	1066	1126	998	-4	48	116	N
		ATOM	1836	CA	SER	A	230	0.902	-79.032	288.679	1.00	7.38		C
35		ANISOU	1836	CA	SER	A	230	1250	784	768	12	-34	341	C
		ATOM	1837	CB	SER	A	230	1.457	-77.626	288.661	1.00	8.90		C

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		ANISOU	1837	CB	SER A	230	1352	1038	990	-139	120	184	C
		ATOM	1838	OG	SER A	230	0.622	-76.721	287.948	1.00	9.37		O
		ANISOU	1838	OG	SER A	230	1155	1189	1213	100	47	75	O
		ATOM	1839	C	SER A	230	2.006	-80.074	288.869	1.00	8.83		C
5		ANISOU	1839	C	SER A	230	1212	936	1207	112	26	59	C
		ATOM	1840	O	SER A	230	2.818	-79.960	289.781	1.00	8.90		O
		ANISOU	1840	O	SER A	230	1383	955	1041	-85	-116	-45	O
		ATOM	1841	N	GLY A	231	2.062	-81.084	287.994	1.00	9.11		N
		ANISOU	1841	N	GLY A	231	1073	1373	1015	182	-121	-66	N
10		ATOM	1842	CA	GLY A	231	3.026	-82.121	288.111	1.00	8.75		C
		ANISOU	1842	CA	GLY A	231	1349	815	1161	-118	37	-114	C
		ATOM	1843	C	GLY A	231	4.444	-81.762	287.684	1.00	9.87		C
		ANISOU	1843	C	GLY A	231	1341	1236	1172	56	11	-13	C
		ATOM	1844	O	GLY A	231	5.368	-81.843	288.436	1.00	9.09		O
15		ANISOU	1844	O	GLY A	231	1275	914	1263	47	-36	3	O
		ATOM	1845	N	SER A	232	4.586	-81.366	286.409	1.00	9.08		N
		ANISOU	1845	N	SER A	232	1228	905	1316	187	-62	68	N
		ATOM	1846	CA	SER A	232	5.883	-81.155	285.796	1.00	10.26		C
		ANISOU	1846	CA	SER A	232	1426	1215	1257	116	58	-131	C
20		ATOM	1847	CB	SER A	232	5.705	-80.709	284.310	1.00	12.42		C
		ANISOU	1847	CB	SER A	232	1868	1569	1282	-19	149	40	C
		ATOM	1848	OG	SER A	232	5.037	-81.703	283.606	1.00	18.23		O
		ANISOU	1848	OG	SER A	232	2382	2634	1908	-197	-57	-156	O
		ATOM	1849	C	SER A	232	6.682	-80.083	286.490	1.00	8.22		C
25		ANISOU	1849	C	SER A	232	1200	641	1281	98	-81	204	C
		ATOM	1850	O	SER A	232	7.915	-80.112	286.525	1.00	9.90		O
		ANISOU	1850	O	SER A	232	1171	993	1596	6	131	194	O
		ATOM	1851	N	ALA A	233	6.048	-79.086	287.077	1.00	9.37		N
		ANISOU	1851	N	ALA A	233	1182	1145	1230	267	-93	168	N
30		ATOM	1852	CA	ALA A	233	6.718	-78.066	287.844	1.00	10.10		C
		ANISOU	1852	CA	ALA A	233	1080	1389	1366	159	-127	247	C
		ATOM	1853	CB	ALA A	233	5.752	-76.925	288.106	1.00	12.31		C
		ANISOU	1853	CB	ALA A	233	1782	1092	1799	232	-202	5	C
		ATOM	1854	C	ALA A	233	7.233	-78.545	289.162	1.00	10.83		C
35		ANISOU	1854	C	ALA A	233	1282	1532	1298	55	-282	81	C
		ATOM	1855	O	ALA A	233	7.916	-77.770	289.830	1.00	12.09		O

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		ANISOU	1855	O	ALA	A	233	1915	905	1772	28	-535	336	O
		ATOM	1856	N	GLY	A	234	6.904	-79.769	289.559	1.00	9.21		N
		ANISOU	1856	N	GLY	A	234	1234	1308	956	90	-6	70	N
		ATOM	1857	CA	GLY	A	234	7.345	-80.340	290.839	1.00	9.29		C
5		ANISOU	1857	CA	GLY	A	234	1214	1119	1194	-31	-173	247	C
		ATOM	1858	C	GLY	A	234	6.249	-80.381	291.893	1.00	8.04		C
		ANISOU	1858	C	GLY	A	234	1122	788	1142	52	-84	308	C
		ATOM	1859	O	GLY	A	234	6.508	-80.157	293.045	1.00	9.42		O
		ANISOU	1859	O	GLY	A	234	1267	1143	1168	12	-317	145	O
10		ATOM	1860	N	VAL	A	235	5.055	-80.834	291.466	1.00	8.65		N
		ANISOU	1860	N	VAL	A	235	1155	1089	1039	20	-140	310	N
		ATOM	1861	CA	VAL	A	235	3.964	-81.166	292.424	1.00	7.79		C
		ANISOU	1861	CA	VAL	A	235	988	852	1117	-76	-95	177	C
		ATOM	1862	CB	VAL	A	235	4.247	-82.516	293.164	1.00	8.63		C
15		ANISOU	1862	CB	VAL	A	235	1171	922	1184	324	-47	197	C
		ATOM	1863	CG1	VAL	A	235	3.036	-82.842	293.990	1.00	9.80		C
		ANISOU	1863	CG1	VAL	A	235	1319	1244	1158	262	-82	318	C
		ATOM	1864	CG2	VAL	A	235	4.524	-83.628	292.166	1.00	9.27		C
		ANISOU	1864	CG2	VAL	A	235	1650	742	1127	-96	-74	455	C
20		ATOM	1865	C	VAL	A	235	3.640	-79.942	293.250	1.00	8.43		C
		ANISOU	1865	C	VAL	A	235	1269	875	1056	225	-103	86	C
		ATOM	1866	O	VAL	A	235	3.846	-79.878	294.433	1.00	10.70		O
		ANISOU	1866	O	VAL	A	235	1552	1478	1035	81	-206	0	O
		ATOM	1867	N	ILE	A	236	3.021	-78.966	292.562	1.00	8.33		N
25		ANISOU	1867	N	ILE	A	236	1195	1122	845	42	-12	466	N
		ATOM	1868	CA	ILE	A	236	2.441	-77.834	293.271	1.00	7.94		C
		ANISOU	1868	CA	ILE	A	236	1184	983	850	-107	-104	350	C
		ATOM	1869	CB	ILE	A	236	2.680	-76.488	292.504	1.00	8.96		C
		ANISOU	1869	CB	ILE	A	236	1243	1081	1078	24	118	338	C
30		ATOM	1870	CG1	ILE	A	236	4.170	-76.300	292.196	1.00	9.50		C
		ANISOU	1870	CG1	ILE	A	236	1309	731	1567	-170	155	105	C
		ATOM	1871	CD1	ILE	A	236	4.444	-75.071	291.343	1.00	10.87		C
		ANISOU	1871	CD1	ILE	A	236	1387	912	1830	-209	219	90	C
		ATOM	1872	CG2	ILE	A	236	2.169	-75.281	293.272	1.00	9.52		C
35		ANISOU	1872	CG2	ILE	A	236	1459	852	1305	10	-45	141	C
		ATOM	1873	C	ILE	A	236	0.986	-78.050	293.512	1.00	7.84		C

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	ANISOU	1873	C	ILE	A	236	1176	657	1145	6	-121	60	C
	ATOM	1874	O	ILE	A	236	0.199	-78.218	292.535	1.00	8.55		O
	ANISOU	1874	O	ILE	A	236	1098	1182	966	70	-131	105	O
	ATOM	1875	N	VAL	A	237	0.573	-78.087	294.774	1.00	9.97		N
5	ANISOU	1875	N	VAL	A	237	1314	1395	1077	58	28	-53	N
	ATOM	1876	CA	VAL	A	237	-0.692	-78.570	295.202	1.00	10.07		C
	ANISOU	1876	CA	VAL	A	237	1439	1225	1160	75	-121	176	C
	ATOM	1877	CB	VAL	A	237	-0.486	-79.453	296.471	1.00	9.54		C
	ANISOU	1877	CB	VAL	A	237	1572	890	1163	27	98	398	C
10	ATOM	1878	CG1	VAL	A	237	-1.845	-80.063	296.878	1.00	9.47		C
	ANISOU	1878	CG1	VAL	A	237	1615	794	1189	26	305	339	C
	ATOM	1879	CG2	VAL	A	237	0.590	-80.468	296.239	1.00	12.32		C
	ANISOU	1879	CG2	VAL	A	237	1472	1774	1434	144	260	263	C
	ATOM	1880	C	VAL	A	237	-1.607	-77.379	295.522	1.00	8.30		C
15	ANISOU	1880	C	VAL	A	237	1169	1089	895	-115	-50	198	C
	ATOM	1881	O	VAL	A	237	-1.165	-76.438	296.204	1.00	9.00		O
	ANISOU	1881	O	VAL	A	237	1433	878	1107	-48	35	34	O
	ATOM	1882	N	PRO	A	238	-2.866	-77.473	295.066	1.00	8.05		N
	ANISOU	1882	N	PRO	A	238	1089	815	1154	4	-3	157	N
20	ATOM	1883	CA	PRO	A	238	-3.754	-76.304	295.392	1.00	7.98		C
	ANISOU	1883	CA	PRO	A	238	1331	810	891	155	-115	-12	C
	ATOM	1884	CB	PRO	A	238	-5.028	-76.602	294.561	1.00	8.95		C
	ANISOU	1884	CB	PRO	A	238	1323	1007	1070	184	61	127	C
	ATOM	1885	CG	PRO	A	238	-4.998	-78.113	294.422	1.00	8.65		C
25	ANISOU	1885	CG	PRO	A	238	1121	1100	1062	-80	75	-21	C
	ATOM	1886	CD	PRO	A	238	-3.559	-78.505	294.268	1.00	9.11		C
	ANISOU	1886	CD	PRO	A	238	1191	1174	1096	-372	230	197	C
	ATOM	1887	C	PRO	A	238	-4.135	-76.356	296.890	1.00	9.47		C
	ANISOU	1887	C	PRO	A	238	1511	1120	967	-9	78	-150	C
30	ATOM	1888	O	PRO	A	238	-4.471	-77.399	297.413	1.00	10.20		O
	ANISOU	1888	O	PRO	A	238	1505	1318	1051	51	198	52	O
	ATOM	1889	N	PRO	A	239	-4.156	-75.169	297.525	1.00	7.21		N
	ANISOU	1889	N	PRO	A	239	1106	642	988	-104	97	93	N
	ATOM	1890	CA	PRO	A	239	-4.677	-75.091	298.923	1.00	8.68		C
35	ANISOU	1890	CA	PRO	A	239	1423	945	927	91	258	146	C
	ATOM	1891	CB	PRO	A	239	-4.452	-73.651	299.338	1.00	10.60		C

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		ANISOU	1891	CB	PRO	A	239	1490	1157	1379	-123	-91	-38	C
		ATOM	1892	CG	PRO	A	239	-3.412	-73.150	298.469	1.00	12.81		C
		ANISOU	1892	CG	PRO	A	239	1913	1535	1417	-121	-20	-141	C
		ATOM	1893	CD	PRO	A	239	-3.622	-73.849	297.169	1.00	8.52		C
5		ANISOU	1893	CD	PRO	A	239	1294	677	1264	-192	-62	160	C
		ATOM	1894	C	PRO	A	239	-6.153	-75.391	298.950	1.00	11.71		C
		ANISOU	1894	C	PRO	A	239	1418	1773	1258	29	-35	-32	C
		ATOM	1895	O	PRO	A	239	-6.856	-75.301	297.939	1.00	9.96		O
		ANISOU	1895	O	PRO	A	239	1482	1125	1174	91	35	122	O
10		ATOM	1896	N	ALYS	A	240	-6.647	-75.795	300.110	0.50	11.20		N
		ANISOU	1896	N	ALYS	A	240	1442	1705	1106	264	-17	397	N
		ATOM	1897	N	BLYS	A	240	-6.663	-75.785	300.116	0.50	11.02		N
		ANISOU	1897	N	BLYS	A	240	1426	1671	1090	282	-23	390	N
		ATOM	1898	CA	ALYS	A	240	-8.060	-76.066	300.271	0.50	10.62		C
15		ANISOU	1898	CA	ALYS	A	240	1541	1414	1077	-107	-46	162	C
		ATOM	1899	CA	BLYS	A	240	-8.091	-76.056	300.265	0.50	10.52		C
		ANISOU	1899	CA	BLYS	A	240	1528	1423	1044	-98	-53	157	C
		ATOM	1900	CB	ALYS	A	240	-8.325	-76.335	301.748	0.50	14.45		C
		ANISOU	1900	CB	ALYS	A	240	2149	2185	1155	-131	186	176	C
20		ATOM	1901	CB	BLYS	A	240	-8.438	-76.312	301.733	0.50	13.80		C
		ANISOU	1901	CB	BLYS	A	240	2153	1964	1125	-38	120	178	C
		ATOM	1902	CG	ALYS	A	240	-7.764	-77.689	302.164	0.50	16.87		C
		ANISOU	1902	CG	ALYS	A	240	2282	2212	1913	-73	241	65	C
		ATOM	1903	CG	BLYS	A	240	-7.735	-77.537	302.307	0.50	16.54		C
25		ANISOU	1903	CG	BLYS	A	240	2055	2192	2037	92	193	364	C
		ATOM	1904	CD	ALYS	A	240	-8.064	-78.024	303.623	0.50	20.95		C
		ANISOU	1904	CD	ALYS	A	240	3189	2750	2019	-214	140	333	C
		ATOM	1905	CD	BLYS	A	240	-8.138	-78.842	301.629	0.50	16.15		C
		ANISOU	1905	CD	BLYS	A	240	2077	1899	2160	160	160	660	C
30		ATOM	1906	CE	ALYS	A	240	-7.636	-79.467	303.904	0.50	19.96		C
		ANISOU	1906	CE	ALYS	A	240	3014	2280	2287	10	325	-625	C
		ATOM	1907	CE	BLYS	A	240	-7.574	-80.065	302.355	0.50	15.47		C
		ANISOU	1907	CE	BLYS	A	240	1952	1964	1962	228	112	605	C
		ATOM	1908	NZ	ALYS	A	240	-8.035	-79.921	305.268	0.50	25.02		N
35		ANISOU	1908	NZ	ALYS	A	240	3942	2540	3023	-353	-152	989	N
		ATOM	1909	NZ	BLYS	A	240	-7.884	-81.276	301.590	0.50	20.52		N

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	ANISOU	1909	NZ	BLYS	A	240	3024	2248	2525	-647	506	568	N
	ATOM	1910	C	ALYS	A	240	-8.865	-74.889	299.755	0.50	10.47		C
	ANISOU	1910	C	ALYS	A	240	1482	1278	1217	-133	112	-21	C
	ATOM	1911	C	BLYS	A	240	-8.884	-74.881	299.756	0.50	10.53		C
5	ANISOU	1911	C	BLYS	A	240	1521	1246	1231	-150	87	-27	C
	ATOM	1912	O	ALYS	A	240	-8.553	-73.732	300.024	0.50	10.86		O
	ANISOU	1912	O	ALYS	A	240	1584	1174	1367	-73	109	18	O
	ATOM	1913	O	BLYS	A	240	-8.612	-73.722	300.053	0.50	10.77		O
	ANISOU	1913	O	BLYS	A	240	1623	1077	1389	13	115	-12	O
10	ATOM	1914	N	GLY	A	241	-9.933	-75.147	298.991	1.00	9.84		N
	ANISOU	1914	N	GLY	A	241	1552	960	1227	-70	51	89	N
	ATOM	1915	CA	GLY	A	241	-10.801	-74.140	298.532	1.00	10.86		C
	ANISOU	1915	CA	GLY	A	241	1699	1512	914	102	230	157	C
	ATOM	1916	C	GLY	A	241	-10.420	-73.438	297.253	1.00	9.50		C
15	ANISOU	1916	C	GLY	A	241	1161	1229	1218	55	201	0	C
	ATOM	1917	O	GLY	A	241	-11.221	-72.622	296.760	1.00	10.19		O
	ANISOU	1917	O	GLY	A	241	1457	1341	1070	190	235	244	O
	ATOM	1918	N	TYR	A	242	-9.207	-73.619	296.795	1.00	8.06		N
	ANISOU	1918	N	TYR	A	242	1239	796	1024	18	123	169	N
20	ATOM	1919	CA	TYR	A	242	-8.704	-72.874	295.638	1.00	9.45		C
	ANISOU	1919	CA	TYR	A	242	1166	1410	1011	-7	-115	237	C
	ATOM	1920	CB	TYR	A	242	-7.218	-73.212	295.449	1.00	10.05		C
	ANISOU	1920	CB	TYR	A	242	1266	1478	1075	-131	94	221	C
	ATOM	1921	CG	TYR	A	242	-6.642	-72.645	294.170	1.00	7.29		C
25	ANISOU	1921	CG	TYR	A	242	1154	565	1049	14	67	27	C
	ATOM	1922	CD1	TYR	A	242	-6.233	-71.285	294.094	1.00	7.69		C
	ANISOU	1922	CD1	TYR	A	242	1127	709	1084	-106	85	5	C
	ATOM	1923	CE1	TYR	A	242	-5.669	-70.765	292.937	1.00	9.57		C
	ANISOU	1923	CE1	TYR	A	242	1242	1284	1108	5	57	-62	C
30	ATOM	1924	CZ	TYR	A	242	-5.593	-71.578	291.820	1.00	7.86		C
	ANISOU	1924	CZ	TYR	A	242	1083	884	1020	-26	131	126	C
	ATOM	1925	OH	TYR	A	242	-4.987	-71.125	290.630	1.00	8.03		O
	ANISOU	1925	OH	TYR	A	242	1179	825	1046	-87	98	112	O
	ATOM	1926	CE2	TYR	A	242	-5.983	-72.941	291.884	1.00	7.60		C
35	ANISOU	1926	CE2	TYR	A	242	1274	651	960	167	82	-162	C
	ATOM	1927	CD2	TYR	A	242	-6.555	-73.432	293.008	1.00	9.13		C

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		ANISOU	1927	CD2	TYR	A	242	1091	1194	1182	-273	197	-147	C
		ATOM	1928	C	TYR	A	242	-9.500	-73.211	294.377	1.00	6.90		C
		ANISOU	1928	C	TYR	A	242	1014	603	1001	80	131	53	C
		ATOM	1929	O	TYR	A	242	-9.947	-72.244	293.672	1.00	8.47		O
5		ANISOU	1929	O	TYR	A	242	1187	1087	942	-65	75	129	O
		ATOM	1930	N	LEU	A	243	-9.612	-74.489	294.007	1.00	7.82		N
		ANISOU	1930	N	LEU	A	243	1269	792	909	-37	97	-45	N
		ATOM	1931	CA	LEU	A	243	-10.272	-74.828	292.778	1.00	7.62		C
		ANISOU	1931	CA	LEU	A	243	1069	737	1087	5	111	128	C
10		ATOM	1932	CB	LEU	A	243	-10.097	-76.285	292.425	1.00	6.63		C
		ANISOU	1932	CB	LEU	A	243	1105	613	798	-92	-55	136	C
		ATOM	1933	CG	LEU	A	243	-8.654	-76.721	292.041	1.00	8.10		C
		ANISOU	1933	CG	LEU	A	243	1148	836	1091	-121	86	-26	C
		ATOM	1934	CD1	LEU	A	243	-8.490	-78.204	291.921	1.00	8.55		C
15		ANISOU	1934	CD1	LEU	A	243	1198	765	1284	212	23	-133	C
		ATOM	1935	CD2	LEU	A	243	-8.148	-76.074	290.796	1.00	8.88		C
		ANISOU	1935	CD2	LEU	A	243	1143	1000	1230	-47	256	26	C
		ATOM	1936	C	LEU	A	243	-11.759	-74.448	292.838	1.00	7.67		C
		ANISOU	1936	C	LEU	A	243	987	898	1028	84	24	50	C
20		ATOM	1937	O	LEU	A	243	-12.343	-73.985	291.833	1.00	8.43		O
		ANISOU	1937	O	LEU	A	243	1186	1002	1013	4	-89	-53	O
		ATOM	1938	N	AGLN	A	244	-12.393	-74.643	293.970	0.50	9.03		N
		ANISOU	1938	N	AGLN	A	244	1349	996	1085	82	227	274	N
		ATOM	1939	N	BGLN	A	244	-12.429	-74.659	293.959	0.50	8.97		N
25		ANISOU	1939	N	BGLN	A	244	1372	948	1089	57	231	274	N
		ATOM	1940	CA	AGLN	A	244	-13.779	-74.215	294.110	0.50	8.91		C
		ANISOU	1940	CA	AGLN	A	244	1194	1216	975	-178	120	167	C
		ATOM	1941	CA	BGLN	A	244	-13.829	-74.195	294.114	0.50	9.18		C
		ANISOU	1941	CA	BGLN	A	244	1218	1237	1033	-174	134	122	C
30		ATOM	1942	CB	AGLN	A	244	-14.281	-74.633	295.484	0.50	9.03		C
		ANISOU	1942	CB	AGLN	A	244	1290	1186	954	-256	176	84	C
		ATOM	1943	CB	BGLN	A	244	-14.364	-74.571	295.507	0.50	9.74		C
		ANISOU	1943	CB	BGLN	A	244	1412	1261	1026	-284	166	110	C
		ATOM	1944	CG	AGLN	A	244	-15.681	-74.170	295.791	0.50	11.89		C
35		ANISOU	1944	CG	AGLN	A	244	1660	1215	1641	142	284	277	C
		ATOM	1945	CG	BGLN	A	244	-15.830	-74.195	295.781	0.50	11.46		C

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		ANISOU	1945	CG	BGLN	A	244	1625	1291	1438	-153	208	229	C
		ATOM	1946	CD	AGLN	A	244	-16.738	-74.711	294.859	0.50	14.77		C
		ANISOU	1946	CD	AGLN	A	244	1542	2025	2043	-30	368	-127	C
		ATOM	1947	CD	BGLN	A	244	-16.286	-74.575	297.193	0.50	17.46		C
5		ANISOU	1947	CD	BGLN	A	244	1183	3741	1708	287	649	824	C
		ATOM	1948	OE1	AGLN	A	244	-16.687	-75.840	294.433	0.50	18.41		O
		ANISOU	1948	OE1	AGLN	A	244	3008	953	3032	-375	94	931	O
		ATOM	1949	OE1	BGLN	A	244	-15.739	-75.475	297.737	0.50	29.31		O
		ANISOU	1949	OE1	BGLN	A	244	4418	3850	2868	980	1035	1892	O
10		ATOM	1950	NE2	AGLN	A	244	-17.712	-73.920	294.600	0.50	19.17		N
		ANISOU	1950	NE2	AGLN	A	244	2327	1446	3508	-408	-339	984	N
		ATOM	1951	NE2	BGLN	A	244	-17.239	-73.855	297.765	0.50	27.78		N
		ANISOU	1951	NE2	BGLN	A	244	2837	4832	2884	2002	-144	-622	N
		ATOM	1952	C	AGLN	A	244	-13.959	-72.698	293.873	0.50	9.10		C
15		ANISOU	1952	C	AGLN	A	244	1184	1360	914	77	84	-44	C
		ATOM	1953	C	BGLN	A	244	-13.982	-72.685	293.875	0.50	9.21		C
		ANISOU	1953	C	BGLN	A	244	1189	1380	930	68	83	-42	C
		ATOM	1954	O	AGLN	A	244	-14.896	-72.272	293.225	0.50	9.26		O
		ANISOU	1954	O	AGLN	A	244	1198	1131	1188	215	136	5	O
20		ATOM	1955	O	BGLN	A	244	-14.936	-72.252	293.241	0.50	9.45		O
		ANISOU	1955	O	BGLN	A	244	1190	1174	1225	199	153	27	O
		ATOM	1956	N	ARG	A	245	-13.053	-71.889	294.413	1.00	8.37		N
		ANISOU	1956	N	ARG	A	245	1133	853	1194	134	-10	212	N
		ATOM	1957	CA	ARG	A	245	-13.157	-70.479	294.214	1.00	7.61		C
25		ANISOU	1957	CA	ARG	A	245	1116	786	988	255	220	-203	C
		ATOM	1958	CB	ARG	A	245	-12.191	-69.716	295.103	1.00	8.62		C
		ANISOU	1958	CB	ARG	A	245	1088	1016	1172	181	175	31	C
		ATOM	1959	CG	ARG	A	245	-12.274	-68.166	295.047	1.00	9.25		C
		ANISOU	1959	CG	ARG	A	245	1396	1023	1094	-143	40	44	C
30		ATOM	1960	CD	ARG	A	245	-13.652	-67.665	295.583	1.00	10.85		C
		ANISOU	1960	CD	ARG	A	245	1758	972	1390	-52	280	14	C
		ATOM	1961	NE	ARG	A	245	-13.784	-66.295	295.312	1.00	10.33		N
		ANISOU	1961	NE	ARG	A	245	1336	1172	1415	-94	202	235	N
		ATOM	1962	CZ	ARG	A	245	-14.844	-65.690	294.917	1.00	12.25		C
35		ANISOU	1962	CZ	ARG	A	245	1769	1351	1533	222	105	-283	C
		ATOM	1963	NH1	ARG	A	245	-16.023	-66.303	294.727	1.00	15.99		N

	ANISOU	1963	NH1	ARG	A	245	1814	1967	2292	65	249	259	N
	ATOM	1964	NH2	ARG	A	245	-14.731	-64.379	294.699	1.00	17.42		N
	ANISOU	1964	NH2	ARG	A	245	2306	1793	2517	-251	81	567	N
	ATOM	1965	C	ARG	A	245	-12.971	-70.151	292.752	1.00	8.76		C
5	ANISOU	1965	C	ARG	A	245	1144	1000	1182	157	14	-85	C
	ATOM	1966	O	ARG	A	245	-13.647	-69.263	292.251	1.00	8.22		O
	ANISOU	1966	O	ARG	A	245	1401	716	1003	-3	130	101	O
	ATOM	1967	N	LEU	A	246	-11.998	-70.711	292.054	1.00	7.72		N
	ANISOU	1967	N	LEU	A	246	1137	733	1060	141	-7	136	N
10	ATOM	1968	CA	LEU	A	246	-11.931	-70.547	290.616	1.00	8.85		C
	ANISOU	1968	CA	LEU	A	246	1263	861	1238	181	-3	117	C
	ATOM	1969	CB	LEU	A	246	-10.789	-71.314	289.961	1.00	10.26		C
	ANISOU	1969	CB	LEU	A	246	1361	1256	1279	158	20	-76	C
	ATOM	1970	CG	LEU	A	246	-9.352	-70.954	290.197	1.00	9.28		C
15	ANISOU	1970	CG	LEU	A	246	1350	832	1344	129	112	-86	C
	ATOM	1971	CD1	LEU	A	246	-8.432	-71.847	289.407	1.00	10.46		C
	ANISOU	1971	CD1	LEU	A	246	1583	1071	1319	152	188	-11	C
	ATOM	1972	CD2	LEU	A	246	-9.091	-69.489	289.761	1.00	10.51		C
	ANISOU	1972	CD2	LEU	A	246	1401	1265	1327	-122	-69	83	C
20	ATOM	1973	C	LEU	A	246	-13.220	-70.866	289.928	1.00	9.42		C
	ANISOU	1973	C	LEU	A	246	1261	1093	1222	126	-129	-9	C
	ATOM	1974	O	LEU	A	246	-13.658	-70.131	289.025	1.00	7.90		O
	ANISOU	1974	O	LEU	A	246	1163	721	1115	0	111	57	O
	ATOM	1975	N	ARG	A	247	-13.829	-71.976	290.306	1.00	8.02		N
25	ANISOU	1975	N	ARG	A	247	998	857	1192	62	50	23	N
	ATOM	1976	CA	ARG	A	247	-15.101	-72.401	289.694	1.00	7.84		C
	ANISOU	1976	CA	ARG	A	247	1016	1007	954	156	34	57	C
	ATOM	1977	CB	ARG	A	247	-15.545	-73.744	290.241	1.00	8.96		C
	ANISOU	1977	CB	ARG	A	247	1303	992	1107	-51	275	-12	C
30	ATOM	1978	CG	ARG	A	247	-16.898	-74.199	289.827	1.00	9.67		C
	ANISOU	1978	CG	ARG	A	247	1243	1330	1102	-86	293	-35	C
	ATOM	1979	CD	ARG	A	247	-16.932	-74.822	288.400	1.00	8.90		C
	ANISOU	1979	CD	ARG	A	247	1097	1098	1186	-45	129	140	C
	ATOM	1980	NE	ARG	A	247	-17.005	-73.772	287.395	1.00	7.83		N
35	ANISOU	1980	NE	ARG	A	247	1379	601	992	-143	167	-140	N
	ATOM	1981	CZ	ARG	A	247	-16.894	-73.937	286.087	1.00	7.66		C

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		ANISOU	1981	CZ	ARG	A	247	1262	634	1012	-211	245	239	C
		ATOM	1982	NH1	ARG	A	247	-17.090	-72.911	285.258	1.00	8.24		N
		ANISOU	1982	NH1	ARG	A	247	1251	907	971	2	127	273	N
		ATOM	1983	NH2	ARG	A	247	-16.594	-75.114	285.601	1.00	9.16		N
5		ANISOU	1983	NH2	ARG	A	247	1331	1047	1103	116	-45	-16	N
		ATOM	1984	C	ARG	A	247	-16.145	-71.290	289.902	1.00	8.13		C
		ANISOU	1984	C	ARG	A	247	966	1033	1088	10	14	-1	C
		ATOM	1985	O	ARG	A	247	-16.936	-70.972	288.992	1.00	8.89		O
		ANISOU	1985	O	ARG	A	247	1257	1079	1041	-53	35	11	O
10		ATOM	1986	N	GLU	A	248	-16.262	-70.794	291.132	1.00	9.11		N
		ANISOU	1986	N	GLU	A	248	1500	975	987	39	192	-11	N
		ATOM	1987	CA	GLU	A	248	-17.184	-69.691	291.405	1.00	8.88		C
		ANISOU	1987	CA	GLU	A	248	1297	781	1293	-69	176	155	C
		ATOM	1988	CB	GLU	A	248	-17.170	-69.372	292.907	1.00	8.63		C
15		ANISOU	1988	CB	GLU	A	248	1234	788	1257	97	-72	54	C
		ATOM	1989	CG	GLU	A	248	-17.635	-70.483	293.810	1.00	10.84		C
		ANISOU	1989	CG	GLU	A	248	1353	1425	1340	-6	158	360	C
		ATOM	1990	CD	GLU	A	248	-17.296	-70.232	295.318	1.00	14.46		C
		ANISOU	1990	CD	GLU	A	248	2237	1630	1625	-244	170	-430	C
20		ATOM	1991	OE1	GLU	A	248	-16.670	-69.190	295.608	1.00	15.79		O
		ANISOU	1991	OE1	GLU	A	248	2299	2042	1655	-512	387	150	O
		ATOM	1992	OE2	GLU	A	248	-17.736	-71.092	296.114	1.00	17.51		O
		ANISOU	1992	OE2	GLU	A	248	2310	2348	1994	-13	457	278	O
		ATOM	1993	C	GLU	A	248	-16.983	-68.431	290.600	1.00	7.85		C
25		ANISOU	1993	C	GLU	A	248	1025	882	1075	140	39	68	C
		ATOM	1994	O	GLU	A	248	-17.934	-67.847	290.056	1.00	8.65		O
		ANISOU	1994	O	GLU	A	248	1005	920	1360	-30	74	162	O
		ATOM	1995	N	ILE	A	249	-15.725	-68.086	290.472	1.00	7.03		N
		ANISOU	1995	N	ILE	A	249	1030	488	1152	172	111	91	N
30		ATOM	1996	CA	ILE	A	249	-15.434	-66.852	289.754	1.00	7.55		C
		ANISOU	1996	CA	ILE	A	249	1243	492	1133	-55	-149	-47	C
		ATOM	1997	CB	ILE	A	249	-13.948	-66.472	289.955	1.00	7.28		C
		ANISOU	1997	CB	ILE	A	249	1101	605	1057	97	82	101	C
		ATOM	1998	CG1	ILE	A	249	-13.669	-66.025	291.413	1.00	9.12		C
35		ANISOU	1998	CG1	ILE	A	249	1388	943	1134	-333	-40	-235	C
		ATOM	1999	CD1	ILE	A	249	-12.196	-65.964	291.772	1.00	9.45		C

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		ANISOU	1999	CD1	ILE	A	249	1504	1019	1064	114	-19	73	C
		ATOM	2000	CG2	ILE	A	249	-13.601	-65.280	289.034	1.00	7.85		C
		ANISOU	2000	CG2	ILE	A	249	1050	839	1091	-231	208	-95	C
		ATOM	2001	C	ILE	A	249	-15.736	-67.068	288.263	1.00	8.28		C
5		ANISOU	2001	C	ILE	A	249	1131	938	1074	143	-100	112	C
		ATOM	2002	O	ILE	A	249	-16.318	-66.198	287.562	1.00	8.02		O
		ANISOU	2002	O	ILE	A	249	1160	752	1135	146	211	30	O
		ATOM	2003	N	CYS	A	250	-15.384	-68.224	287.720	1.00	8.54		N
		ANISOU	2003	N	CYS	A	250	1282	1075	885	-57	175	-18	N
10		ATOM	2004	CA	CYS	A	250	-15.668	-68.527	286.326	1.00	7.91		C
		ANISOU	2004	CA	CYS	A	250	1219	749	1035	-64	-69	53	C
		ATOM	2005	CB	CYS	A	250	-15.036	-69.868	285.893	1.00	8.00		C
		ANISOU	2005	CB	CYS	A	250	1192	762	1086	35	145	-21	C
		ATOM	2006	SG	CYS	A	250	-13.201	-69.693	285.699	1.00	8.93		S
15		ANISOU	2006	SG	CYS	A	250	1206	997	1188	28	121	39	S
		ATOM	2007	C	CYS	A	250	-17.165	-68.592	286.083	1.00	9.71		C
		ANISOU	2007	C	CYS	A	250	1239	1448	1001	147	-84	-148	C
		ATOM	2008	O	CYS	A	250	-17.647	-68.002	285.048	1.00	8.29		O
		ANISOU	2008	O	CYS	A	250	1120	952	1077	8	82	62	O
20		ATOM	2009	N	ASP	A	251	-17.938	-69.166	287.020	1.00	9.49		N
		ANISOU	2009	N	ASP	A	251	1156	1264	1185	67	53	-23	N
		ATOM	2010	CA	ASP	A	251	-19.408	-69.221	286.857	1.00	9.28		C
		ANISOU	2010	CA	ASP	A	251	1199	965	1359	-8	-8	-60	C
		ATOM	2011	CB	ASP	A	251	-20.035	-69.913	288.025	1.00	9.09		C
25		ANISOU	2011	CB	ASP	A	251	1095	955	1403	65	44	-84	C
		ATOM	2012	CG	ASP	A	251	-19.834	-71.466	287.980	1.00	10.27		C
		ANISOU	2012	CG	ASP	A	251	1527	1016	1356	98	79	-175	C
		ATOM	2013	OD1	ASP	A	251	-19.380	-71.998	286.912	1.00	11.59		O
		ANISOU	2013	OD1	ASP	A	251	1529	1417	1455	120	401	-24	O
30		ATOM	2014	OD2	ASP	A	251	-20.198	-72.216	288.931	1.00	15.41		O
		ANISOU	2014	OD2	ASP	A	251	2012	1684	2157	-237	429	370	O
		ATOM	2015	C	ASP	A	251	-19.948	-67.773	286.788	1.00	8.00		C
		ANISOU	2015	C	ASP	A	251	858	915	1264	-158	53	-11	C
		ATOM	2016	O	ASP	A	251	-20.824	-67.489	285.965	1.00	9.77		O
35		ANISOU	2016	O	ASP	A	251	1388	918	1405	-81	-107	10	O
		ATOM	2017	N	ALA	A	252	-19.539	-66.904	287.719	1.00	8.94		N

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		ANISOU	2017	N	ALA	A	252	1203	1008	1185	151	137	-125	N
		ATOM	2018	CA	ALA	A	252	-20.103	-65.564	287.837	1.00	8.59		C
		ANISOU	2018	CA	ALA	A	252	1077	1044	1143	118	180	211	C
		ATOM	2019	CB	ALA	A	252	-19.609	-64.944	289.153	1.00	10.38		C
5		ANISOU	2019	CB	ALA	A	252	1451	1243	1247	227	227	-51	C
		ATOM	2020	C	ALA	A	252	-19.750	-64.682	286.670	1.00	8.46		C
		ANISOU	2020	C	ALA	A	252	1013	969	1231	-52	103	96	C
		ATOM	2021	O	ALA	A	252	-20.405	-63.697	286.424	1.00	12.21		O
		ANISOU	2021	O	ALA	A	252	1552	1559	1527	420	344	311	O
10		ATOM	2022	N	ASN	A	253	-18.666	-65.028	285.958	1.00	9.98		N
		ANISOU	2022	N	ASN	A	253	1222	1292	1275	-79	277	75	N
		ATOM	2023	CA	ASN	A	253	-18.156	-64.138	284.879	1.00	8.69		C
		ANISOU	2023	CA	ASN	A	253	1139	1028	1134	172	-46	-74	C
		ATOM	2024	CB	ASN	A	253	-16.725	-63.716	285.216	1.00	8.32		C
15		ANISOU	2024	CB	ASN	A	253	1141	884	1136	100	77	-195	C
		ATOM	2025	CG	ASN	A	253	-16.704	-62.746	286.352	1.00	9.39		C
		ANISOU	2025	CG	ASN	A	253	1156	1174	1238	-51	-226	-260	C
		ATOM	2026	OD1	ASN	A	253	-16.944	-61.503	286.114	1.00	11.77		O
		ANISOU	2026	OD1	ASN	A	253	1534	1324	1614	185	128	-164	O
20		ATOM	2027	ND2	ASN	A	253	-16.506	-63.231	287.586	1.00	7.43		N
		ANISOU	2027	ND2	ASN	A	253	1194	575	1052	65	153	-55	N
		ATOM	2028	C	ASN	A	253	-18.242	-64.789	283.484	1.00	9.00		C
		ANISOU	2028	C	ASN	A	253	1464	752	1202	86	285	-109	C
		ATOM	2029	O	ASN	A	253	-17.651	-64.240	282.550	1.00	10.07		O
25		ANISOU	2029	O	ASN	A	253	1299	1312	1215	-23	104	-148	O
		ATOM	2030	N	ASP	A	254	-18.898	-65.935	283.337	1.00	8.43		N
		ANISOU	2030	N	ASP	A	254	1468	731	1003	12	153	128	N
		ATOM	2031	CA	ASP	A	254	-19.104	-66.601	282.087	1.00	8.31		C
		ANISOU	2031	CA	ASP	A	254	1106	991	1060	-150	113	55	C
30		ATOM	2032	CB	ASP	A	254	-19.982	-65.832	281.115	1.00	11.18		C
		ANISOU	2032	CB	ASP	A	254	1543	1377	1327	-100	65	8	C
		ATOM	2033	CG	ASP	A	254	-21.432	-65.878	281.483	1.00	15.76		C
		ANISOU	2033	CG	ASP	A	254	1447	2263	2278	142	-409	422	C
		ATOM	2034	OD1	ASP	A	254	-21.877	-66.657	282.425	1.00	18.13		O
35		ANISOU	2034	OD1	ASP	A	254	2118	2038	2730	125	123	489	O
		ATOM	2035	OD2	ASP	A	254	-22.153	-65.083	280.822	1.00	18.50		O

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		ANISOU	2035	OD2	ASP	A	254	1742	2369	2916	594	-169	549	O
		ATOM	2036	C	ASP	A	254	-17.739	-66.895	281.461	1.00	8.03		C
		ANISOU	2036	C	ASP	A	254	1206	895	947	-22	20	-159	C
		ATOM	2037	O	ASP	A	254	-17.460	-66.590	280.283	1.00	8.48		O
5		ANISOU	2037	O	ASP	A	254	1385	729	1105	265	-50	-40	O
		ATOM	2038	N	ILE	A	255	-16.861	-67.537	282.201	1.00	8.21		N
		ANISOU	2038	N	ILE	A	255	992	1030	1095	95	69	216	N
		ATOM	2039	CA	ILE	A	255	-15.560	-67.951	281.703	1.00	7.16		C
		ANISOU	2039	CA	ILE	A	255	989	765	965	309	-79	19	C
10		ATOM	2040	CB	ILE	A	255	-14.406	-67.412	282.555	1.00	7.42		C
		ANISOU	2040	CB	ILE	A	255	1050	711	1058	107	2	70	C
		ATOM	2041	CG1	ILE	A	255	-14.401	-65.911	282.452	1.00	8.14		C
		ANISOU	2041	CG1	ILE	A	255	1179	811	1103	147	70	-183	C
		ATOM	2042	CD1	ILE	A	255	-13.566	-65.134	283.495	1.00	9.31		C
15		ANISOU	2042	CD1	ILE	A	255	1212	940	1386	-236	317	-255	C
		ATOM	2043	CG2	ILE	A	255	-13.041	-68.052	282.189	1.00	7.64		C
		ANISOU	2043	CG2	ILE	A	255	952	1025	923	-181	118	-91	C
		ATOM	2044	C	ILE	A	255	-15.559	-69.509	281.815	1.00	7.11		C
		ANISOU	2044	C	ILE	A	255	827	822	1051	62	-5	28	C
20		ATOM	2045	O	ILE	A	255	-15.956	-70.111	282.817	1.00	8.57		O
		ANISOU	2045	O	ILE	A	255	1367	870	1020	-41	177	79	O
		ATOM	2046	N	LEU	A	256	-15.045	-70.174	280.781	1.00	6.79		N
		ANISOU	2046	N	LEU	A	256	1015	652	912	-130	15	32	N
		ATOM	2047	CA	LEU	A	256	-14.917	-71.670	280.777	1.00	6.29		C
25		ANISOU	2047	CA	LEU	A	256	939	501	949	-178	-63	42	C
		ATOM	2048	CB	LEU	A	256	-14.805	-72.227	279.361	1.00	7.63		C
		ANISOU	2048	CB	LEU	A	256	1047	912	941	-157	44	70	C
		ATOM	2049	CG	LEU	A	256	-15.984	-71.994	278.437	1.00	9.67		C
		ANISOU	2049	CG	LEU	A	256	1375	1242	1056	82	35	-61	C
30		ATOM	2050	CD1	LEU	A	256	-15.708	-72.590	277.032	1.00	10.15		C
		ANISOU	2050	CD1	LEU	A	256	1511	1253	1092	-78	-197	-147	C
		ATOM	2051	CD2	LEU	A	256	-17.275	-72.539	279.034	1.00	10.10		C
		ANISOU	2051	CD2	LEU	A	256	1148	1292	1396	118	-83	29	C
		ATOM	2052	C	LEU	A	256	-13.687	-72.032	281.582	1.00	7.15		C
35		ANISOU	2052	C	LEU	A	256	892	745	1077	-56	-176	-12	C
		ATOM	2053	O	LEU	A	256	-12.607	-71.406	281.453	1.00	8.55		O

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		ANISOU	2053	O	LEU	A	256	1091	934	1223	-108	-67	180	O
		ATOM	2054	N	LEU	A	257	-13.843	-73.068	282.416	1.00	6.78		N
		ANISOU	2054	N	LEU	A	257	897	749	929	38	73	75	N
		ATOM	2055	CA	LEU	A	257	-12.749	-73.551	283.219	1.00	7.56		C
5		ANISOU	2055	CA	LEU	A	257	942	1081	850	80	55	106	C
		ATOM	2056	CB	LEU	A	257	-13.242	-73.764	284.652	1.00	7.28		C
		ANISOU	2056	CB	LEU	A	257	1007	948	810	-55	208	24	C
		ATOM	2057	CG	LEU	A	257	-12.253	-74.210	285.702	1.00	7.27		C
		ANISOU	2057	CG	LEU	A	257	1075	571	1116	173	111	-235	C
10		ATOM	2058	CD1	LEU	A	257	-10.976	-73.447	285.667	1.00	9.41		C
		ANISOU	2058	CD1	LEU	A	257	1077	1368	1129	-26	-32	115	C
		ATOM	2059	CD2	LEU	A	257	-12.869	-74.286	287.066	1.00	8.88		C
		ANISOU	2059	CD2	LEU	A	257	1238	1007	1127	116	177	73	C
		ATOM	2060	C	LEU	A	257	-12.332	-74.922	282.635	1.00	7.52		C
15		ANISOU	2060	C	LEU	A	257	904	931	1021	-91	40	-32	C
		ATOM	2061	O	LEU	A	257	-13.110	-75.865	282.536	1.00	7.05		O
		ANISOU	2061	O	LEU	A	257	972	661	1043	-9	126	93	O
		ATOM	2062	N	ILE	A	258	-11.057	-74.990	282.170	1.00	7.04		N
		ANISOU	2062	N	ILE	A	258	916	741	1018	88	-4	26	N
20		ATOM	2063	CA	ILE	A	258	-10.461	-76.178	281.563	1.00	6.33		C
		ANISOU	2063	CA	ILE	A	258	964	526	913	-61	21	-38	C
		ATOM	2064	CB	ILE	A	258	-9.675	-75.803	280.273	1.00	7.09		C
		ANISOU	2064	CB	ILE	A	258	643	1049	999	7	-19	-165	C
		ATOM	2065	CG1	ILE	A	258	-10.563	-75.046	279.302	1.00	7.98		C
25		ANISOU	2065	CG1	ILE	A	258	1045	1017	971	-146	31	-6	C
		ATOM	2066	CD1	ILE	A	258	-9.803	-74.425	278.128	1.00	9.02		C
		ANISOU	2066	CD1	ILE	A	258	1379	964	1084	124	104	98	C
		ATOM	2067	CG2	ILE	A	258	-9.087	-77.106	279.671	1.00	7.87		C
		ANISOU	2067	CG2	ILE	A	258	1077	838	1073	32	151	12	C
30		ATOM	2068	C	ILE	A	258	-9.505	-76.732	282.616	1.00	7.05		C
		ANISOU	2068	C	ILE	A	258	1057	863	758	86	-79	-205	C
		ATOM	2069	O	ILE	A	258	-8.615	-76.066	283.115	1.00	7.90		O
		ANISOU	2069	O	ILE	A	258	1061	877	1062	-189	26	80	O
		ATOM	2070	N	PHE	A	259	-9.725	-78.023	282.941	1.00	7.48		N
35		ANISOU	2070	N	PHE	A	259	779	979	1084	0	45	4	N
		ATOM	2071	CA	PHE	A	259	-8.780	-78.739	283.761	1.00	6.45		C

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		ANISOU	2071	CA	PHE	A	259	867	748	834	-36	56	140	C
		ATOM	2072	CB	PHE	A	259	-9.447	-79.677	284.774	1.00	6.31		C
		ANISOU	2072	CB	PHE	A	259	843	810	744	-16	27	210	C
		ATOM	2073	CG	PHE	A	259	-9.973	-79.011	286.027	1.00	6.99		C
5		ANISOU	2073	CG	PHE	A	259	1071	757	828	-16	10	145	C
		ATOM	2074	CD1	PHE	A	259	-9.843	-77.686	286.295	1.00	7.30		C
		ANISOU	2074	CD1	PHE	A	259	989	954	829	-107	30	-127	C
		ATOM	2075	CE1	PHE	A	259	-10.342	-77.060	287.445	1.00	9.32		C
		ANISOU	2075	CE1	PHE	A	259	1401	1056	1081	5	3	-121	C
10		ATOM	2076	CZ	PHE	A	259	-10.995	-77.895	288.356	1.00	9.61		C
		ANISOU	2076	CZ	PHE	A	259	1174	1230	1244	-175	208	-69	C
		ATOM	2077	CE2	PHE	A	259	-11.153	-79.231	288.108	1.00	9.72		C
		ANISOU	2077	CE2	PHE	A	259	1295	1290	1106	-320	300	-176	C
		ATOM	2078	CD2	PHE	A	259	-10.645	-79.799	286.965	1.00	6.94		C
15		ANISOU	2078	CD2	PHE	A	259	896	767	972	161	105	215	C
		ATOM	2079	C	PHE	A	259	-7.872	-79.605	282.873	1.00	6.36		C
		ANISOU	2079	C	PHE	A	259	918	439	1057	24	-64	166	C
		ATOM	2080	O	PHE	A	259	-8.360	-80.437	282.079	1.00	7.28		O
		ANISOU	2080	O	PHE	A	259	937	935	893	-59	63	-79	O
20		ATOM	2081	N	ASP	A	260	-6.569	-79.398	283.017	1.00	5.50		N
		ANISOU	2081	N	ASP	A	260	869	255	963	3	-47	39	N
		ATOM	2082	CA	ASP	A	260	-5.582	-80.201	282.408	1.00	7.65		C
		ANISOU	2082	CA	ASP	A	260	783	1143	980	297	20	120	C
		ATOM	2083	CB	ASP	A	260	-4.390	-79.393	282.007	1.00	8.01		C
25		ANISOU	2083	CB	ASP	A	260	1058	1042	943	93	7	-48	C
		ATOM	2084	CG	ASP	A	260	-3.425	-80.153	281.165	1.00	7.10		C
		ANISOU	2084	CG	ASP	A	260	960	821	915	-281	94	-253	C
		ATOM	2085	OD1	ASP	A	260	-3.443	-81.451	281.233	1.00	9.02		O
		ANISOU	2085	OD1	ASP	A	260	1293	818	1313	144	146	65	O
30		ATOM	2086	OD2	ASP	A	260	-2.571	-79.641	280.396	1.00	8.69		O
		ANISOU	2086	OD2	ASP	A	260	1196	967	1135	-168	206	-47	O
		ATOM	2087	C	ASP	A	260	-5.259	-81.412	283.302	1.00	6.07		C
		ANISOU	2087	C	ASP	A	260	942	384	979	-39	60	-60	C
		ATOM	2088	O	ASP	A	260	-4.475	-81.279	284.227	1.00	6.46		O
35		ANISOU	2088	O	ASP	A	260	997	523	934	-63	16	-57	O
		ATOM	2089	N	GLU	A	261	-5.893	-82.553	282.990	1.00	6.71		N

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		ANISOU	2089	N	GLU	A	261	1173	531	843	-173	44	-68	N
		ATOM	2090	CA	GLU	A	261	-5.821	-83.776	283.761	1.00	5.95		C
		ANISOU	2090	CA	GLU	A	261	809	532	917	141	-4	79	C
		ATOM	2091	CB	GLU	A	261	-7.201	-84.327	284.127	1.00	6.30		C
5		ANISOU	2091	CB	GLU	A	261	774	663	956	224	107	-11	C
		ATOM	2092	CG	GLU	A	261	-8.007	-83.378	285.001	1.00	6.41		C
		ANISOU	2092	CG	GLU	A	261	824	663	947	17	120	-148	C
		ATOM	2093	CD	GLU	A	261	-8.659	-84.100	286.201	1.00	7.27		C
		ANISOU	2093	CD	GLU	A	261	1102	597	1061	-67	190	22	C
10		ATOM	2094	OE1	GLU	A	261	-8.072	-85.171	286.615	1.00	9.50		O
		ANISOU	2094	OE1	GLU	A	261	1326	1060	1223	201	150	486	O
		ATOM	2095	OE2	GLU	A	261	-9.745	-83.722	286.579	1.00	8.16		O
		ANISOU	2095	OE2	GLU	A	261	1115	892	1091	-77	102	178	O
		ATOM	2096	C	GLU	A	261	-4.925	-84.777	283.123	1.00	5.79		C
15		ANISOU	2096	C	GLU	A	261	798	675	724	-46	122	-28	C
		ATOM	2097	O	GLU	A	261	-5.062	-86.017	283.340	1.00	7.23		O
		ANISOU	2097	O	GLU	A	261	1155	622	970	-78	30	210	O
		ATOM	2098	N	VAL	A	262	-3.985	-84.380	282.288	1.00	6.45		N
		ANISOU	2098	N	VAL	A	262	930	575	945	133	144	144	N
20		ATOM	2099	CA	VAL	A	262	-3.103	-85.341	281.608	1.00	6.87		C
		ANISOU	2099	CA	VAL	A	262	913	698	997	-18	122	-73	C
		ATOM	2100	CB	VAL	A	262	-2.200	-84.544	280.650	1.00	7.19		C
		ANISOU	2100	CB	VAL	A	262	974	721	1034	-16	136	-160	C
		ATOM	2101	CG1	VAL	A	262	-1.012	-85.322	280.127	1.00	8.27		C
25		ANISOU	2101	CG1	VAL	A	262	1143	737	1261	214	105	231	C
		ATOM	2102	CG2	VAL	A	262	-3.048	-84.045	279.491	1.00	8.77		C
		ANISOU	2102	CG2	VAL	A	262	1120	1290	923	129	179	-178	C
		ATOM	2103	C	VAL	A	262	-2.317	-86.160	282.591	1.00	6.90		C
		ANISOU	2103	C	VAL	A	262	749	992	880	-93	-108	-16	C
30		ATOM	2104	O	VAL	A	262	-2.121	-87.356	282.300	1.00	7.59		O
		ANISOU	2104	O	VAL	A	262	1096	780	1008	-179	65	38	O
		ATOM	2105	N	ILE	A	263	-1.891	-85.601	283.747	1.00	6.55		N
		ANISOU	2105	N	ILE	A	263	1121	553	815	-163	-8	57	N
		ATOM	2106	CA	ILE	A	263	-1.334	-86.439	284.841	1.00	7.22		C
35		ANISOU	2106	CA	ILE	A	263	950	926	864	254	-5	97	C
		ATOM	2107	CB	ILE	A	263	-0.228	-85.688	285.567	1.00	7.44		C

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		ANISOU	2107	CB	ILE	A	263	1137	615	1073	63	1	217	C
		ATOM	2108	CG1	ILE	A	263	0.972	-85.645	284.659	1.00	8.24		C
		ANISOU	2108	CG1	ILE	A	263	1145	842	1143	-6	-55	293	C
		ATOM	2109	CD1	ILE	A	263	2.120	-84.785	285.249	1.00	10.03		C
5		ANISOU	2109	CD1	ILE	A	263	1211	1455	1145	-95	-23	-134	C
		ATOM	2110	CG2	ILE	A	263	0.186	-86.387	286.911	1.00	10.19		C
		ANISOU	2110	CG2	ILE	A	263	1526	1426	918	228	-262	-32	C
		ATOM	2111	C	ILE	A	263	-2.414	-86.870	285.819	1.00	7.23		C
		ANISOU	2111	C	ILE	A	263	1045	747	955	-110	29	-69	C
10		ATOM	2112	O	ILE	A	263	-2.395	-88.074	286.223	1.00	8.66		O
		ANISOU	2112	O	ILE	A	263	1312	819	1159	48	115	220	O
		ATOM	2113	N	THR	A	264	-3.383	-86.055	286.195	1.00	7.88		N
		ANISOU	2113	N	THR	A	264	1202	939	852	156	87	295	N
		ATOM	2114	CA	THR	A	264	-4.240	-86.350	287.317	1.00	7.43		C
15		ANISOU	2114	CA	THR	A	264	946	981	896	-213	46	-148	C
		ATOM	2115	CB	THR	A	264	-4.822	-85.072	287.939	1.00	9.49		C
		ANISOU	2115	CB	THR	A	264	1392	969	1244	180	-132	72	C
		ATOM	2116	OG1	THR	A	264	-5.548	-84.331	286.941	1.00	8.08		O
		ANISOU	2116	OG1	THR	A	264	1237	873	959	138	167	110	O
20		ATOM	2117	CG2	THR	A	264	-3.777	-84.160	288.562	1.00	9.43		C
		ANISOU	2117	CG2	THR	A	264	1285	1108	1188	201	-108	87	C
		ATOM	2118	C	THR	A	264	-5.321	-87.410	287.023	1.00	7.48		C
		ANISOU	2118	C	THR	A	264	1161	608	1073	-180	-62	117	C
		ATOM	2119	O	THR	A	264	-5.832	-87.978	287.992	1.00	9.92		O
25		ANISOU	2119	O	THR	A	264	1492	1145	1129	-241	243	345	O
		ATOM	2120	N	ALA	A	265	-5.787	-87.559	285.797	1.00	7.71		N
		ANISOU	2120	N	ALA	A	265	1231	689	1006	-78	111	-7	N
		ATOM	2121	CA	ALA	A	265	-6.920	-88.504	285.560	1.00	8.14		C
		ANISOU	2121	CA	ALA	A	265	1331	905	856	-108	-19	-183	C
30		ATOM	2122	CB	ALA	A	265	-7.644	-88.157	284.277	1.00	9.33		C
		ANISOU	2122	CB	ALA	A	265	1142	1217	1185	-196	-5	49	C
		ATOM	2123	C	ALA	A	265	-6.488	-89.976	285.490	1.00	9.25		C
		ANISOU	2123	C	ALA	A	265	1247	1022	1242	-11	139	142	C
		ATOM	2124	O	ALA	A	265	-5.346	-90.282	285.094	1.00	7.50		O
35		ANISOU	2124	O	ALA	A	265	1168	594	1084	-164	66	165	O
		ATOM	2125	N	PHE	A	266	-7.405	-90.839	285.875	1.00	8.62		N

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		ANISOU	2125	N	PHE	A	266	1183	1050	1041	-195	137	-75	N
		ATOM	2126	CA	PHE	A	266	-7.368	-92.284	285.670	1.00	8.02		C
		ANISOU	2126	CA	PHE	A	266	1083	952	1011	-240	-27	-144	C
		ATOM	2127	CB	PHE	A	266	-7.079	-92.735	284.220	1.00	8.80		C
5		ANISOU	2127	CB	PHE	A	266	1096	1108	1137	-175	52	-13	C
		ATOM	2128	CG	PHE	A	266	-8.020	-92.194	283.238	1.00	8.55		C
		ANISOU	2128	CG	PHE	A	266	1226	1076	945	-191	18	59	C
		ATOM	2129	CD1	PHE	A	266	-9.366	-92.511	283.269	1.00	10.65		C
		ANISOU	2129	CD1	PHE	A	266	1380	978	1687	-177	-147	443	C
10		ATOM	2130	CE1	PHE	A	266	-10.264	-91.995	282.333	1.00	12.49		C
		ANISOU	2130	CE1	PHE	A	266	1119	1948	1677	-146	-184	330	C
		ATOM	2131	CZ	PHE	A	266	-9.844	-91.081	281.376	1.00	14.46		C
		ANISOU	2131	CZ	PHE	A	266	1654	1987	1853	-95	-317	317	C
		ATOM	2132	CE2	PHE	A	266	-8.549	-90.765	281.341	1.00	10.73		C
15		ANISOU	2132	CE2	PHE	A	266	1542	1442	1090	-209	31	48	C
		ATOM	2133	CD2	PHE	A	266	-7.642	-91.292	282.241	1.00	7.56		C
		ANISOU	2133	CD2	PHE	A	266	1199	574	1099	-101	14	-126	C
		ATOM	2134	C	PHE	A	266	-6.516	-93.018	286.688	1.00	7.19		C
		ANISOU	2134	C	PHE	A	266	1087	484	1160	-216	27	180	C
20		ATOM	2135	O	PHE	A	266	-6.209	-94.242	286.462	1.00	8.53		O
		ANISOU	2135	O	PHE	A	266	1381	677	1182	71	52	80	O
		ATOM	2136	N	GLY	A	267	-6.290	-92.455	287.866	1.00	8.92		N
		ANISOU	2136	N	GLY	A	267	1419	890	1078	-183	-36	221	N
		ATOM	2137	CA	GLY	A	267	-5.925	-93.182	289.058	1.00	8.60		C
25		ANISOU	2137	CA	GLY	A	267	1276	1043	946	49	147	156	C
		ATOM	2138	C	GLY	A	267	-4.861	-92.658	289.929	1.00	7.99		C
		ANISOU	2138	C	GLY	A	267	1351	564	1121	29	-19	126	C
		ATOM	2139	O	GLY	A	267	-4.813	-92.899	291.155	1.00	10.45		O
		ANISOU	2139	O	GLY	A	267	1822	968	1181	71	170	329	O
30		ATOM	2140	N	ARG	A	268	-4.054	-91.719	289.399	1.00	8.55		N
		ANISOU	2140	N	ARG	A	268	1218	1040	988	-143	-116	438	N
		ATOM	2141	CA	ARG	A	268	-3.031	-91.136	290.205	1.00	10.05		C
		ANISOU	2141	CA	ARG	A	268	1308	1088	1421	84	-113	139	C
		ATOM	2142	CB	ARG	A	268	-2.179	-90.148	289.410	1.00	12.46		C
35		ANISOU	2142	CB	ARG	A	268	1416	1685	1631	-234	340	-279	C
		ATOM	2143	CG	ARG	A	268	-0.845	-89.968	290.268	1.00	17.03		C

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		ANISOU	2143	CG	ARG	A	268	2164	2438	1868	-778	6	-587	C
		ATOM	2144	CD	ARG	A	268	0.347	-89.974	289.543	1.00	13.77		C
		ANISOU	2144	CD	ARG	A	268	1622	1025	2584	-260	-389	50	C
		ATOM	2145	NE	ARG	A	268	0.519	-91.043	288.689	1.00	12.32		N
5		ANISOU	2145	NE	ARG	A	268	1606	1568	1507	-83	-270	91	N
		ATOM	2146	CZ	ARG	A	268	1.139	-92.137	289.031	1.00	10.72		C
		ANISOU	2146	CZ	ARG	A	268	1212	1452	1407	-35	123	-17	C
		ATOM	2147	NH1	ARG	A	268	1.590	-92.293	290.230	1.00	9.24		N
		ANISOU	2147	NH1	ARG	A	268	1516	833	1162	154	-84	71	N
10		ATOM	2148	NH2	ARG	A	268	1.259	-93.050	288.098	1.00	9.75		N
		ANISOU	2148	NH2	ARG	A	268	1442	1025	1237	23	188	205	N
		ATOM	2149	C	ARG	A	268	-3.512	-90.494	291.499	1.00	10.61		C
		ANISOU	2149	C	ARG	A	268	1305	1591	1135	-73	127	185	C
		ATOM	2150	O	ARG	A	268	-2.766	-90.469	292.480	1.00	11.15		O
15		ANISOU	2150	O	ARG	A	268	1703	1132	1400	293	-168	95	O
		ATOM	2151	N	MET	A	269	-4.688	-89.903	291.459	1.00	7.86		N
		ANISOU	2151	N	MET	A	269	1315	664	1006	22	-108	434	N
		ATOM	2152	CA	MET	A	269	-5.281	-89.270	292.646	1.00	12.12		C
		ANISOU	2152	CA	MET	A	269	1617	1651	1334	77	255	147	C
20		ATOM	2153	CB	MET	A	269	-6.120	-88.059	292.230	1.00	12.35		C
		ANISOU	2153	CB	MET	A	269	1854	1519	1317	-76	157	180	C
		ATOM	2154	CG	MET	A	269	-5.418	-87.021	291.278	1.00	12.86		C
		ANISOU	2154	CG	MET	A	269	1867	1822	1193	212	317	643	C
		ATOM	2155	SD	MET	A	269	-3.759	-86.614	291.843	1.00	19.19		S
25		ANISOU	2155	SD	MET	A	269	2723	2107	2458	-651	-154	699	S
		ATOM	2156	CE	MET	A	269	-4.131	-85.728	293.241	1.00	20.78		C
		ANISOU	2156	CE	MET	A	269	2622	1965	3306	-172	-225	-212	C
		ATOM	2157	C	MET	A	269	-6.151	-90.141	293.520	1.00	11.52		C
		ANISOU	2157	C	MET	A	269	1807	1046	1523	-267	120	23	C
30		ATOM	2158	O	MET	A	269	-6.703	-89.701	294.489	1.00	11.91		O
		ANISOU	2158	O	MET	A	269	2092	1014	1420	131	467	326	O
		ATOM	2159	N	GLY	A	270	-6.283	-91.425	293.139	1.00	9.07		N
		ANISOU	2159	N	GLY	A	270	1496	1058	891	-209	175	271	N
		ATOM	2160	CA	GLY	A	270	-7.067	-92.446	293.960	1.00	10.59		C
35		ANISOU	2160	CA	GLY	A	270	1648	1113	1259	-241	254	298	C
		ATOM	2161	C	GLY	A	270	-8.545	-92.296	293.772	1.00	11.06		C

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		ANISOU	2161	C	GLY	A	270	1524	1260	1419	-183	34	302	C
		ATOM	2162	O	GLY	A	270	-9.325	-92.880	294.490	1.00	11.72		O
		ANISOU	2162	O	GLY	A	270	1622	1438	1393	-89	301	388	O
		ATOM	2163	N	ALYS	A	271	-8.938	-91.502	292.770	0.50	10.82		N
5		ANISOU	2163	N	ALYS	A	271	1703	826	1580	-222	46	368	N
		ATOM	2164	N	BLYS	A	271	-8.961	-91.466	292.801	0.50	11.04		N
		ANISOU	2164	N	BLYS	A	271	1740	876	1576	-167	106	380	N
		ATOM	2165	CA	ALYS	A	271	-10.290	-91.356	292.281	0.50	11.02		C
		ANISOU	2165	CA	ALYS	A	271	1760	997	1428	-56	371	352	C
10		ATOM	2166	CA	BLYS	A	271	-10.322	-91.351	292.281	0.50	11.41		C
		ANISOU	2166	CA	BLYS	A	271	1822	1052	1461	-63	392	384	C
		ATOM	2167	CB	ALYS	A	271	-10.915	-90.055	292.744	0.50	12.42		C
		ANISOU	2167	CB	ALYS	A	271	1578	1275	1864	13	16	-271	C
		ATOM	2168	CB	BLYS	A	271	-11.006	-90.041	292.648	0.50	12.81		C
15		ANISOU	2168	CB	BLYS	A	271	1567	1331	1967	9	-95	-389	C
		ATOM	2169	CG	ALYS	A	271	-10.867	-89.856	294.256	0.50	15.90		C
		ANISOU	2169	CG	ALYS	A	271	1981	2228	1830	-134	58	-89	C
		ATOM	2170	CG	BLYS	A	271	-11.248	-89.787	294.132	0.50	16.89		C
		ANISOU	2170	CG	BLYS	A	271	2246	2306	1863	-24	-141	-28	C
20		ATOM	2171	CD	ALYS	A	271	-11.656	-90.963	294.925	0.50	15.78		C
		ANISOU	2171	CD	ALYS	A	271	2406	1442	2145	379	-216	526	C
		ATOM	2172	CD	BLYS	A	271	-12.348	-90.673	294.671	0.50	17.50		C
		ANISOU	2172	CD	BLYS	A	271	2344	1941	2363	15	-230	285	C
		ATOM	2173	CE	ALYS	A	271	-11.409	-91.202	296.473	0.50	22.78		C
25		ANISOU	2173	CE	ALYS	A	271	3514	2791	2348	85	-1067	497	C
		ATOM	2174	CE	BLYS	A	271	-12.574	-90.484	296.198	0.50	20.37		C
		ANISOU	2174	CE	BLYS	A	271	1841	2953	2943	605	155	-538	C
		ATOM	2175	NZ	ALYS	A	271	-10.508	-92.329	297.086	0.50	10.61		N
		ANISOU	2175	NZ	ALYS	A	271	1926	828	1278	-51	868	-199	N
30		ATOM	2176	NZ	BLYS	A	271	-13.721	-91.310	296.626	0.50	25.36		N
		ANISOU	2176	NZ	BLYS	A	271	4371	3033	2228	586	928	1629	N
		ATOM	2177	C	ALYS	A	271	-10.167	-91.305	290.754	0.50	8.31		C
		ANISOU	2177	C	ALYS	A	271	1451	296	1409	135	102	190	C
		ATOM	2178	C	BLYS	A	271	-10.176	-91.315	290.759	0.50	8.39		C
35		ANISOU	2178	C	BLYS	A	271	1460	296	1430	124	90	196	C
		ATOM	2179	O	ALYS	A	271	-9.037	-91.166	290.201	0.50	10.45		O

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		ANISOU	2179	O	ALYS	A	271	1386	915	1666	153	269	436	O
		ATOM	2180	O	BLYS	A	271	-9.051	-91.169	290.211	0.50	10.63		O
		ANISOU	2180	O	BLYS	A	271	1399	933	1704	155	264	463	O
		ATOM	2181	N	ALA	A	272	-11.263	-91.488	290.033	1.00	11.19		N
5		ANISOU	2181	N	ALA	A	272	1263	1650	1339	-18	148	203	N
		ATOM	2182	CA	ALA	A	272	-11.202	-91.586	288.560	1.00	10.45		C
		ANISOU	2182	CA	ALA	A	272	1595	950	1426	41	-78	217	C
		ATOM	2183	CB	ALA	A	272	-12.533	-91.859	287.971	1.00	12.38		C
		ANISOU	2183	CB	ALA	A	272	1686	1303	1714	20	8	130	C
10		ATOM	2184	C	ALA	A	272	-10.613	-90.293	287.944	1.00	9.62		C
		ANISOU	2184	C	ALA	A	272	1347	1078	1230	-230	153	-11	C
		ATOM	2185	O	ALA	A	272	-9.956	-90.401	286.901	1.00	9.13		O
		ANISOU	2185	O	ALA	A	272	1498	739	1231	135	302	173	O
		ATOM	2186	N	THR	A	273	-10.809	-89.103	288.535	1.00	8.88		N
15		ANISOU	2186	N	THR	A	273	1161	1064	1147	15	180	141	N
		ATOM	2187	CA	THR	A	273	-10.316	-87.822	288.062	1.00	8.90		C
		ANISOU	2187	CA	THR	A	273	1011	1099	1271	5	200	149	C
		ATOM	2188	CB	THR	A	273	-11.344	-87.071	287.177	1.00	9.35		C
		ANISOU	2188	CB	THR	A	273	1285	1073	1194	-43	86	-18	C
20		ATOM	2189	OG1	THR	A	273	-12.491	-86.719	287.989	1.00	8.88		O
		ANISOU	2189	OG1	THR	A	273	1137	999	1237	62	193	138	O
		ATOM	2190	CG2	THR	A	273	-11.741	-87.848	285.941	1.00	8.68		C
		ANISOU	2190	CG2	THR	A	273	1273	691	1333	-195	-15	283	C
		ATOM	2191	C	THR	A	273	-9.878	-87.011	289.234	1.00	10.66		C
25		ANISOU	2191	C	THR	A	273	1294	1587	1167	-74	81	172	C
		ATOM	2192	O	THR	A	273	-10.359	-87.126	290.382	1.00	9.45		O
		ANISOU	2192	O	THR	A	273	1469	949	1171	-25	316	127	O
		ATOM	2193	N	GLY	A	274	-8.997	-86.056	288.935	1.00	10.19		N
		ANISOU	2193	N	GLY	A	274	1371	1278	1219	-15	37	-36	N
30		ATOM	2194	CA	GLY	A	274	-8.704	-85.021	289.868	1.00	8.62		C
		ANISOU	2194	CA	GLY	A	274	1124	952	1199	-240	25	234	C
		ATOM	2195	C	GLY	A	274	-9.895	-84.158	290.201	1.00	8.52		C
		ANISOU	2195	C	GLY	A	274	1343	741	1152	9	-26	81	C
		ATOM	2196	O	GLY	A	274	-10.063	-83.748	291.333	1.00	9.99		O
35		ANISOU	2196	O	GLY	A	274	1623	1086	1086	-52	227	-68	O
		ATOM	2197	N	ALA	A	275	-10.697	-83.868	289.203	1.00	8.69		N

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		ANISOU	2197	N	ALA	A	275	1136	1144	1021	-76	85	115	N
		ATOM	2198	CA	ALA	A	275	-11.956	-83.167	289.441	1.00	8.09		C
		ANISOU	2198	CA	ALA	A	275	1291	839	941	15	124	-50	C
		ATOM	2199	CB	ALA	A	275	-12.807	-83.106	288.168	1.00	9.62		C
5		ANISOU	2199	CB	ALA	A	275	1193	1269	1190	-32	60	342	C
		ATOM	2200	C	ALA	A	275	-12.779	-83.791	290.572	1.00	8.61		C
		ANISOU	2200	C	ALA	A	275	1230	951	1090	104	225	208	C
		ATOM	2201	O	ALA	A	275	-13.285	-83.112	291.466	1.00	9.59		O
		ANISOU	2201	O	ALA	A	275	1633	869	1140	177	211	166	O
10		ATOM	2202	N	GLU	A	276	-12.874	-85.128	290.501	1.00	9.69		N
		ANISOU	2202	N	GLU	A	276	1448	1047	1187	-38	331	-4	N
		ATOM	2203	CA	GLU	A	276	-13.615	-85.881	291.545	1.00	9.10		C
		ANISOU	2203	CA	GLU	A	276	1267	1043	1146	-35	345	-22	C
		ATOM	2204	CB	GLU	A	276	-13.826	-87.327	291.086	1.00	10.48		C
15		ANISOU	2204	CB	GLU	A	276	1473	1101	1407	-292	283	85	C
		ATOM	2205	CG	GLU	A	276	-14.638	-88.180	292.126	1.00	10.23		C
		ANISOU	2205	CG	GLU	A	276	1506	1061	1318	-32	21	580	C
		ATOM	2206	CD	GLU	A	276	-14.767	-89.626	291.661	1.00	14.91		C
		ANISOU	2206	CD	GLU	A	276	2197	1575	1893	13	638	-71	C
20		ATOM	2207	OE1	GLU	A	276	-14.473	-89.928	290.500	1.00	15.82		O
		ANISOU	2207	OE1	GLU	A	276	2704	1422	1884	-563	501	305	O
		ATOM	2208	OE2	GLU	A	276	-15.228	-90.440	292.463	1.00	18.97		O
		ANISOU	2208	OE2	GLU	A	276	2930	2225	2051	-740	329	663	O
		ATOM	2209	C	GLU	A	276	-12.853	-85.824	292.888	1.00	7.90		C
25		ANISOU	2209	C	GLU	A	276	1298	353	1351	-169	101	264	C
		ATOM	2210	O	GLU	A	276	-13.458	-85.560	293.958	1.00	11.98		O
		ANISOU	2210	O	GLU	A	276	1957	1242	1350	-5	368	42	O
		ATOM	2211	N	TYR	A	277	-11.565	-85.953	292.853	1.00	9.27		N
		ANISOU	2211	N	TYR	A	277	1324	1155	1043	-190	158	0	N
30		ATOM	2212	CA	TYR	A	277	-10.759	-85.936	294.058	1.00	10.92		C
		ANISOU	2212	CA	TYR	A	277	1462	1191	1494	139	-227	148	C
		ATOM	2213	CB	TYR	A	277	-9.291	-86.140	293.725	1.00	11.53		C
		ANISOU	2213	CB	TYR	A	277	1700	1207	1474	51	101	-11	C
		ATOM	2214	CG	TYR	A	277	-8.311	-86.059	294.910	1.00	11.26		C
35		ANISOU	2214	CG	TYR	A	277	1830	1008	1441	-88	-225	330	C
		ATOM	2215	CD1	TYR	A	277	-8.084	-87.136	295.711	1.00	14.00		C

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		ANISOU	2215	CD1	TYR	A	277	2398	1074	1847	382	-283	438	C
		ATOM	2216	CE1	TYR	A	277	-7.196	-87.057	296.769	1.00	16.50		C
		ANISOU	2216	CE1	TYR	A	277	2413	1766	2091	-171	-503	306	C
		ATOM	2217	CZ	TYR	A	277	-6.506	-85.936	297.015	1.00	15.90		C
5		ANISOU	2217	CZ	TYR	A	277	2406	1851	1784	-295	-663	655	C
		ATOM	2218	OH	TYR	A	277	-5.623	-85.843	298.067	1.00	18.34		O
		ANISOU	2218	OH	TYR	A	277	3076	1474	2419	-339	-1243	573	O
		ATOM	2219	CE2	TYR	A	277	-6.721	-84.823	296.229	1.00	14.03		C
		ANISOU	2219	CE2	TYR	A	277	2093	1471	1765	-136	-322	366	C
10		ATOM	2220	CD2	TYR	A	277	-7.640	-84.916	295.177	1.00	12.89		C
		ANISOU	2220	CD2	TYR	A	277	1834	1529	1534	-598	-10	494	C
		ATOM	2221	C	TYR	A	277	-10.912	-84.622	294.775	1.00	10.68		C
		ANISOU	2221	C	TYR	A	277	1771	778	1510	49	88	296	C
		ATOM	2222	O	TYR	A	277	-11.084	-84.560	296.042	1.00	12.60		O
15		ANISOU	2222	O	TYR	A	277	2222	1353	1212	223	278	202	O
		ATOM	2223	N	PHE	A	278	-10.829	-83.423	294.111	1.00	8.65		N
		ANISOU	2223	N	PHE	A	278	1365	745	1174	-48	205	203	N
		ATOM	2224	CA	PHE	A	278	-10.957	-82.046	294.642	1.00	9.06		C
		ANISOU	2224	CA	PHE	A	278	1305	1019	1117	-225	71	-69	C
20		ATOM	2225	CB	PHE	A	278	-10.149	-81.073	293.786	1.00	10.84		C
		ANISOU	2225	CB	PHE	A	278	1679	1030	1409	-114	183	17	C
		ATOM	2226	CG	PHE	A	278	-8.640	-81.333	293.872	1.00	9.54		C
		ANISOU	2226	CG	PHE	A	278	1594	655	1375	-69	301	453	C
		ATOM	2227	CD1	PHE	A	278	-7.941	-81.116	295.066	1.00	12.28		C
25		ANISOU	2227	CD1	PHE	A	278	1675	1624	1365	-9	-7	197	C
		ATOM	2228	CE1	PHE	A	278	-6.591	-81.331	295.169	1.00	11.94		C
		ANISOU	2228	CE1	PHE	A	278	1782	1432	1321	-50	-140	130	C
		ATOM	2229	CZ	PHE	A	278	-5.873	-81.787	294.053	1.00	13.18		C
		ANISOU	2229	CZ	PHE	A	278	1590	1691	1726	45	40	440	C
30		ATOM	2230	CE2	PHE	A	278	-6.538	-82.029	292.903	1.00	12.17		C
		ANISOU	2230	CE2	PHE	A	278	1673	1388	1562	-156	200	145	C
		ATOM	2231	CD2	PHE	A	278	-7.926	-81.790	292.803	1.00	11.62		C
		ANISOU	2231	CD2	PHE	A	278	1767	1382	1262	128	98	111	C
		ATOM	2232	C	PHE	A	278	-12.365	-81.650	294.779	1.00	8.64		C
35		ANISOU	2232	C	PHE	A	278	1297	888	1097	-107	218	218	C
		ATOM	2233	O	PHE	A	278	-12.616	-80.589	295.436	1.00	12.90		O

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		ANISOU	2233	O	PHE	A	278	1954	1290	1655	60	46	-138	O
		ATOM	2234	N	GLY	A	279	-13.325	-82.336	294.162	1.00	9.14		N
		ANISOU	2234	N	GLY	A	279	1435	943	1092	69	107	252	N
		ATOM	2235	CA	GLY	A	279	-14.746	-81.951	294.243	1.00	10.79		C
5		ANISOU	2235	CA	GLY	A	279	1453	1338	1309	-227	277	161	C
		ATOM	2236	C	GLY	A	279	-15.163	-80.747	293.442	1.00	10.67		C
		ANISOU	2236	C	GLY	A	279	1322	1300	1431	-154	340	97	C
		ATOM	2237	O	GLY	A	279	-16.146	-80.097	293.773	1.00	13.04		O
		ANISOU	2237	O	GLY	A	279	1787	1758	1407	361	449	268	O
10		ATOM	2238	N	VAL	A	280	-14.518	-80.497	292.305	1.00	10.25		N
		ANISOU	2238	N	VAL	A	280	1575	1220	1099	129	230	38	N
		ATOM	2239	CA	VAL	A	280	-14.822	-79.341	291.433	1.00	8.95		C
		ANISOU	2239	CA	VAL	A	280	1039	1225	1135	20	19	-72	C
		ATOM	2240	CB	VAL	A	280	-13.690	-78.267	291.590	1.00	8.69		C
15		ANISOU	2240	CB	VAL	A	280	1273	811	1214	-122	-102	26	C
		ATOM	2241	CG1	VAL	A	280	-13.985	-77.042	290.739	1.00	8.89		C
		ANISOU	2241	CG1	VAL	A	280	1169	985	1222	-215	265	136	C
		ATOM	2242	CG2	VAL	A	280	-13.581	-77.803	293.052	1.00	9.25		C
		ANISOU	2242	CG2	VAL	A	280	1370	1018	1125	36	96	104	C
20		ATOM	2243	C	VAL	A	280	-14.852	-79.818	289.991	1.00	8.62		C
		ANISOU	2243	C	VAL	A	280	1113	995	1167	43	-59	104	C
		ATOM	2244	O	VAL	A	280	-13.973	-80.581	289.573	1.00	8.69		O
		ANISOU	2244	O	VAL	A	280	1335	959	1005	131	84	172	O
		ATOM	2245	N	THR	A	281	-15.923	-79.468	289.282	1.00	7.38		N
25		ANISOU	2245	N	THR	A	281	1093	657	1054	-69	133	127	N
		ATOM	2246	CA	THR	A	281	-16.185	-79.952	287.964	1.00	8.23		C
		ANISOU	2246	CA	THR	A	281	1205	856	1064	-32	58	257	C
		ATOM	2247	CB	THR	A	281	-17.618	-80.361	287.824	1.00	8.52		C
		ANISOU	2247	CB	THR	A	281	1201	842	1195	-9	-92	277	C
30		ATOM	2248	OG1	THR	A	281	-17.815	-81.407	288.774	1.00	11.44		O
		ANISOU	2248	OG1	THR	A	281	1649	1234	1461	-144	210	600	O
		ATOM	2249	CG2	THR	A	281	-17.882	-80.943	286.452	1.00	10.44		C
		ANISOU	2249	CG2	THR	A	281	1261	1459	1247	-131	44	104	C
		ATOM	2250	C	THR	A	281	-15.900	-78.892	286.918	1.00	7.17		C
35		ANISOU	2250	C	THR	A	281	1020	642	1063	91	47	62	C
		ATOM	2251	O	THR	A	281	-16.411	-77.748	286.978	1.00	8.44		O

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		ANISOU	2251	O	THR	A	281	1205	811	1188	226	279	-86	O
		ATOM	2252	N	PRO	A	282	-14.919	-79.113	285.985	1.00	6.33		N
		ANISOU	2252	N	PRO	A	282	1004	516	883	-44	-25	36	N
		ATOM	2253	CA	PRO	A	282	-14.623	-78.136	284.936	1.00	7.47		C
5		ANISOU	2253	CA	PRO	A	282	921	1007	907	-18	87	84	C
		ATOM	2254	CB	PRO	A	282	-13.211	-78.577	284.454	1.00	6.10		C
		ANISOU	2254	CB	PRO	A	282	929	560	826	-42	-8	-110	C
		ATOM	2255	CG	PRO	A	282	-13.284	-80.109	284.598	1.00	7.14		C
		ANISOU	2255	CG	PRO	A	282	980	687	1043	35	55	-22	C
10		ATOM	2256	CD	PRO	A	282	-14.117	-80.347	285.866	1.00	7.85		C
		ANISOU	2256	CD	PRO	A	282	1173	693	1117	87	221	-196	C
		ATOM	2257	C	PRO	A	282	-15.605	-78.238	283.797	1.00	8.89		C
		ANISOU	2257	C	PRO	A	282	1344	1032	1000	-22	10	171	C
		ATOM	2258	O	PRO	A	282	-16.386	-79.181	283.698	1.00	8.91		O
15		ANISOU	2258	O	PRO	A	282	1256	1090	1036	0	59	-3	O
		ATOM	2259	N	ASP	A	283	-15.524	-77.243	282.896	1.00	7.31		N
		ANISOU	2259	N	ASP	A	283	1112	667	995	35	-52	-82	N
		ATOM	2260	CA	ASP	A	283	-16.322	-77.277	281.690	1.00	5.33		C
		ANISOU	2260	CA	ASP	A	283	792	357	874	-89	142	138	C
20		ATOM	2261	CB	ASP	A	283	-16.406	-75.860	281.121	1.00	5.14		C
		ANISOU	2261	CB	ASP	A	283	805	392	755	-93	-89	76	C
		ATOM	2262	CG	ASP	A	283	-17.173	-74.908	282.042	1.00	7.79		C
		ANISOU	2262	CG	ASP	A	283	1097	1062	801	70	68	-91	C
		ATOM	2263	OD1	ASP	A	283	-18.420	-75.026	282.077	1.00	9.19		O
25		ANISOU	2263	OD1	ASP	A	283	1045	1168	1276	91	98	-315	O
		ATOM	2264	OD2	ASP	A	283	-16.540	-74.139	282.726	1.00	8.31		O
		ANISOU	2264	OD2	ASP	A	283	946	1011	1200	-57	-19	-27	O
		ATOM	2265	C	ASP	A	283	-15.708	-78.196	280.595	1.00	6.54		C
		ANISOU	2265	C	ASP	A	283	896	631	956	0	33	-79	C
30		ATOM	2266	O	ASP	A	283	-16.436	-78.693	279.777	1.00	7.96		O
		ANISOU	2266	O	ASP	A	283	987	1043	995	-170	25	-36	O
		ATOM	2267	N	ILE	A	284	-14.389	-78.277	280.597	1.00	6.60		N
		ANISOU	2267	N	ILE	A	284	814	832	859	30	43	-51	N
		ATOM	2268	CA	ILE	A	284	-13.620	-79.084	279.651	1.00	6.58		C
35		ANISOU	2268	CA	ILE	A	284	982	625	892	-99	-52	-151	C
		ATOM	2269	CB	ILE	A	284	-12.992	-78.200	278.526	1.00	8.10		C

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		ANISOU	2269	CB	ILE	A	284	1046	1068	962	-12	71	-102	C
		ATOM	2270	CG1	ILE	A	284	-14.087	-77.497	277.678	1.00	8.08		C
		ANISOU	2270	CG1	ILE	A	284	1091	769	1209	-116	127	-43	C
		ATOM	2271	CD1	ILE	A	284	-13.503	-76.441	276.763	1.00	9.03		C
5		ANISOU	2271	CD1	ILE	A	284	1383	891	1156	220	19	127	C
		ATOM	2272	CG2	ILE	A	284	-12.157	-79.110	277.600	1.00	8.33		C
		ANISOU	2272	CG2	ILE	A	284	954	1040	1169	34	74	32	C
		ATOM	2273	C	ILE	A	284	-12.492	-79.748	280.418	1.00	5.52		C
		ANISOU	2273	C	ILE	A	284	831	472	792	33	137	31	C
10		ATOM	2274	O	ILE	A	284	-11.916	-79.170	281.329	1.00	7.70		O
		ANISOU	2274	O	ILE	A	284	1036	879	1010	-3	-99	148	O
		ATOM	2275	N	MET	A	285	-12.274	-81.049	280.114	1.00	6.35		N
		ANISOU	2275	N	MET	A	285	961	522	930	-66	40	-213	N
		ATOM	2276	CA	MET	A	285	-11.199	-81.844	280.751	1.00	8.17		C
15		ANISOU	2276	CA	MET	A	285	1040	1152	910	37	58	-11	C
		ATOM	2277	CB	MET	A	285	-11.826	-82.938	281.613	1.00	7.98		C
		ANISOU	2277	CB	MET	A	285	1211	1075	746	-53	92	-45	C
		ATOM	2278	CG	MET	A	285	-10.813	-83.721	282.417	1.00	8.51		C
		ANISOU	2278	CG	MET	A	285	1446	548	1239	69	-92	123	C
20		ATOM	2279	SD	MET	A	285	-11.460	-85.121	283.389	1.00	10.03		S
		ANISOU	2279	SD	MET	A	285	1720	912	1176	-30	144	219	S
		ATOM	2280	CE	MET	A	285	-12.319	-84.224	284.675	1.00	11.89		C
		ANISOU	2280	CE	MET	A	285	1538	1875	1104	216	163	31	C
		ATOM	2281	C	MET	A	285	-10.281	-82.445	279.736	1.00	6.97		C
25		ANISOU	2281	C	MET	A	285	973	735	937	9	-46	57	C
		ATOM	2282	O	MET	A	285	-10.744	-83.109	278.828	1.00	7.58		O
		ANISOU	2282	O	MET	A	285	988	795	1096	-70	-31	-25	O
		ATOM	2283	N	ASN	A	286	-8.976	-82.220	279.896	1.00	5.96		N
		ANISOU	2283	N	ASN	A	286	911	464	889	-51	124	171	N
30		ATOM	2284	CA	ASN	A	286	-7.981	-82.782	278.999	1.00	6.91		C
		ANISOU	2284	CA	ASN	A	286	1041	833	749	-142	85	63	C
		ATOM	2285	CB	ASN	A	286	-6.911	-81.797	278.655	1.00	7.48		C
		ANISOU	2285	CB	ASN	A	286	920	866	1053	-10	199	239	C
		ATOM	2286	CG	ASN	A	286	-7.417	-80.557	277.897	1.00	6.09		C
35		ANISOU	2286	CG	ASN	A	286	804	654	853	10	58	-138	C
		ATOM	2287	OD1	ASN	A	286	-8.569	-80.535	277.483	1.00	7.88		O

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	ANISOU	2287	OD1	ASN	A	286	1011	937	1045	117	-124	178	O
	ATOM	2288	ND2	ASN	A	286	-6.561	-79.529	277.728	1.00	7.82		N
	ANISOU	2288	ND2	ASN	A	286	1003	792	1175	-168	38	146	N
	ATOM	2289	C	ASN	A	286	-7.302	-84.035	279.656	1.00	6.70		C
5	ANISOU	2289	C	ASN	A	286	797	774	974	-27	-44	-131	C
	ATOM	2290	O	ASN	A	286	-6.934	-83.905	280.780	1.00	6.87		O
	ANISOU	2290	O	ASN	A	286	1019	731	858	123	-40	5	O
	ATOM	2291	N	VAL	A	287	-7.230	-85.125	278.920	1.00	6.23		N
	ANISOU	2291	N	VAL	A	287	977	638	749	15	101	164	N
10	ATOM	2292	CA	VAL	A	287	-6.685	-86.387	279.461	1.00	6.86		C
	ANISOU	2292	CA	VAL	A	287	1188	648	771	177	-43	-26	C
	ATOM	2293	CB	VAL	A	287	-7.749	-87.380	279.869	1.00	9.15		C
	ANISOU	2293	CB	VAL	A	287	1097	1136	1242	-20	103	92	C
	ATOM	2294	CG1	VAL	A	287	-8.710	-86.789	280.917	1.00	7.74		C
15	ANISOU	2294	CG1	VAL	A	287	1118	753	1070	45	7	169	C
	ATOM	2295	CG2	VAL	A	287	-8.489	-87.873	278.631	1.00	7.94		C
	ANISOU	2295	CG2	VAL	A	287	1290	449	1277	-174	136	262	C
	ATOM	2296	C	VAL	A	287	-5.723	-86.983	278.418	1.00	6.90		C
	ANISOU	2296	C	VAL	A	287	960	909	750	44	-28	-38	C
20	ATOM	2297	O	VAL	A	287	-5.865	-86.741	277.197	1.00	6.33		O
	ANISOU	2297	O	VAL	A	287	1098	359	947	-91	-69	31	O
	ATOM	2298	N	ALA	A	288	-4.787	-87.802	278.918	1.00	8.58		N
	ANISOU	2298	N	ALA	A	288	1176	1008	1074	248	58	184	N
	ATOM	2299	CA	ALA	A	288	-3.888	-88.571	278.027	1.00	7.33		C
25	ANISOU	2299	CA	ALA	A	288	985	800	999	-26	64	256	C
	ATOM	2300	CB	ALA	A	288	-2.924	-87.683	277.231	1.00	7.87		C
	ANISOU	2300	CB	ALA	A	288	1166	693	1130	-203	80	111	C
	ATOM	2301	C	ALA	A	288	-3.216	-89.625	278.878	1.00	7.27		C
	ANISOU	2301	C	ALA	A	288	981	920	860	163	-206	6	C
30	ATOM	2302	O	ALA	A	288	-3.906	-90.208	279.750	1.00	8.45		O
	ANISOU	2302	O	ALA	A	288	1262	766	1182	-83	169	106	O
	ATOM	2303	N	ALYS	A	289	-1.935	-89.873	278.643	0.70	7.60		N
	ANISOU	2303	N	ALYS	A	289	1035	822	1030	-95	100	87	N
	ATOM	2304	N	BLYS	A	289	-1.922	-89.845	278.661	0.30	7.39		N
35	ANISOU	2304	N	BLYS	A	289	1040	664	1104	-58	90	66	N
	ATOM	2305	CA	ALYS	A	289	-1.127	-90.759	279.498	0.70	8.69		C

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		ANISOU	2305	CA	ALYS	A	289	1089	1118	1092	41	163	361	C
		ATOM	2306	CA	BLYS	A	289	-1.105	-90.729	279.506	0.30	8.44		C
		ANISOU	2306	CA	BLYS	A	289	1063	1033	1110	8	118	273	C
		ATOM	2307	CB	ALYS	A	289	-0.518	-89.978	280.633	0.70	9.18		C
5		ANISOU	2307	CB	ALYS	A	289	1076	1084	1325	40	174	323	C
		ATOM	2308	CB	BLYS	A	289	-0.503	-89.931	280.660	0.30	9.33		C
		ANISOU	2308	CB	BLYS	A	289	1114	1120	1308	-3	107	194	C
		ATOM	2309	CG	ALYS	A	289	0.460	-88.897	280.168	0.70	9.47		C
		ANISOU	2309	CG	ALYS	A	289	1103	1284	1210	-35	155	196	C
10		ATOM	2310	CG	BLYS	A	289	0.478	-88.847	280.204	0.30	9.38		C
		ANISOU	2310	CG	BLYS	A	289	1151	1248	1164	-62	120	140	C
		ATOM	2311	CD	ALYS	A	289	1.139	-88.328	281.401	0.70	10.43		C
		ANISOU	2311	CD	ALYS	A	289	1250	1147	1565	-289	169	-180	C
		ATOM	2312	CD	BLYS	A	289	1.071	-88.168	281.423	0.30	9.31		C
15		ANISOU	2312	CD	BLYS	A	289	1268	944	1324	-168	166	-47	C
		ATOM	2313	CE	ALYS	A	289	2.015	-87.176	281.103	0.70	9.43		C
		ANISOU	2313	CE	ALYS	A	289	1143	881	1557	128	-112	120	C
		ATOM	2314	CE	BLYS	A	289	2.375	-87.468	281.138	0.30	6.93		C
		ANISOU	2314	CE	BLYS	A	289	1019	502	1111	170	-66	-37	C
20		ATOM	2315	NZ	ALYS	A	289	3.369	-87.544	280.583	0.70	7.40		N
		ANISOU	2315	NZ	ALYS	A	289	1363	282	1164	36	165	-37	N
		ATOM	2316	NZ	BLYS	A	289	2.194	-86.042	280.914	0.30	8.70		N
		ANISOU	2316	NZ	BLYS	A	289	1383	615	1307	69	274	561	N
		ATOM	2317	C	ALYS	A	289	-1.798	-92.079	279.959	0.70	7.87		C
25		ANISOU	2317	C	ALYS	A	289	1240	793	957	-48	112	-103	C
		ATOM	2318	C	BLYS	A	289	-1.792	-92.050	279.958	0.30	7.69		C
		ANISOU	2318	C	BLYS	A	289	1221	781	916	-44	137	-102	C
		ATOM	2319	O	ALYS	A	289	-1.903	-93.067	279.222	0.70	8.03		O
		ANISOU	2319	O	ALYS	A	289	1265	724	1060	-65	96	-104	O
30		ATOM	2320	O	BLYS	A	289	-1.853	-93.018	279.184	0.30	8.21		O
		ANISOU	2320	O	BLYS	A	289	1419	595	1104	32	154	-81	O
		ATOM	2321	N	GLN	A	290	-2.358	-92.078	281.182	1.00	7.32		N
		ANISOU	2321	N	GLN	A	290	1147	707	925	10	201	12	N
		ATOM	2322	CA	GLN	A	290	-2.934	-93.282	281.743	1.00	7.49		C
35		ANISOU	2322	CA	GLN	A	290	1111	762	971	6	-48	330	C
		ATOM	2323	CB	GLN	A	290	-3.289	-93.038	283.181	1.00	8.46		C

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		ANISOU	2323	CB	GLN	A	290	1339	869	1006	127	73	40	C
		ATOM	2324	CG	GLN	A	290	-3.803	-94.238	283.978	1.00	9.77		C
		ANISOU	2324	CG	GLN	A	290	1438	1254	1017	101	172	270	C
		ATOM	2325	CD	GLN	A	290	-2.783	-95.344	284.043	1.00	7.58		C
5		ANISOU	2325	CD	GLN	A	290	1217	766	895	-120	142	165	C
		ATOM	2326	OE1	GLN	A	290	-1.751	-95.192	284.688	1.00	10.41		O
		ANISOU	2326	OE1	GLN	A	290	1311	1252	1392	1	108	34	O
		ATOM	2327	NE2	GLN	A	290	-3.068	-96.453	283.372	1.00	9.24		N
		ANISOU	2327	NE2	GLN	A	290	1148	864	1497	12	123	-35	N
10		ATOM	2328	C	GLN	A	290	-4.120	-93.808	280.980	1.00	8.19		C
		ANISOU	2328	C	GLN	A	290	1253	862	995	-168	-66	181	C
		ATOM	2329	O	GLN	A	290	-4.446	-95.022	281.120	1.00	8.61		O
		ANISOU	2329	O	GLN	A	290	1276	841	1152	-90	159	40	O
		ATOM	2330	N	VAL	A	291	-4.765	-93.047	280.128	1.00	8.35		N
15		ANISOU	2330	N	VAL	A	291	1077	1128	965	-37	-19	30	N
		ATOM	2331	CA	VAL	A	291	-5.963	-93.519	279.395	1.00	7.16		C
		ANISOU	2331	CA	VAL	A	291	962	647	1110	99	125	-22	C
		ATOM	2332	CB	VAL	A	291	-6.590	-92.355	278.559	1.00	8.80		C
		ANISOU	2332	CB	VAL	A	291	1248	876	1219	239	124	37	C
20		ATOM	2333	CG1	VAL	A	291	-5.769	-91.949	277.364	1.00	7.89		C
		ANISOU	2333	CG1	VAL	A	291	1349	468	1178	138	-27	20	C
		ATOM	2334	CG2	VAL	A	291	-8.014	-92.597	278.208	1.00	9.99		C
		ANISOU	2334	CG2	VAL	A	291	1501	735	1557	190	-85	-122	C
		ATOM	2335	C	VAL	A	291	-5.648	-94.818	278.555	1.00	7.81		C
25		ANISOU	2335	C	VAL	A	291	1313	686	967	0	212	69	C
		ATOM	2336	O	VAL	A	291	-6.538	-95.564	278.319	1.00	9.91		O
		ANISOU	2336	O	VAL	A	291	1160	1267	1336	10	136	-183	O
		ATOM	2337	N	THR	A	292	-4.359	-94.932	278.097	1.00	6.97		N
		ANISOU	2337	N	THR	A	292	1106	342	1197	-3	32	-129	N
30		ATOM	2338	CA	THR	A	292	-3.956	-96.154	277.425	1.00	6.54		C
		ANISOU	2338	CA	THR	A	292	918	587	978	-62	-4	-306	C
		ATOM	2339	CB	THR	A	292	-3.505	-95.923	275.965	1.00	9.05		C
		ANISOU	2339	CB	THR	A	292	1366	1049	1024	-219	-112	14	C
		ATOM	2340	OG1	THR	A	292	-2.458	-94.919	275.987	1.00	9.15		O
35		ANISOU	2340	OG1	THR	A	292	1474	744	1256	-117	96	-24	O
		ATOM	2341	CG2	THR	A	292	-4.609	-95.416	275.097	1.00	9.62		C

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		ANISOU	2341	CG2	THR	A	292	1295	1007	1351	-396	95	167	C
		ATOM	2342	C	THR	A	292	-2.819	-96.873	278.163	1.00	7.96		C
		ANISOU	2342	C	THR	A	292	944	943	1136	47	61	119	C
		ATOM	2343	O	THR	A	292	-2.158	-97.738	277.557	1.00	7.83		O
5		ANISOU	2343	O	THR	A	292	1292	530	1154	-26	70	145	O
		ATOM	2344	N	ASN	A	293	-2.600	-96.558	279.414	1.00	6.61		N
		ANISOU	2344	N	ASN	A	293	1071	377	1064	23	52	45	N
		ATOM	2345	CA	ASN	A	293	-1.499	-97.057	280.223	1.00	6.11		C
		ANISOU	2345	CA	ASN	A	293	926	428	966	13	-11	-101	C
10		ATOM	2346	CB	ASN	A	293	-1.617	-98.558	280.489	1.00	7.48		C
		ANISOU	2346	CB	ASN	A	293	1127	495	1219	24	190	-32	C
		ATOM	2347	CG	ASN	A	293	-0.846	-98.972	281.711	1.00	8.13		C
		ANISOU	2347	CG	ASN	A	293	1263	816	1008	-3	145	102	C
		ATOM	2348	OD1	ASN	A	293	-0.955	-98.456	282.797	1.00	8.39		O
15		ANISOU	2348	OD1	ASN	A	293	1480	782	925	128	109	225	O
		ATOM	2349	ND2	ASN	A	293	-0.094	-100.067	281.528	1.00	9.01		N
		ANISOU	2349	ND2	ASN	A	293	1643	435	1346	66	48	220	N
		ATOM	2350	C	ASN	A	293	-0.183	-96.859	279.458	1.00	9.21		C
		ANISOU	2350	C	ASN	A	293	1175	1149	1174	3	89	441	C
20		ATOM	2351	O	ASN	A	293	0.777	-97.547	279.637	1.00	8.68		O
		ANISOU	2351	O	ASN	A	293	1132	950	1213	119	118	56	O
		ATOM	2352	N	GLY	A	294	-0.112	-95.737	278.721	1.00	8.81		N
		ANISOU	2352	N	GLY	A	294	1114	877	1355	43	270	214	N
		ATOM	2353	CA	GLY	A	294	1.077	-95.397	277.936	1.00	7.95		C
25		ANISOU	2353	CA	GLY	A	294	1152	822	1044	-72	91	189	C
		ATOM	2354	C	GLY	A	294	1.362	-96.328	276.743	1.00	8.56		C
		ANISOU	2354	C	GLY	A	294	1130	887	1232	138	69	236	C
		ATOM	2355	O	GLY	A	294	2.406	-96.182	276.132	1.00	8.74		O
		ANISOU	2355	O	GLY	A	294	1204	979	1137	-8	237	63	O
30		ATOM	2356	N	ALA	A	295	0.479	-97.270	276.420	1.00	8.98		N
		ANISOU	2356	N	ALA	A	295	1015	1234	1161	90	135	-234	N
		ATOM	2357	CA	ALA	A	295	0.837	-98.383	275.572	1.00	8.79		C
		ANISOU	2357	CA	ALA	A	295	1182	908	1249	-201	-55	-103	C
		ATOM	2358	CB	ALA	A	295	0.031	-99.598	275.968	1.00	9.79		C
35		ANISOU	2358	CB	ALA	A	295	1402	962	1356	-112	186	-38	C
		ATOM	2359	C	ALA	A	295	0.663	-98.075	274.069	1.00	7.88		C

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	ANISOU	2359	C	ALA	A	295	1127	645	1220	-98	82	-110	C
	ATOM	2360	O	ALA	A	295	1.365	-98.649	273.214	1.00	8.87		O
	ANISOU	2360	O	ALA	A	295	1243	981	1145	94	146	123	O
	ATOM	2361	N	VAL	A	296	-0.213	-97.101	273.742	1.00	7.60		N
5	ANISOU	2361	N	VAL	A	296	1045	913	929	-10	166	-4	N
	ATOM	2362	CA	VAL	A	296	-0.368	-96.622	272.381	1.00	8.42		C
	ANISOU	2362	CA	VAL	A	296	1029	995	1172	332	-39	-157	C
	ATOM	2363	CB	VAL	A	296	-1.526	-97.310	271.599	1.00	8.11		C
	ANISOU	2363	CB	VAL	A	296	1252	852	975	327	66	-126	C
10	ATOM	2364	CG1	VAL	A	296	-1.637	-96.740	270.177	1.00	10.64		C
	ANISOU	2364	CG1	VAL	A	296	1601	1307	1135	-51	36	-66	C
	ATOM	2365	CG2	VAL	A	296	-1.289	-98.784	271.583	1.00	9.02		C
	ANISOU	2365	CG2	VAL	A	296	1290	837	1299	64	126	84	C
	ATOM	2366	C	VAL	A	296	-0.707	-95.121	272.582	1.00	7.86		C
15	ANISOU	2366	C	VAL	A	296	1058	798	1128	-113	289	117	C
	ATOM	2367	O	VAL	A	296	-1.528	-94.749	273.397	1.00	8.54		O
	ANISOU	2367	O	VAL	A	296	1302	731	1213	119	315	-131	O
	ATOM	2368	N	PRO	A	297	-0.154	-94.252	271.720	1.00	6.96		N
	ANISOU	2368	N	PRO	A	297	1084	437	1122	-148	210	-49	N
20	ATOM	2369	CA	PRO	A	297	-0.433	-92.798	271.886	1.00	6.66		C
	ANISOU	2369	CA	PRO	A	297	1011	531	989	-8	197	-194	C
	ATOM	2370	CB	PRO	A	297	0.362	-92.130	270.752	1.00	8.82		C
	ANISOU	2370	CB	PRO	A	297	1103	1176	1072	157	163	72	C
	ATOM	2371	CG	PRO	A	297	1.522	-93.109	270.583	1.00	6.58		C
25	ANISOU	2371	CG	PRO	A	297	1120	425	953	-13	109	194	C
	ATOM	2372	CD	PRO	A	297	0.926	-94.474	270.736	1.00	6.45		C
	ANISOU	2372	CD	PRO	A	297	1125	440	885	-123	29	54	C
	ATOM	2373	C	PRO	A	297	-1.912	-92.415	271.715	1.00	8.09		C
	ANISOU	2373	C	PRO	A	297	1045	1063	963	15	23	-63	C
30	ATOM	2374	O	PRO	A	297	-2.552	-92.793	270.768	1.00	9.64		O
	ANISOU	2374	O	PRO	A	297	1209	1146	1305	56	-16	-192	O
	ATOM	2375	N	MET	A	298	-2.415	-91.576	272.641	1.00	6.75		N
	ANISOU	2375	N	MET	A	298	1097	502	964	-32	121	-111	N
	ATOM	2376	CA	MET	A	298	-3.780	-91.071	272.643	1.00	9.37		C
35	ANISOU	2376	CA	MET	A	298	1147	1378	1033	71	-126	111	C
	ATOM	2377	CB	MET	A	298	-4.839	-92.158	272.992	1.00	9.01		C

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		ANISOU	2377	CB	MET	A	298	1317	1000	1104	82	-37	224	C
		ATOM	2378	CG	MET	A	298	-6.233	-91.614	273.243	1.00	9.92		C
		ANISOU	2378	CG	MET	A	298	1401	1039	1328	-261	42	175	C
		ATOM	2379	SD	MET	A	298	-7.428	-92.946	273.551	1.00	10.26		S
5		ANISOU	2379	SD	MET	A	298	1481	870	1545	-56	-11	103	S
		ATOM	2380	CE	MET	A	298	-7.801	-93.403	271.883	1.00	10.34		C
		ANISOU	2380	CE	MET	A	298	1258	1161	1506	-290	229	35	C
		ATOM	2381	C	MET	A	298	-3.900	-90.013	273.685	1.00	7.45		C
		ANISOU	2381	C	MET	A	298	1065	615	1151	58	82	315	C
10		ATOM	2382	O	MET	A	298	-3.344	-90.058	274.752	1.00	8.77		O
		ANISOU	2382	O	MET	A	298	1369	847	1114	151	-182	-75	O
		ATOM	2383	N	GLY	A	299	-4.674	-88.946	273.340	1.00	6.64		N
		ANISOU	2383	N	GLY	A	299	999	678	843	-13	78	102	N
		ATOM	2384	CA	GLY	A	299	-5.241	-88.003	274.252	1.00	7.92		C
15		ANISOU	2384	CA	GLY	A	299	1034	930	1044	235	129	60	C
		ATOM	2385	C	GLY	A	299	-6.693	-87.825	273.991	1.00	7.38		C
		ANISOU	2385	C	GLY	A	299	1009	1051	744	32	97	-70	C
		ATOM	2386	O	GLY	A	299	-7.236	-88.315	273.021	1.00	6.23		O
		ANISOU	2386	O	GLY	A	299	898	511	957	-31	117	30	O
20		ATOM	2387	N	ALA	A	300	-7.349	-86.991	274.851	1.00	6.21		N
		ANISOU	2387	N	ALA	A	300	1014	533	812	25	8	-40	N
		ATOM	2388	CA	ALA	A	300	-8.732	-86.622	274.587	1.00	7.70		C
		ANISOU	2388	CA	ALA	A	300	1017	1015	893	-49	14	84	C
		ATOM	2389	CB	ALA	A	300	-9.667	-87.737	274.974	1.00	9.31		C
25		ANISOU	2389	CB	ALA	A	300	1303	819	1415	-77	22	-85	C
		ATOM	2390	C	ALA	A	300	-9.109	-85.380	275.345	1.00	6.69		C
		ANISOU	2390	C	ALA	A	300	699	963	877	87	64	146	C
		ATOM	2391	O	ALA	A	300	-8.594	-85.087	276.421	1.00	6.52		O
		ANISOU	2391	O	ALA	A	300	1003	586	885	114	-27	123	O
30		ATOM	2392	N	VAL	A	301	-10.064	-84.677	274.735	1.00	6.78		N
		ANISOU	2392	N	VAL	A	301	1023	718	833	88	-75	-58	N
		ATOM	2393	CA	VAL	A	301	-10.642	-83.477	275.316	1.00	6.56		C
		ANISOU	2393	CA	VAL	A	301	902	399	1192	-2	-103	10	C
		ATOM	2394	CB	VAL	A	301	-10.508	-82.222	274.397	1.00	6.70		C
35		ANISOU	2394	CB	VAL	A	301	1084	440	1022	-55	-45	-122	C
		ATOM	2395	CG1	VAL	A	301	-11.228	-80.990	274.917	1.00	9.73		C

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		ANISOU	2395	CG1	VAL	A	301	1376	940	1381	289	70	-225	C
		ATOM	2396	CG2	VAL	A	301	-9.009	-81.932	274.217	1.00	7.53		C
		ANISOU	2396	CG2	VAL	A	301	1227	744	889	-24	200	70	C
		ATOM	2397	C	VAL	A	301	-12.114	-83.797	275.542	1.00	6.93		C
5		ANISOU	2397	C	VAL	A	301	945	821	867	0	3	121	C
		ATOM	2398	O	VAL	A	301	-12.853	-84.123	274.562	1.00	6.97		O
		ANISOU	2398	O	VAL	A	301	998	768	881	3	44	-20	O
		ATOM	2399	N	AILE	A	302	-12.558	-83.707	276.782	0.50	6.42		N
		ANISOU	2399	N	AILE	A	302	1000	571	866	-111	73	-149	N
10		ATOM	2400	N	BILE	A	302	-12.582	-83.705	276.779	0.50	6.75		N
		ANISOU	2400	N	BILE	A	302	1083	598	880	-102	82	-173	N
		ATOM	2401	CA	AILE	A	302	-13.903	-84.088	277.169	0.50	6.96		C
		ANISOU	2401	CA	AILE	A	302	896	831	917	-36	70	-37	C
		ATOM	2402	CA	BILE	A	302	-13.950	-84.065	277.153	0.50	7.94		C
15		ANISOU	2402	CA	BILE	A	302	986	939	1092	-49	92	-78	C
		ATOM	2403	CB	AILE	A	302	-13.873	-85.084	278.387	0.50	6.39		C
		ANISOU	2403	CB	AILE	A	302	1062	436	927	-20	163	-116	C
		ATOM	2404	CB	BILE	A	302	-13.997	-85.046	278.373	0.50	9.06		C
		ANISOU	2404	CB	BILE	A	302	1486	781	1173	-118	65	-44	C
20		ATOM	2405	CG1AILE	A	302	-12.754	-86.147	278.257	0.50	6.41			C
		ANISOU	2405	CG1AILE	A	302	825	765	846	48	-317	104		C
		ATOM	2406	CG1BILE	A	302	-13.219	-86.314	278.105	0.50	11.23			C
		ANISOU	2406	CG1BILE	A	302	1655	1088	1524	19	253	-101		C
		ATOM	2407	CD1AILE	A	302	-12.533	-86.929	279.544	0.50	6.75			C
25		ANISOU	2407	CD1AILE	A	302	1044	676	844	-25	156	247		C
		ATOM	2408	CD1BILE	A	302	-11.999	-86.372	278.988	0.50	14.38			C
		ANISOU	2408	CD1BILE	A	302	1475	1704	2281	152	208	117		C
		ATOM	2409	CG2AILE	A	302	-15.287	-85.639	278.560	0.50	7.48			C
		ANISOU	2409	CG2AILE	A	302	1115	600	1127	-12	297	-80		C
30		ATOM	2410	CG2BILE	A	302	-15.446	-85.345	278.762	0.50	10.88			C
		ANISOU	2410	CG2BILE	A	302	1559	1281	1293	121	179	-101		C
		ATOM	2411	C	AILE	A	302	-14.669	-82.808	277.473	0.50	6.38		C
		ANISOU	2411	C	AILE	A	302	705	729	989	-240	100	-97	C
		ATOM	2412	C	BILE	A	302	-14.698	-82.800	277.479	0.50	6.79		C
35		ANISOU	2412	C	BILE	A	302	729	791	1060	-271	56	-55	C
		ATOM	2413	O	AILE	A	302	-14.205	-81.975	278.298	0.50	6.48		O

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		ANISOU	2413	O	AILE	A	302	1042	290	1128	-61	18	-45	O
		ATOM	2414	O	BILE	A	302	-14.281	-81.985	278.331	0.50	7.25		O
		ANISOU	2414	O	BILE	A	302	1137	415	1203	-4	-45	-59	O
		ATOM	2415	N	ALA	A	303	-15.797	-82.618	276.769	1.00	6.56		N
5		ANISOU	2415	N	ALA	A	303	921	669	901	39	-5	-58	N
		ATOM	2416	CA	ALA	A	303	-16.556	-81.384	276.832	1.00	7.15		C
		ANISOU	2416	CA	ALA	A	303	941	630	1146	87	-37	-308	C
		ATOM	2417	CB	ALA	A	303	-16.832	-80.867	275.444	1.00	8.72		C
		ANISOU	2417	CB	ALA	A	303	1203	747	1361	0	65	-264	C
10		ATOM	2418	C	ALA	A	303	-17.897	-81.621	277.505	1.00	7.67		C
		ANISOU	2418	C	ALA	A	303	1078	837	997	-109	106	-159	C
		ATOM	2419	O	ALA	A	303	-18.481	-82.741	277.376	1.00	8.66		O
		ANISOU	2419	O	ALA	A	303	1039	1067	1184	-202	238	-212	O
		ATOM	2420	N	SER	A	304	-18.383	-80.606	278.206	1.00	8.61		N
15		ANISOU	2420	N	SER	A	304	882	1049	1337	101	199	-149	N
		ATOM	2421	CA	SER	A	304	-19.735	-80.679	278.803	1.00	6.67		C
		ANISOU	2421	CA	SER	A	304	909	733	891	-211	103	-91	C
		ATOM	2422	CB	SER	A	304	-19.964	-79.414	279.590	1.00	8.44		C
		ANISOU	2422	CB	SER	A	304	1042	740	1422	168	135	81	C
20		ATOM	2423	OG	SER	A	304	-20.076	-78.232	278.736	1.00	8.58		O
		ANISOU	2423	OG	SER	A	304	966	1019	1273	-132	-14	127	O
		ATOM	2424	C	SER	A	304	-20.771	-80.805	277.691	1.00	7.14		C
		ANISOU	2424	C	SER	A	304	1078	529	1104	-68	99	-173	C
		ATOM	2425	O	SER	A	304	-20.590	-80.348	276.553	1.00	8.07		O
25		ANISOU	2425	O	SER	A	304	1135	815	1116	-33	100	17	O
		ATOM	2426	N	SER	A	305	-21.950	-81.262	278.062	1.00	8.62		N
		ANISOU	2426	N	SER	A	305	1002	1074	1196	33	78	88	N
		ATOM	2427	CA	SER	A	305	-23.036	-81.316	277.101	1.00	9.57		C
		ANISOU	2427	CA	SER	A	305	1122	1268	1243	-209	116	76	C
30		ATOM	2428	CB	SER	A	305	-24.225	-82.059	277.702	1.00	9.15		C
		ANISOU	2428	CB	SER	A	305	1077	1032	1365	-149	170	40	C
		ATOM	2429	OG	SER	A	305	-23.941	-83.455	277.878	1.00	12.88		O
		ANISOU	2429	OG	SER	A	305	1672	1322	1898	-218	123	25	O
		ATOM	2430	C	SER	A	305	-23.433	-79.944	276.626	1.00	7.88		C
35		ANISOU	2430	C	SER	A	305	911	1144	937	-137	-36	-205	C
		ATOM	2431	O	SER	A	305	-23.837	-79.734	275.467	1.00	7.35		O

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		ANISOU	2431	O	SER	A	305	1069	736	984	-28	104	-161	O
		ATOM	2432	N	AGLU	A	306	-23.340	-78.922	277.503	0.50	6.87		N
		ANISOU	2432	N	AGLU	A	306	901	580	1127	-49	10	-103	N
		ATOM	2433	N	BGLU	A	306	-23.362	-78.936	277.501	0.50	7.23		N
5		ANISOU	2433	N	BGLU	A	306	945	617	1182	-62	-2	-157	N
		ATOM	2434	CA	AGLU	A	306	-23.634	-77.520	277.116	0.50	7.42		C
		ANISOU	2434	CA	AGLU	A	306	939	772	1105	296	11	-86	C
		ATOM	2435	CA	BGLU	A	306	-23.715	-77.601	277.058	0.50	8.58		C
		ANISOU	2435	CA	BGLU	A	306	1029	939	1290	332	42	-28	C
10		ATOM	2436	CB	AGLU	A	306	-23.413	-76.529	278.313	0.50	8.51		C
		ANISOU	2436	CB	AGLU	A	306	949	1063	1219	108	189	-292	C
		ATOM	2437	CB	BGLU	A	306	-23.742	-76.612	278.231	0.50	12.20		C
		ANISOU	2437	CB	BGLU	A	306	1518	1762	1355	148	186	-406	C
		ATOM	2438	CG	AGLU	A	306	-23.196	-75.063	277.961	0.50	8.01		C
15		ANISOU	2438	CG	AGLU	A	306	907	1296	839	-68	-48	120	C
		ATOM	2439	CG	BGLU	A	306	-24.778	-75.528	278.003	0.50	13.18		C
		ANISOU	2439	CG	BGLU	A	306	1715	1960	1333	110	-64	93	C
		ATOM	2440	CD	AGLU	A	306	-24.303	-74.424	277.155	0.50	7.38		C
		ANISOU	2440	CD	AGLU	A	306	1052	625	1126	157	6	-85	C
20		ATOM	2441	CD	BGLU	A	306	-24.155	-74.462	277.117	0.50	11.19		C
		ANISOU	2441	CD	BGLU	A	306	1865	727	1659	440	159	-243	C
		ATOM	2442	OE1	AGLU	A	306	-25.469	-74.867	277.282	0.50	9.15		O
		ANISOU	2442	OE1	AGLU	A	306	1140	947	1386	12	288	133	O
		ATOM	2443	OE1	BGLU	A	306	-22.917	-74.272	277.255	0.50	15.46		O
25		ANISOU	2443	OE1	BGLU	A	306	2281	1606	1985	34	-80	-627	O
		ATOM	2444	OE2	AGLU	A	306	-24.070	-73.329	276.513	0.50	8.30		O
		ANISOU	2444	OE2	AGLU	A	306	1192	613	1347	154	175	-63	O
		ATOM	2445	OE2	BGLU	A	306	-24.883	-73.763	276.342	0.50	15.16		O
		ANISOU	2445	OE2	BGLU	A	306	1520	2195	2044	332	-429	-25	O
30		ATOM	2446	C	AGLU	A	306	-22.771	-77.090	275.920	0.50	7.40		C
		ANISOU	2446	C	AGLU	A	306	1095	663	1054	-60	-128	-200	C
		ATOM	2447	C	BGLU	A	306	-22.792	-77.108	275.916	0.50	7.82		C
		ANISOU	2447	C	BGLU	A	306	1137	681	1150	-24	-147	-218	C
		ATOM	2448	O	AGLU	A	306	-23.238	-76.504	274.964	0.50	8.04		O
35		ANISOU	2448	O	AGLU	A	306	962	1032	1060	174	-138	-159	O
		ATOM	2449	O	BGLU	A	306	-23.267	-76.511	274.969	0.50	8.68		O

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		ANISOU	2449	O	BGLU	A	306	1071	1107	1120	178	-182	-176	O
		ATOM	2450	N	ILE	A	307	-21.492	-77.378	276.004	1.00	8.60		N
		ANISOU	2450	N	ILE	A	307	1066	1038	1160	134	103	-77	N
		ATOM	2451	CA	ILE	A	307	-20.578	-76.977	274.953	1.00	9.19		C
5		ANISOU	2451	CA	ILE	A	307	1075	1323	1093	-131	-19	-156	C
		ATOM	2452	CB	ILE	A	307	-19.110	-77.151	275.386	1.00	6.92		C
		ANISOU	2452	CB	ILE	A	307	1019	536	1071	-27	0	-50	C
		ATOM	2453	CG1	ILE	A	307	-18.772	-76.076	276.431	1.00	9.06		C
		ANISOU	2453	CG1	ILE	A	307	1280	940	1223	-262	-32	-216	C
10		ATOM	2454	CD1	ILE	A	307	-17.493	-76.386	277.168	1.00	9.77		C
		ANISOU	2454	CD1	ILE	A	307	1340	1217	1155	-180	-147	-308	C
		ATOM	2455	CG2	ILE	A	307	-18.132	-77.106	274.262	1.00	9.46		C
		ANISOU	2455	CG2	ILE	A	307	1281	1106	1205	-188	17	-93	C
		ATOM	2456	C	ILE	A	307	-20.898	-77.795	273.680	1.00	7.38		C
15		ANISOU	2456	C	ILE	A	307	789	911	1102	-128	36	37	C
		ATOM	2457	O	ILE	A	307	-20.991	-77.244	272.563	1.00	7.45		O
		ANISOU	2457	O	ILE	A	307	1106	540	1183	-13	114	-172	O
		ATOM	2458	N	TYR	A	308	-20.958	-79.136	273.820	1.00	7.63		N
		ANISOU	2458	N	TYR	A	308	942	772	1183	-9	-38	-202	N
20		ATOM	2459	CA	TYR	A	308	-21.256	-80.043	272.677	1.00	7.34		C
		ANISOU	2459	CA	TYR	A	308	989	807	992	-128	53	140	C
		ATOM	2460	CB	TYR	A	308	-21.259	-81.496	273.170	1.00	7.62		C
		ANISOU	2460	CB	TYR	A	308	1095	658	1140	-109	4	109	C
		ATOM	2461	CG	TYR	A	308	-21.664	-82.509	272.120	1.00	7.75		C
25		ANISOU	2461	CG	TYR	A	308	922	744	1277	64	25	-51	C
		ATOM	2462	CD1	TYR	A	308	-20.721	-83.041	271.263	1.00	6.92		C
		ANISOU	2462	CD1	TYR	A	308	932	374	1320	-120	74	-137	C
		ATOM	2463	CE1	TYR	A	308	-21.062	-84.065	270.370	1.00	8.14		C
		ANISOU	2463	CE1	TYR	A	308	1079	694	1318	-75	28	-200	C
30		ATOM	2464	CZ	TYR	A	308	-22.376	-84.426	270.237	1.00	9.78		C
		ANISOU	2464	CZ	TYR	A	308	1181	1384	1148	-139	73	-216	C
		ATOM	2465	OH	TYR	A	308	-22.782	-85.426	269.358	1.00	10.37		O
		ANISOU	2465	OH	TYR	A	308	1361	1068	1507	-169	-106	-46	O
		ATOM	2466	CE2	TYR	A	308	-23.286	-83.877	271.063	1.00	7.49		C
35		ANISOU	2466	CE2	TYR	A	308	902	614	1327	-283	25	-227	C
		ATOM	2467	CD2	TYR	A	308	-22.957	-82.889	271.981	1.00	7.89		C

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		ANISOU	2467	CD2	TYR	A	308	991	893	1113	-72	25	-359	C
		ATOM	2468	C	TYR	A	308	-22.539	-79.607	271.977	1.00	6.84		C
		ANISOU	2468	C	TYR	A	308	1129	482	989	-211	-35	-126	C
		ATOM	2469	O	TYR	A	308	-22.591	-79.494	270.755	1.00	8.22		O
5		ANISOU	2469	O	TYR	A	308	1245	794	1082	-108	-58	-132	O
		ATOM	2470	N	ASP	A	309	-23.572	-79.443	272.751	1.00	7.75		N
		ANISOU	2470	N	ASP	A	309	1042	814	1086	-215	-88	-15	N
		ATOM	2471	CA	ASP	A	309	-24.834	-79.020	272.154	1.00	7.90		C
		ANISOU	2471	CA	ASP	A	309	1051	693	1255	-197	-66	-113	C
10		ATOM	2472	CB	ASP	A	309	-25.988	-79.025	273.208	1.00	8.75		C
		ANISOU	2472	CB	ASP	A	309	959	1011	1355	55	-47	-48	C
		ATOM	2473	CG	ASP	A	309	-26.338	-80.436	273.740	1.00	10.51		C
		ANISOU	2473	CG	ASP	A	309	1169	1295	1529	-20	-15	52	C
		ATOM	2474	OD1	ASP	A	309	-26.015	-81.451	273.145	1.00	13.79		O
15		ANISOU	2474	OD1	ASP	A	309	1564	1437	2238	-114	354	252	O
		ATOM	2475	OD2	ASP	A	309	-27.069	-80.425	274.785	1.00	15.75		O
		ANISOU	2475	OD2	ASP	A	309	1971	2201	1812	-204	228	269	O
		ATOM	2476	C	ASP	A	309	-24.770	-77.697	271.450	1.00	8.39		C
		ANISOU	2476	C	ASP	A	309	1064	997	1126	-34	-64	41	C
20		ATOM	2477	O	ASP	A	309	-25.438	-77.531	270.412	1.00	8.99		O
		ANISOU	2477	O	ASP	A	309	1189	1021	1204	-132	-113	-54	O
		ATOM	2478	N	THR	A	310	-24.029	-76.704	271.977	1.00	8.89		N
		ANISOU	2478	N	THR	A	310	1262	1039	1076	105	-67	-9	N
		ATOM	2479	CA	THR	A	310	-23.928	-75.465	271.317	1.00	7.54		C
25		ANISOU	2479	CA	THR	A	310	929	1043	891	105	-64	18	C
		ATOM	2480	CB	THR	A	310	-23.016	-74.539	272.186	1.00	8.04		C
		ANISOU	2480	CB	THR	A	310	1009	762	1282	-46	-13	15	C
		ATOM	2481	OG1	THR	A	310	-23.766	-74.238	273.361	1.00	9.00		O
		ANISOU	2481	OG1	THR	A	310	1205	982	1232	-64	83	-110	O
30		ATOM	2482	CG2	THR	A	310	-22.699	-73.237	271.511	1.00	7.36		C
		ANISOU	2482	CG2	THR	A	310	958	775	1063	155	0	-116	C
		ATOM	2483	C	THR	A	310	-23.320	-75.649	269.909	1.00	9.11		C
		ANISOU	2483	C	THR	A	310	1299	1158	1003	125	-221	-250	C
		ATOM	2484	O	THR	A	310	-23.776	-75.080	268.926	1.00	9.66		O
35		ANISOU	2484	O	THR	A	310	1291	1229	1150	53	-54	-75	O
		ATOM	2485	N	PHE	A	311	-22.314	-76.518	269.827	1.00	8.25		N

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		ANISOU	2485	N	PHE	A	311	1190	874	1071	103	61	196	N
		ATOM	2486	CA	PHE	A	311	-21.747	-76.775	268.521	1.00	8.41		C
		ANISOU	2486	CA	PHE	A	311	966	1086	1142	117	-135	-116	C
		ATOM	2487	CB	PHE	A	311	-20.430	-77.536	268.563	1.00	7.39		C
5		ANISOU	2487	CB	PHE	A	311	965	808	1032	33	2	-180	C
		ATOM	2488	CG	PHE	A	311	-19.205	-76.710	268.911	1.00	8.04		C
		ANISOU	2488	CG	PHE	A	311	1128	828	1096	-169	111	-135	C
		ATOM	2489	CD1	PHE	A	311	-18.891	-76.388	270.212	1.00	7.39		C
		ANISOU	2489	CD1	PHE	A	311	1348	436	1023	48	97	154	C
10		ATOM	2490	CE1	PHE	A	311	-17.785	-75.657	270.495	1.00	8.94		C
		ANISOU	2490	CE1	PHE	A	311	1188	1266	943	-89	2	-274	C
		ATOM	2491	CZ	PHE	A	311	-16.957	-75.188	269.495	1.00	8.93		C
		ANISOU	2491	CZ	PHE	A	311	976	1308	1106	-20	-50	-11	C
		ATOM	2492	CE2	PHE	A	311	-17.216	-75.524	268.204	1.00	7.20		C
15		ANISOU	2492	CE2	PHE	A	311	892	777	1063	8	182	7	C
		ATOM	2493	CD2	PHE	A	311	-18.378	-76.220	267.900	1.00	8.08		C
		ANISOU	2493	CD2	PHE	A	311	1301	789	978	-328	-41	-139	C
		ATOM	2494	C	PHE	A	311	-22.748	-77.486	267.590	1.00	9.70		C
		ANISOU	2494	C	PHE	A	311	1207	1359	1119	-155	-56	-11	C
20		ATOM	2495	O	PHE	A	311	-22.790	-77.275	266.396	1.00	8.36		O
		ANISOU	2495	O	PHE	A	311	1140	846	1190	-155	44	-163	O
		ATOM	2496	N	MET	A	312	-23.434	-78.454	268.152	1.00	7.64		N
		ANISOU	2496	N	MET	A	312	1247	674	979	6	-217	-19	N
		ATOM	2497	CA	MET	A	312	-24.389	-79.245	267.331	1.00	8.43		C
25		ANISOU	2497	CA	MET	A	312	1103	894	1203	-69	154	-435	C
		ATOM	2498	CB	MET	A	312	-24.747	-80.548	268.030	1.00	9.87		C
		ANISOU	2498	CB	MET	A	312	1377	1006	1364	-150	-98	-124	C
		ATOM	2499	CG	MET	A	312	-23.556	-81.419	268.267	1.00	10.32		C
		ANISOU	2499	CG	MET	A	312	1679	899	1342	-22	81	-75	C
30		ATOM	2500	SD	MET	A	312	-22.672	-81.910	266.773	1.00	12.65		S
		ANISOU	2500	SD	MET	A	312	1693	1595	1517	169	-24	-323	S
		ATOM	2501	CE	MET	A	312	-20.966	-81.704	267.255	1.00	12.98		C
		ANISOU	2501	CE	MET	A	312	1847	1359	1725	-228	291	262	C
		ATOM	2502	C	MET	A	312	-25.632	-78.488	266.938	1.00	11.62		C
35		ANISOU	2502	C	MET	A	312	1287	1765	1360	-27	-256	-374	C
		ATOM	2503	O	MET	A	312	-26.317	-78.922	266.044	1.00	13.28		O

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		ANISOU	2503	O	MET	A	312	1519	1977	1546	209	-293	-552	O
		ATOM	2504	N	ASN	A	313	-25.921	-77.375	267.596	1.00	9.55		N
		ANISOU	2504	N	ASN	A	313	1180	1104	1344	165	-185	-89	N
		ATOM	2505	CA	ASN	A	313	-27.165	-76.582	267.335	1.00	11.65		C
5		ANISOU	2505	CA	ASN	A	313	1368	1494	1562	214	-338	-20	C
		ATOM	2506	CB	ASN	A	313	-27.872	-76.124	268.612	1.00	16.10		C
		ANISOU	2506	CB	ASN	A	313	1470	2733	1912	140	111	-182	C
		ATOM	2507	CG	ASN	A	313	-28.395	-77.278	269.434	1.00	16.35		C
		ANISOU	2507	CG	ASN	A	313	1768	2124	2320	543	-100	-277	C
10		ATOM	2508	OD1	ASN	A	313	-28.649	-78.332	268.937	1.00	22.32		O
		ANISOU	2508	OD1	ASN	A	313	2601	2919	2961	-493	803	-653	O
		ATOM	2509	ND2	ASN	A	313	-28.577	-77.053	270.718	1.00	20.80		N
		ANISOU	2509	ND2	ASN	A	313	2475	3149	2278	135	46	120	N
		ATOM	2510	C	ASN	A	313	-26.945	-75.423	266.382	1.00	11.59		C
15		ANISOU	2510	C	ASN	A	313	1332	1747	1325	-71	-73	-118	C
		ATOM	2511	O	ASN	A	313	-27.815	-74.552	266.214	1.00	13.02		O
		ANISOU	2511	O	ASN	A	313	1725	1516	1705	205	39	-310	O
		ATOM	2512	N	GLN	A	314	-25.731	-75.320	265.802	1.00	10.05		N
		ANISOU	2512	N	GLN	A	314	1162	1403	1252	162	-120	-247	N
20		ATOM	2513	CA	GLN	A	314	-25.392	-74.205	264.917	1.00	10.62		C
		ANISOU	2513	CA	GLN	A	314	1264	1407	1363	170	44	-142	C
		ATOM	2514	CB	GLN	A	314	-23.975	-74.261	264.378	1.00	10.68		C
		ANISOU	2514	CB	GLN	A	314	1452	1174	1429	152	-75	181	C
		ATOM	2515	CG	GLN	A	314	-22.935	-73.967	265.420	1.00	9.62		C
25		ANISOU	2515	CG	GLN	A	314	1567	752	1334	-244	-104	-96	C
		ATOM	2516	CD	GLN	A	314	-21.562	-74.205	264.859	1.00	11.04		C
		ANISOU	2516	CD	GLN	A	314	1581	1618	995	-285	104	-51	C
		ATOM	2517	OE1	GLN	A	314	-21.008	-73.279	264.207	1.00	10.91		O
		ANISOU	2517	OE1	GLN	A	314	1797	746	1599	-93	147	-112	O
30		ATOM	2518	NE2	GLN	A	314	-21.029	-75.360	265.031	1.00	10.91		N
		ANISOU	2518	NE2	GLN	A	314	1329	1461	1353	-238	49	-156	N
		ATOM	2519	C	GLN	A	314	-26.342	-74.159	263.691	1.00	11.63		C
		ANISOU	2519	C	GLN	A	314	1389	1375	1653	229	28	91	C
		ATOM	2520	O	GLN	A	314	-26.828	-75.182	263.245	1.00	13.03		O
35		ANISOU	2520	O	GLN	A	314	1576	1926	1447	59	-292	-35	O
		ATOM	2521	N	AASN	A	315	-26.488	-72.964	263.123	0.50	11.31		N

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		ANISOU	2521	N	AASN	A	315	1702	1097	1498	246	-226	-253	N
		ATOM	2522	N	BASN	A	315	-26.516	-72.969	263.134	0.50	12.25		N
		ANISOU	2522	N	BASN	A	315	1872	1142	1637	289	-240	-222	N
		ATOM	2523	CA	AASN	A	315	-27.233	-72.756	261.888	0.50	11.04		C
5		ANISOU	2523	CA	AASN	A	315	2115	720	1358	-124	-245	-313	C
		ATOM	2524	CA	BASN	A	315	-27.282	-72.761	261.913	0.50	12.56		C
		ANISOU	2524	CA	BASN	A	315	2395	882	1494	-199	-335	-420	C
		ATOM	2525	CB	AASN	A	315	-27.840	-71.351	261.824	0.50	13.51		C
		ANISOU	2525	CB	AASN	A	315	1949	1554	1628	740	-199	-286	C
10		ATOM	2526	CB	BASN	A	315	-27.865	-71.339	261.922	0.50	18.00		C
		ANISOU	2526	CB	BASN	A	315	2631	1854	2353	927	-543	-393	C
		ATOM	2527	CG	AASN	A	315	-28.767	-71.191	260.628	0.50	16.37		C
		ANISOU	2527	CG	AASN	A	315	2006	2104	2110	611	-544	224	C
		ATOM	2528	CG	BASN	A	315	-28.978	-71.169	262.952	0.50	25.99		C
15		ANISOU	2528	CG	BASN	A	315	3524	3473	2876	333	159	354	C
		ATOM	2529	OD1AASN	A	315	-29.230	-72.184	260.066	0.50	19.31			O
		ANISOU	2529	OD1AASN	A	315	2219	2688	2430	491	-1077	220		O
		ATOM	2530	OD1BASN	A	315	-29.656	-72.145	263.312	0.50	35.68			O
		ANISOU	2530	OD1BASN	A	315	3558	3428	6568	-811	-1168	460		O
20		ATOM	2531	ND2AASN	A	315	-29.014	-69.960	260.232	0.50	24.80			N
		ANISOU	2531	ND2AASN	A	315	4224	2662	2534	1272	-359	690		N
		ATOM	2532	ND2BASN	A	315	-29.181	-69.912	263.443	0.50	38.71			N
		ANISOU	2532	ND2BASN	A	315	6975	3371	4361	-656	10	-115		N
		ATOM	2533	C	AASN	A	315	-26.303	-73.052	260.720	0.50	13.84		C
25		ANISOU	2533	C	AASN	A	315	1825	1720	1711	172	-119	-7	C
		ATOM	2534	C	BASN	A	315	-26.373	-73.052	260.708	0.50	14.82		C
		ANISOU	2534	C	BASN	A	315	1999	1727	1903	187	-170	0	C
		ATOM	2535	O	AASN	A	315	-25.740	-72.163	260.114	0.50	17.80		O
		ANISOU	2535	O	AASN	A	315	2848	1880	2033	111	260	-13	O
30		ATOM	2536	O	BASN	A	315	-25.909	-72.151	260.048	0.50	18.57		O
		ANISOU	2536	O	BASN	A	315	2801	2087	2167	74	256	24	O
		ATOM	2537	N	LEU	A	316	-26.135	-74.351	260.475	1.00	14.03		N
		ANISOU	2537	N	LEU	A	316	1766	1908	1654	319	118	77	N
		ATOM	2538	CA	LEU	A	316	-25.293	-74.845	259.398	1.00	13.58		C
35		ANISOU	2538	CA	LEU	A	316	1839	1735	1583	290	7	-49	C
		ATOM	2539	CB	LEU	A	316	-23.961	-75.436	259.898	1.00	13.20		C

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		ANISOU	2539	CB	LEU	A	316	1644	1841	1529	329	-31	-338	C
		ATOM	2540	CG	LEU	A	316	-22.974	-74.521	260.552	1.00	15.32		C
		ANISOU	2540	CG	LEU	A	316	2125	1949	1747	63	-281	33	C
		ATOM	2541	CD1	LEU	A	316	-21.901	-75.408	261.247	1.00	13.96		C
5		ANISOU	2541	CD1	LEU	A	316	2133	1216	1952	170	-416	-318	C
		ATOM	2542	CD2	LEU	A	316	-22.365	-73.569	259.508	1.00	16.96		C
		ANISOU	2542	CD2	LEU	A	316	2517	1248	2678	-240	66	-264	C
		ATOM	2543	C	LEU	A	316	-26.040	-75.982	258.733	1.00	14.16		C
		ANISOU	2543	C	LEU	A	316	1902	1856	1621	116	176	-263	C
10		ATOM	2544	O	LEU	A	316	-26.757	-76.715	259.391	1.00	12.60		O
		ANISOU	2544	O	LEU	A	316	1687	1532	1569	230	-83	-233	O
		ATOM	2545	N	PRO	A	317	-25.794	-76.185	257.430	1.00	14.02		N
		ANISOU	2545	N	PRO	A	317	1731	1800	1793	58	61	-50	N
		ATOM	2546	CA	PRO	A	317	-26.305	-77.434	256.857	1.00	15.42		C
15		ANISOU	2546	CA	PRO	A	317	1893	2171	1793	248	-107	-420	C
		ATOM	2547	CB	PRO	A	317	-25.721	-77.392	255.433	1.00	17.03		C
		ANISOU	2547	CB	PRO	A	317	2429	2361	1679	-36	-17	-273	C
		ATOM	2548	CG	PRO	A	317	-25.316	-75.974	255.144	1.00	17.99		C
		ANISOU	2548	CG	PRO	A	317	2651	2476	1706	-160	-289	-415	C
20		ATOM	2549	CD	PRO	A	317	-24.904	-75.463	256.506	1.00	16.39		C
		ANISOU	2549	CD	PRO	A	317	2317	2045	1862	320	-102	-428	C
		ATOM	2550	C	PRO	A	317	-25.812	-78.690	257.569	1.00	11.17		C
		ANISOU	2550	C	PRO	A	317	1564	1235	1445	242	315	-662	C
		ATOM	2551	O	PRO	A	317	-24.711	-78.688	258.148	1.00	11.33		O
25		ANISOU	2551	O	PRO	A	317	1645	1097	1561	149	-163	-285	O
		ATOM	2552	N	AGLU	A	318	-26.583	-79.780	257.529	0.50	12.97		N
		ANISOU	2552	N	AGLU	A	318	1289	1864	1774	-62	21	-520	N
		ATOM	2553	N	BGLU	A	318	-26.592	-79.758	257.484	0.50	13.40		N
		ANISOU	2553	N	BGLU	A	318	1317	1940	1833	-129	24	-576	N
30		ATOM	2554	CA	AGLU	A	318	-26.251	-81.009	258.326	0.50	14.63		C
		ANISOU	2554	CA	AGLU	A	318	1768	1848	1941	-332	254	-208	C
		ATOM	2555	CA	BGLU	A	318	-26.335	-80.993	258.257	0.50	15.57		C
		ANISOU	2555	CA	BGLU	A	318	1915	1956	2045	-363	340	-226	C
		ATOM	2556	CB	AGLU	A	318	-27.406	-82.048	258.370	0.50	17.03		C
35		ANISOU	2556	CB	AGLU	A	318	1802	1753	2912	-223	173	-605	C
		ATOM	2557	CB	BGLU	A	318	-27.552	-81.954	258.168	0.50	17.75		C

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		ANISOU	2557	CB	BGLU	A	318	2148	1695	2900	-286	89	-425	C
		ATOM	2558	CG	AGLU	A	318	-28.414	-81.789	259.505	0.50	20.34		C
		ANISOU	2558	CG	AGLU	A	318	2403	3017	2305	-57	42	444	C
		ATOM	2559	CG	BGLU	A	318	-28.860	-81.334	258.731	0.50	24.59		C
5		ANISOU	2559	CG	BGLU	A	318	2600	3029	3711	466	306	430	C
		ATOM	2560	CD	AGLU	A	318	-29.406	-82.946	259.698	0.50	21.10		C
		ANISOU	2560	CD	AGLU	A	318	2726	2524	2764	13	471	1383	C
		ATOM	2561	CD	BGLU	A	318	-28.897	-81.188	260.242	0.50	29.37		C
		ANISOU	2561	CD	BGLU	A	318	4546	2847	3763	473	-488	-731	C
10		ATOM	2562	OE1	AGLU	A	318	-29.290	-84.054	259.109	0.50	31.16		O
		ANISOU	2562	OE1	AGLU	A	318	4094	3099	4643	-668	1068	774	O
		ATOM	2563	OE1	BGLU	A	318	-28.938	-82.206	260.985	0.50	34.57		O
		ANISOU	2563	OE1	BGLU	A	318	3828	4126	5178	-1469	-1165	709	O
		ATOM	2564	OE2	AGLU	A	318	-30.334	-82.694	260.447	0.50	27.23		O
15		ANISOU	2564	OE2	AGLU	A	318	2416	3843	4086	44	321	1203	O
		ATOM	2565	OE2	BGLU	A	318	-28.938	-80.025	260.694	0.50	38.97		O
		ANISOU	2565	OE2	BGLU	A	318	4961	2864	6979	-1324	1002	-1297	O
		ATOM	2566	C	AGLU	A	318	-24.959	-81.668	257.842	0.50	12.32		C
		ANISOU	2566	C	AGLU	A	318	1860	1126	1695	-308	-115	-398	C
20		ATOM	2567	C	BGLU	A	318	-25.016	-81.668	257.825	0.50	12.53		C
		ANISOU	2567	C	BGLU	A	318	1965	1070	1726	-342	-115	-357	C
		ATOM	2568	O	AGLU	A	318	-24.356	-82.467	258.572	0.50	13.23		O
		ANISOU	2568	O	AGLU	A	318	1713	1701	1610	-312	168	-169	O
		ATOM	2569	O	BGLU	A	318	-24.444	-82.462	258.580	0.50	13.37		O
25		ANISOU	2569	O	BGLU	A	318	1814	1705	1561	-288	127	-145	O
		ATOM	2570	N	TYR	A	319	-24.613	-81.411	256.570	1.00	12.86		N
		ANISOU	2570	N	TYR	A	319	1432	1647	1806	-184	-148	-541	N
		ATOM	2571	CA	TYR	A	319	-23.394	-81.969	255.966	1.00	10.37		C
		ANISOU	2571	CA	TYR	A	319	1439	1174	1326	10	-86	-207	C
30		ATOM	2572	CB	TYR	A	319	-23.598	-82.291	254.472	1.00	12.56		C
		ANISOU	2572	CB	TYR	A	319	1573	1591	1606	-209	109	-440	C
		ATOM	2573	CG	TYR	A	319	-24.105	-81.110	253.713	1.00	12.08		C
		ANISOU	2573	CG	TYR	A	319	1528	1852	1209	68	-114	-601	C
		ATOM	2574	CD1	TYR	A	319	-23.309	-80.081	253.306	1.00	12.20		C
35		ANISOU	2574	CD1	TYR	A	319	1458	1609	1568	-7	90	-358	C
		ATOM	2575	CE1	TYR	A	319	-23.783	-78.948	252.625	1.00	12.37		C

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		ANISOU	2575	CE1	TYR	A	319	1522	1436	1741	71	193	-588	C
		ATOM	2576	CZ	TYR	A	319	-25.125	-78.899	252.344	1.00	14.44		C
		ANISOU	2576	CZ	TYR	A	319	1916	2086	1484	401	-140	-233	C
		ATOM	2577	OH	TYR	A	319	-25.683	-77.791	251.705	1.00	14.96		O
5		ANISOU	2577	OH	TYR	A	319	2085	2259	1340	663	-110	-369	O
		ATOM	2578	CE2	TYR	A	319	-25.968	-79.881	252.762	1.00	12.91		C
		ANISOU	2578	CE2	TYR	A	319	1803	1457	1644	349	-335	-484	C
		ATOM	2579	CD2	TYR	A	319	-25.497	-80.978	253.429	1.00	11.55		C
		ANISOU	2579	CD2	TYR	A	319	1446	1326	1616	-27	89	-74	C
10		ATOM	2580	C	TYR	A	319	-22.165	-81.168	256.251	1.00	9.97		C
		ANISOU	2580	C	TYR	A	319	1193	1275	1319	211	-98	-241	C
		ATOM	2581	O	TYR	A	319	-21.109	-81.508	255.733	1.00	9.40		O
		ANISOU	2581	O	TYR	A	319	1246	1146	1179	-12	-126	-320	O
		ATOM	2582	N	ALA	A	320	-22.272	-80.055	257.020	1.00	10.46		N
15		ANISOU	2582	N	ALA	A	320	1389	1012	1573	68	-382	-360	N
		ATOM	2583	CA	ALA	A	320	-21.111	-79.220	257.368	1.00	9.22		C
		ANISOU	2583	CA	ALA	A	320	1239	1151	1113	109	-41	-156	C
		ATOM	2584	CB	ALA	A	320	-21.501	-77.740	257.394	1.00	10.28		C
		ANISOU	2584	CB	ALA	A	320	1655	1024	1224	-153	-242	-250	C
20		ATOM	2585	C	ALA	A	320	-20.524	-79.641	258.696	1.00	8.39		C
		ANISOU	2585	C	ALA	A	320	1204	835	1146	132	-159	-6	C
		ATOM	2586	O	ALA	A	320	-21.240	-79.996	259.646	1.00	8.99		O
		ANISOU	2586	O	ALA	A	320	1330	864	1221	-126	61	-278	O
		ATOM	2587	N	VAL	A	321	-19.186	-79.649	258.738	1.00	9.31		N
25		ANISOU	2587	N	VAL	A	321	1207	1083	1244	67	101	-199	N
		ATOM	2588	CA	VAL	A	321	-18.452	-79.895	259.990	1.00	7.20		C
		ANISOU	2588	CA	VAL	A	321	974	613	1146	165	-39	-213	C
		ATOM	2589	CB	VAL	A	321	-16.956	-79.902	259.625	1.00	7.80		C
		ANISOU	2589	CB	VAL	A	321	1158	620	1184	-10	-47	33	C
30		ATOM	2590	CG1	VAL	A	321	-16.106	-79.960	260.847	1.00	10.39		C
		ANISOU	2590	CG1	VAL	A	321	1424	1227	1297	2	-206	-232	C
		ATOM	2591	CG2	VAL	A	321	-16.626	-81.078	258.716	1.00	9.87		C
		ANISOU	2591	CG2	VAL	A	321	1401	942	1405	-65	-121	-242	C
		ATOM	2592	C	VAL	A	321	-18.766	-78.767	261.027	1.00	7.32		C
35		ANISOU	2592	C	VAL	A	321	935	860	985	164	-5	-232	C
		ATOM	2593	O	VAL	A	321	-18.703	-77.605	260.718	1.00	10.32		O

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		ANISOU	2593	O	VAL	A	321	1443	1222	1254	-21	85	-53	O
		ATOM	2594	N	GLU	A	322	-19.101	-79.196	262.228	1.00	7.34		N
		ANISOU	2594	N	GLU	A	322	1086	780	922	-22	82	-140	N
		ATOM	2595	CA	GLU	A	322	-19.460	-78.238	263.267	1.00	8.03		C
5		ANISOU	2595	CA	GLU	A	322	1012	1253	784	142	-1	-219	C
		ATOM	2596	CB	GLU	A	322	-20.309	-78.920	264.357	1.00	6.85		C
		ANISOU	2596	CB	GLU	A	322	1130	326	1147	-108	101	-157	C
		ATOM	2597	CG	GLU	A	322	-21.585	-79.565	263.785	1.00	8.97		C
		ANISOU	2597	CG	GLU	A	322	1028	1284	1095	97	11	-319	C
10		ATOM	2598	CD	GLU	A	322	-21.441	-81.035	263.347	1.00	9.54		C
		ANISOU	2598	CD	GLU	A	322	1220	1180	1225	3	-190	-163	C
		ATOM	2599	OE1	GLU	A	322	-20.350	-81.662	263.449	1.00	8.36		O
		ANISOU	2599	OE1	GLU	A	322	1117	808	1248	-358	-92	-360	O
		ATOM	2600	OE2	GLU	A	322	-22.501	-81.593	262.878	1.00	9.80		O
15		ANISOU	2600	OE2	GLU	A	322	1322	911	1488	-79	23	-206	O
		ATOM	2601	C	GLU	A	322	-18.260	-77.627	263.958	1.00	6.11		C
		ANISOU	2601	C	GLU	A	322	917	416	987	-68	8	-129	C
		ATOM	2602	O	GLU	A	322	-18.319	-76.399	264.278	1.00	7.39		O
		ANISOU	2602	O	GLU	A	322	1083	435	1289	-6	-159	-167	O
20		ATOM	2603	N	PHE	A	323	-17.152	-78.394	264.101	1.00	8.05		N
		ANISOU	2603	N	PHE	A	323	1002	1047	1008	190	-79	-238	N
		ATOM	2604	CA	PHE	A	323	-15.906	-77.941	264.771	1.00	7.04		C
		ANISOU	2604	CA	PHE	A	323	851	865	958	29	35	97	C
		ATOM	2605	CB	PHE	A	323	-15.795	-78.577	266.159	1.00	5.56		C
25		ANISOU	2605	CB	PHE	A	323	857	416	839	-10	21	93	C
		ATOM	2606	CG	PHE	A	323	-14.511	-78.374	266.927	1.00	6.08		C
		ANISOU	2606	CG	PHE	A	323	883	602	822	-55	86	-104	C
		ATOM	2607	CD1	PHE	A	323	-13.925	-77.084	267.009	1.00	5.86		C
		ANISOU	2607	CD1	PHE	A	323	864	487	874	-22	19	175	C
30		ATOM	2608	CE1	PHE	A	323	-12.773	-76.915	267.778	1.00	7.39		C
		ANISOU	2608	CE1	PHE	A	323	1023	890	893	-83	0	56	C
		ATOM	2609	CZ	PHE	A	323	-12.262	-78.006	268.436	1.00	6.85		C
		ANISOU	2609	CZ	PHE	A	323	1028	627	947	34	3	-137	C
		ATOM	2610	CE2	PHE	A	323	-12.806	-79.316	268.339	1.00	7.68		C
35		ANISOU	2610	CE2	PHE	A	323	1062	846	1008	-171	-17	142	C
		ATOM	2611	CD2	PHE	A	323	-13.931	-79.451	267.580	1.00	6.96		C

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		ANISOU	2611	CD2	PHE	A	323	994	562	1088	33	-6	-23	C
		ATOM	2612	C	PHE	A	323	-14.783	-78.317	263.810	1.00	6.35		C
		ANISOU	2612	C	PHE	A	323	962	605	844	-166	14	-229	C
		ATOM	2613	O	PHE	A	323	-14.509	-79.520	263.639	1.00	7.51		O
5		ANISOU	2613	O	PHE	A	323	1165	654	1035	-16	-24	-311	O
		ATOM	2614	N	GLY	A	324	-14.227	-77.346	263.087	1.00	7.36		N
		ANISOU	2614	N	GLY	A	324	951	926	918	113	105	-77	N
		ATOM	2615	CA	GLY	A	324	-13.274	-77.594	261.998	1.00	6.82		C
		ANISOU	2615	CA	GLY	A	324	1060	650	878	170	21	103	C
10		ATOM	2616	C	GLY	A	324	-11.899	-77.827	262.520	1.00	7.18		C
		ANISOU	2616	C	GLY	A	324	937	818	974	-6	2	-90	C
		ATOM	2617	O	GLY	A	324	-10.978	-76.981	262.389	1.00	8.33		O
		ANISOU	2617	O	GLY	A	324	1118	836	1209	-14	-15	10	O
		ATOM	2618	N	HIS	A	325	-11.757	-79.058	263.095	1.00	7.02		N
15		ANISOU	2618	N	HIS	A	325	1083	513	1071	-84	-97	-99	N
		ATOM	2619	CA	HIS	A	325	-10.584	-79.385	263.855	1.00	5.46		C
		ANISOU	2619	CA	HIS	A	325	957	495	621	-50	52	110	C
		ATOM	2620	CB	HIS	A	325	-10.684	-78.829	265.275	1.00	7.18		C
		ANISOU	2620	CB	HIS	A	325	931	895	900	166	82	-223	C
20		ATOM	2621	CG	HIS	A	325	-9.456	-78.942	266.101	1.00	7.32		C
		ANISOU	2621	CG	HIS	A	325	786	873	1121	273	-26	-287	C
		ATOM	2622	ND1	HIS	A	325	-9.201	-79.936	267.026	1.00	10.33		N
		ANISOU	2622	ND1	HIS	A	325	1243	1427	1251	47	-94	-2	N
		ATOM	2623	CE1	HIS	A	325	-7.982	-79.721	267.555	1.00	5.00		C
25		ANISOU	2623	CE1	HIS	A	325	733	491	676	-18	-16	63	C
		ATOM	2624	NE2	HIS	A	325	-7.508	-78.597	267.016	1.00	9.64		N
		ANISOU	2624	NE2	HIS	A	325	1192	1113	1357	-78	-92	232	N
		ATOM	2625	CD2	HIS	A	325	-8.379	-78.128	266.093	1.00	4.78		C
		ANISOU	2625	CD2	HIS	A	325	852	335	627	214	210	35	C
30		ATOM	2626	C	HIS	A	325	-10.589	-80.921	263.896	1.00	6.01		C
		ANISOU	2626	C	HIS	A	325	868	466	948	-22	-56	95	C
		ATOM	2627	O	HIS	A	325	-11.641	-81.509	263.998	1.00	7.51		O
		ANISOU	2627	O	HIS	A	325	882	906	1065	-92	47	-166	O
		ATOM	2628	N	GLY	A	326	-9.378	-81.501	263.879	1.00	6.17		N
35		ANISOU	2628	N	GLY	A	326	839	394	1111	-160	-65	-269	N
		ATOM	2629	CA	GLY	A	326	-9.265	-82.997	263.927	1.00	5.88		C

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		ANISOU	2629	CA	GLY	A	326	845	418	972	-138	168	-160	C
		ATOM	2630	C	GLY	A	326	-7.859	-83.380	263.502	1.00	6.29		C
		ANISOU	2630	C	GLY	A	326	776	797	814	1	18	-70	C
		ATOM	2631	O	GLY	A	326	-7.223	-82.630	262.760	1.00	7.86		O
5		ANISOU	2631	O	GLY	A	326	1124	802	1058	29	143	-107	O
		ATOM	2632	N	TYR	A	327	-7.421	-84.536	263.995	1.00	6.96		N
		ANISOU	2632	N	TYR	A	327	798	731	1113	-29	34	63	N
		ATOM	2633	CA	TYR	A	327	-6.099	-85.076	263.700	1.00	6.63		C
		ANISOU	2633	CA	TYR	A	327	861	678	979	-110	151	-149	C
10		ATOM	2634	CB	TYR	A	327	-5.393	-85.385	264.999	1.00	7.49		C
		ANISOU	2634	CB	TYR	A	327	925	903	1017	56	101	-49	C
		ATOM	2635	CG	TYR	A	327	-5.259	-84.184	265.855	1.00	6.68		C
		ANISOU	2635	CG	TYR	A	327	909	742	888	-106	-14	10	C
		ATOM	2636	CD1	TYR	A	327	-4.138	-83.324	265.735	1.00	6.48		C
15		ANISOU	2636	CD1	TYR	A	327	983	641	836	-61	315	-110	C
		ATOM	2637	CE1	TYR	A	327	-4.006	-82.151	266.503	1.00	5.88		C
		ANISOU	2637	CE1	TYR	A	327	996	400	835	-171	116	-14	C
		ATOM	2638	CZ	TYR	A	327	-4.921	-81.871	267.449	1.00	5.70		C
		ANISOU	2638	CZ	TYR	A	327	898	604	663	-101	-30	-40	C
20		ATOM	2639	OH	TYR	A	327	-4.801	-80.675	268.188	1.00	6.33		O
		ANISOU	2639	OH	TYR	A	327	1128	538	739	-12	-110	4	O
		ATOM	2640	CE2	TYR	A	327	-6.019	-82.663	267.605	1.00	6.98		C
		ANISOU	2640	CE2	TYR	A	327	820	885	944	-160	25	-130	C
		ATOM	2641	CD2	TYR	A	327	-6.185	-83.868	266.855	1.00	6.46		C
25		ANISOU	2641	CD2	TYR	A	327	896	531	1027	-61	133	74	C
		ATOM	2642	C	TYR	A	327	-6.310	-86.395	262.929	1.00	6.50		C
		ANISOU	2642	C	TYR	A	327	1012	680	777	-71	65	48	C
		ATOM	2643	O	TYR	A	327	-7.240	-87.173	263.217	1.00	7.16		O
		ANISOU	2643	O	TYR	A	327	1083	676	959	-168	25	-139	O
30		ATOM	2644	N	THR	A	328	-5.406	-86.673	261.986	1.00	6.97		N
		ANISOU	2644	N	THR	A	328	1107	552	989	-54	179	-52	N
		ATOM	2645	CA	THR	A	328	-5.406	-87.982	261.291	1.00	7.58		C
		ANISOU	2645	CA	THR	A	328	1104	503	1272	167	-52	-159	C
		ATOM	2646	CB	THR	A	328	-4.069	-88.109	260.544	1.00	8.28		C
35		ANISOU	2646	CB	THR	A	328	1384	427	1332	-192	146	-120	C
		ATOM	2647	OG1	THR	A	328	-3.962	-87.079	259.573	1.00	12.80		O

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		ANISOU	2647	OG1	THR	A	328	2398	1335	1130	-53	687	-61	O
		ATOM	2648	CG2	THR	A	328	-3.936	-89.468	259.823	1.00	9.69		C
		ANISOU	2648	CG2	THR	A	328	1609	672	1401	-239	506	-197	C
		ATOM	2649	C	THR	A	328	-5.627	-89.144	262.262	1.00	8.79		C
5		ANISOU	2649	C	THR	A	328	1100	1090	1147	49	188	-96	C
		ATOM	2650	O	THR	A	328	-6.397	-90.103	261.950	1.00	8.08		O
		ANISOU	2650	O	THR	A	328	1336	722	1010	-72	124	-73	O
		ATOM	2651	N	TYR	A	329	-4.960	-89.093	263.374	1.00	7.25		N
		ANISOU	2651	N	TYR	A	329	1198	485	1071	-51	39	79	N
10		ATOM	2652	CA	TYR	A	329	-4.951	-90.171	264.360	1.00	7.13		C
		ANISOU	2652	CA	TYR	A	329	1076	507	1124	-43	91	232	C
		ATOM	2653	CB	TYR	A	329	-3.514	-90.461	264.826	1.00	8.54		C
		ANISOU	2653	CB	TYR	A	329	1032	723	1490	12	204	-151	C
		ATOM	2654	CG	TYR	A	329	-2.624	-90.877	263.649	1.00	8.56		C
15		ANISOU	2654	CG	TYR	A	329	937	1170	1145	52	70	10	C
		ATOM	2655	CD1	TYR	A	329	-3.078	-91.852	262.723	1.00	9.40		C
		ANISOU	2655	CD1	TYR	A	329	1301	690	1580	-336	439	34	C
		ATOM	2656	CE1	TYR	A	329	-2.287	-92.288	261.690	1.00	9.01		C
		ANISOU	2656	CE1	TYR	A	329	1187	981	1253	-242	-7	-153	C
20		ATOM	2657	CZ	TYR	A	329	-1.007	-91.821	261.585	1.00	8.91		C
		ANISOU	2657	CZ	TYR	A	329	1077	1125	1180	-131	51	-144	C
		ATOM	2658	OH	TYR	A	329	-0.178	-92.251	260.543	1.00	9.52		O
		ANISOU	2658	OH	TYR	A	329	1395	964	1257	-151	245	-113	O
		ATOM	2659	CE2	TYR	A	329	-0.522	-90.828	262.449	1.00	7.03		C
25		ANISOU	2659	CE2	TYR	A	329	991	506	1173	-216	253	-55	C
		ATOM	2660	CD2	TYR	A	329	-1.363	-90.366	263.491	1.00	6.78		C
		ANISOU	2660	CD2	TYR	A	329	992	682	901	72	-6	0	C
		ATOM	2661	C	TYR	A	329	-5.905	-90.023	265.524	1.00	8.54		C
		ANISOU	2661	C	TYR	A	329	1090	1082	1071	304	74	-128	C
30		ATOM	2662	O	TYR	A	329	-5.849	-90.757	266.509	1.00	9.00		O
		ANISOU	2662	O	TYR	A	329	1314	854	1252	187	103	-53	O
		ATOM	2663	N	SER	A	330	-6.782	-89.029	265.402	1.00	6.82		N
		ANISOU	2663	N	SER	A	330	1038	673	878	-8	206	78	N
		ATOM	2664	CA	SER	A	330	-7.913	-88.908	266.402	1.00	5.96		C
35		ANISOU	2664	CA	SER	A	330	1146	373	745	18	177	8	C
		ATOM	2665	CB	SER	A	330	-8.787	-87.669	266.038	1.00	6.20		C

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		ANISOU	2665	CB	SER A	330	1063	382	907	-32	248	74	C
		ATOM	2666	OG	SER A	330	-8.289	-86.384	266.299	1.00	6.89		O
		ANISOU	2666	OG	SER A	330	967	591	1058	-183	103	-29	O
		ATOM	2667	C	SER A	330	-8.661	-90.264	266.384	1.00	6.91		C
5		ANISOU	2667	C	SER A	330	1185	488	951	-96	129	-274	C
		ATOM	2668	O	SER A	330	-9.296	-90.564	265.343	1.00	7.50		O
		ANISOU	2668	O	SER A	330	1384	437	1030	-237	-75	143	O
		ATOM	2669	N	ALA A	331	-8.819	-90.817	267.541	1.00	6.98		N
		ANISOU	2669	N	ALA A	331	1221	572	858	-114	202	-438	N
10		ATOM	2670	CA	ALA A	331	-9.565	-92.072	267.685	1.00	8.42		C
		ANISOU	2670	CA	ALA A	331	1248	708	1243	-96	95	8	C
		ATOM	2671	CB	ALA A	331	-11.051	-91.859	267.420	1.00	8.49		C
		ANISOU	2671	CB	ALA A	331	1302	640	1284	-134	272	-191	C
		ATOM	2672	C	ALA A	331	-8.972	-93.250	266.858	1.00	6.99		C
15		ANISOU	2672	C	ALA A	331	964	515	1177	-19	-85	233	C
		ATOM	2673	O	ALA A	331	-9.745	-94.078	266.342	1.00	8.63		O
		ANISOU	2673	O	ALA A	331	1034	1129	1113	-140	66	-175	O
		ATOM	2674	N	HIS A	332	-7.689	-93.282	266.659	1.00	6.30		N
		ANISOU	2674	N	HIS A	332	921	443	1030	44	85	-87	N
20		ATOM	2675	CA	HIS A	332	-7.055	-94.347	265.932	1.00	7.34		C
		ANISOU	2675	CA	HIS A	332	1091	676	1021	369	182	4	C
		ATOM	2676	CB	HIS A	332	-5.560	-94.249	266.179	1.00	7.41		C
		ANISOU	2676	CB	HIS A	332	1223	512	1079	-24	10	-293	C
		ATOM	2677	CG	HIS A	332	-4.761	-95.173	265.342	1.00	6.21		C
25		ANISOU	2677	CG	HIS A	332	1091	277	990	-129	197	10	C
		ATOM	2678	ND1	HIS A	332	-4.693	-96.548	265.594	1.00	8.16		N
		ANISOU	2678	ND1	HIS A	332	1498	374	1227	-160	416	228	N
		ATOM	2679	CE1	HIS A	332	-3.892	-97.076	264.680	1.00	9.74		C
		ANISOU	2679	CE1	HIS A	332	1232	1123	1342	-179	360	176	C
30		ATOM	2680	NE2	HIS A	332	-3.565	-96.164	263.793	1.00	8.73		N
		ANISOU	2680	NE2	HIS A	332	1389	787	1141	161	326	-205	N
		ATOM	2681	CD2	HIS A	332	-4.054	-94.962	264.208	1.00	7.67		C
		ANISOU	2681	CD2	HIS A	332	1387	562	965	23	144	-311	C
		ATOM	2682	C	HIS A	332	-7.534	-95.738	266.552	1.00	8.70		C
35		ANISOU	2682	C	HIS A	332	1269	959	1075	-203	-1	-108	C
		ATOM	2683	O	HIS A	332	-7.611	-95.914	267.752	1.00	8.57		O

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		ANISOU	2683	O	HIS	A	332	1291	960	1003	136	223	-160	O
		ATOM	2684	N	PRO	A	333	-7.923	-96.701	265.687	1.00	7.64		N
		ANISOU	2684	N	PRO	A	333	1216	678	1007	-148	-78	1	N
		ATOM	2685	CA	PRO	A	333	-8.560	-97.891	266.258	1.00	9.25		C
5		ANISOU	2685	CA	PRO	A	333	1397	920	1199	-261	138	169	C
		ATOM	2686	CB	PRO	A	333	-9.069	-98.639	265.045	1.00	11.01		C
		ANISOU	2686	CB	PRO	A	333	1396	1392	1393	-32	-50	8	C
		ATOM	2687	CG	PRO	A	333	-8.252	-98.144	263.902	1.00	11.16		C
		ANISOU	2687	CG	PRO	A	333	1536	1324	1381	-97	139	-281	C
10		ATOM	2688	CD	PRO	A	333	-7.953	-96.674	264.191	1.00	8.92		C
		ANISOU	2688	CD	PRO	A	333	1347	987	1055	120	178	-176	C
		ATOM	2689	C	PRO	A	333	-7.686	-98.756	267.163	1.00	8.38		C
		ANISOU	2689	C	PRO	A	333	1161	788	1235	13	222	-390	C
		ATOM	2690	O	PRO	A	333	-8.163	-99.311	268.106	1.00	8.68		O
15		ANISOU	2690	O	PRO	A	333	1328	867	1102	-61	229	-139	O
		ATOM	2691	N	VAL	A	334	-6.367	-98.775	266.885	1.00	8.46		N
		ANISOU	2691	N	VAL	A	334	1084	945	1185	23	51	88	N
		ATOM	2692	CA	VAL	A	334	-5.426	-99.451	267.711	1.00	8.11		C
		ANISOU	2692	CA	VAL	A	334	1004	812	1264	-60	-56	77	C
20		ATOM	2693	CB	VAL	A	334	-4.072	-99.705	266.960	1.00	8.88		C
		ANISOU	2693	CB	VAL	A	334	1216	970	1186	62	135	-12	C
		ATOM	2694	CG1	VAL	A	334	-3.163	-100.458	267.882	1.00	9.47		C
		ANISOU	2694	CG1	VAL	A	334	1291	1103	1204	18	58	42	C
		ATOM	2695	CG2	VAL	A	334	-4.301	-100.468	265.648	1.00	10.08		C
25		ANISOU	2695	CG2	VAL	A	334	1278	1422	1128	-67	185	107	C
		ATOM	2696	C	VAL	A	334	-5.298	-98.885	269.073	1.00	9.66		C
		ANISOU	2696	C	VAL	A	334	1340	1137	1192	86	117	44	C
		ATOM	2697	O	VAL	A	334	-5.266	-99.519	270.143	1.00	8.85		O
		ANISOU	2697	O	VAL	A	334	1476	499	1387	60	130	-45	O
30		ATOM	2698	N	ALA	A	335	-5.180	-97.554	269.063	1.00	9.39		N
		ANISOU	2698	N	ALA	A	335	1165	1110	1290	-85	269	-145	N
		ATOM	2699	CA	ALA	A	335	-5.197	-96.778	270.308	1.00	6.52		C
		ANISOU	2699	CA	ALA	A	335	893	562	1021	246	33	74	C
		ATOM	2700	CB	ALA	A	335	-4.966	-95.285	270.035	1.00	7.45		C
35		ANISOU	2700	CB	ALA	A	335	1120	596	1115	131	253	-46	C
		ATOM	2701	C	ALA	A	335	-6.496	-96.960	271.069	1.00	6.34		C

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		ANISOU	2701	C	ALA	A	335	992	257	1157	26	74	-47	C
		ATOM	2702	O	ALA	A	335	-6.474	-97.118	272.308	1.00	8.36		O
		ANISOU	2702	O	ALA	A	335	1426	722	1029	38	59	43	O
		ATOM	2703	N	CYS	A	336	-7.614	-96.969	270.366	1.00	8.00		N
5		ANISOU	2703	N	CYS	A	336	1157	875	1007	19	12	220	N
		ATOM	2704	CA	CYS	A	336	-8.908	-97.248	271.061	1.00	7.20		C
		ANISOU	2704	CA	CYS	A	336	1013	624	1096	-65	102	22	C
		ATOM	2705	CB	CYS	A	336	-10.158	-97.034	270.170	1.00	6.38		C
		ANISOU	2705	CB	CYS	A	336	819	333	1270	-121	293	-280	C
10		ATOM	2706	SG	CYS	A	336	-10.420	-95.384	269.634	1.00	9.43		S
		ANISOU	2706	SG	CYS	A	336	1336	877	1367	-97	132	16	S
		ATOM	2707	C	CYS	A	336	-8.924	-98.634	271.695	1.00	8.23		C
		ANISOU	2707	C	CYS	A	336	1267	567	1291	77	153	-51	C
		ATOM	2708	O	CYS	A	336	-9.434	-98.760	272.828	1.00	8.83		O
15		ANISOU	2708	O	CYS	A	336	1493	571	1290	-70	392	-169	O
		ATOM	2709	N	ALA	A	337	-8.427	-99.667	271.006	1.00	8.44		N
		ANISOU	2709	N	ALA	A	337	1295	768	1143	60	131	-18	N
		ATOM	2710	CA	ALA	A	337	-8.345	-101.023	271.596	1.00	8.13		C
		ANISOU	2710	CA	ALA	A	337	1110	809	1168	-67	247	154	C
20		ATOM	2711	CB	ALA	A	337	-7.794	-102.020	270.608	1.00	10.71		C
		ANISOU	2711	CB	ALA	A	337	1709	1234	1126	229	228	-11	C
		ATOM	2712	C	ALA	A	337	-7.523	-101.001	272.876	1.00	9.40		C
		ANISOU	2712	C	ALA	A	337	1122	1111	1338	-131	86	-62	C
		ATOM	2713	O	ALA	A	337	-7.858	-101.574	273.913	1.00	9.70		O
25		ANISOU	2713	O	ALA	A	337	1421	978	1287	-180	246	-25	O
		ATOM	2714	N	ALA	A	338	-6.394	-100.242	272.825	1.00	8.33		N
		ANISOU	2714	N	ALA	A	338	1203	793	1167	-138	60	191	N
		ATOM	2715	CA	ALA	A	338	-5.562	-100.093	274.003	1.00	9.26		C
		ANISOU	2715	CA	ALA	A	338	1195	972	1352	74	-29	-124	C
30		ATOM	2716	CB	ALA	A	338	-4.263	-99.358	273.680	1.00	10.00		C
		ANISOU	2716	CB	ALA	A	338	1270	1093	1435	178	151	170	C
		ATOM	2717	C	ALA	A	338	-6.315	-99.461	275.160	1.00	8.73		C
		ANISOU	2717	C	ALA	A	338	1107	901	1306	187	155	-3	C
		ATOM	2718	O	ALA	A	338	-6.157	-99.826	276.355	1.00	9.34		O
35		ANISOU	2718	O	ALA	A	338	1526	779	1243	68	134	-105	O
		ATOM	2719	N	GLY	A	339	-6.959	-98.301	274.869	1.00	8.61		N

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		ANISOU	2719	N	GLY	A	339	1527	588	1153	-54	212	312	N
		ATOM	2720	CA	GLY	A	339	-7.768	-97.504	275.877	1.00	9.87		C
		ANISOU	2720	CA	GLY	A	339	1207	1223	1318	-145	115	109	C
		ATOM	2721	C	GLY	A	339	-8.833	-98.387	276.547	1.00	8.62		C
5		ANISOU	2721	C	GLY	A	339	1295	788	1192	-73	-25	-26	C
		ATOM	2722	O	GLY	A	339	-9.006	-98.394	277.734	1.00	9.31		O
		ANISOU	2722	O	GLY	A	339	1387	1044	1104	-156	230	-81	O
		ATOM	2723	N	ILE	A	340	-9.606	-99.106	275.713	1.00	10.54		N
		ANISOU	2723	N	ILE	A	340	1279	1607	1116	-385	4	80	N
10		ATOM	2724	CA	ILE	A	340	-10.669	-99.989	276.264	1.00	9.66		C
		ANISOU	2724	CA	ILE	A	340	1106	1291	1273	-124	2	123	C
		ATOM	2725	CB	ILE	A	340	-11.477	-100.642	275.120	1.00	9.86		C
		ANISOU	2725	CB	ILE	A	340	1169	1204	1373	-84	87	155	C
		ATOM	2726	CG1	ILE	A	340	-12.305	-99.581	274.391	1.00	11.55		C
15		ANISOU	2726	CG1	ILE	A	340	1669	1195	1525	124	97	26	C
		ATOM	2727	CD1	ILE	A	340	-12.869	-99.965	273.034	1.00	12.67		C
		ANISOU	2727	CD1	ILE	A	340	1448	1916	1448	-183	19	-50	C
		ATOM	2728	CG2	ILE	A	340	-12.365	-101.759	275.681	1.00	12.04		C
		ANISOU	2728	CG2	ILE	A	340	1496	1336	1742	-357	96	208	C
20		ATOM	2729	C	ILE	A	340	-10.053	-101.008	277.186	1.00	9.29		C
		ANISOU	2729	C	ILE	A	340	1198	1096	1236	7	-16	18	C
		ATOM	2730	O	ILE	A	340	-10.537	-101.223	278.339	1.00	10.40		O
		ANISOU	2730	O	ILE	A	340	1294	1269	1388	-304	296	20	O
		ATOM	2731	N	ALA	A	341	-8.969	-101.612	276.760	1.00	9.95		N
25		ANISOU	2731	N	ALA	A	341	1552	881	1344	-116	216	-143	N
		ATOM	2732	CA	ALA	A	341	-8.317	-102.689	277.551	1.00	9.49		C
		ANISOU	2732	CA	ALA	A	341	1194	966	1444	-124	106	44	C
		ATOM	2733	CB	ALA	A	341	-7.259	-103.421	276.774	1.00	11.57		C
		ANISOU	2733	CB	ALA	A	341	1543	1412	1439	-230	195	265	C
30		ATOM	2734	C	ALA	A	341	-7.734	-102.064	278.831	1.00	11.17		C
		ANISOU	2734	C	ALA	A	341	1569	1254	1421	-378	-28	29	C
		ATOM	2735	O	ALA	A	341	-7.804	-102.643	279.917	1.00	11.40		O
		ANISOU	2735	O	ALA	A	341	1681	1411	1237	99	12	211	O
		ATOM	2736	N	ALA	A	342	-7.145	-100.879	278.742	1.00	8.98		N
35		ANISOU	2736	N	ALA	A	342	1478	896	1037	-25	-187	351	N
		ATOM	2737	CA	ALA	A	342	-6.544	-100.261	279.914	1.00	8.35		C

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		ANISOU	2737	CA	ALA	A	342	1274	689	1207	-59	65	195	C
		ATOM	2738	CB	ALA	A	342	-5.764	-99.084	279.474	1.00	10.23		C
		ANISOU	2738	CB	ALA	A	342	1506	881	1500	-184	91	171	C
		ATOM	2739	C	ALA	A	342	-7.574	-99.891	280.931	1.00	10.87		C
5		ANISOU	2739	C	ALA	A	342	1241	1432	1454	-19	117	16	C
		ATOM	2740	O	ALA	A	342	-7.387	-100.175	282.128	1.00	11.32		O
		ANISOU	2740	O	ALA	A	342	1825	1073	1400	-118	47	35	O
		ATOM	2741	N	LEU	A	343	-8.649	-99.278	280.517	1.00	8.44		N
		ANISOU	2741	N	LEU	A	343	1426	810	971	-65	79	83	N
10		ATOM	2742	CA	LEU	A	343	-9.733	-98.874	281.482	1.00	9.71		C
		ANISOU	2742	CA	LEU	A	343	1384	1116	1188	30	268	175	C
		ATOM	2743	CB	LEU	A	343	-10.766	-97.990	280.813	1.00	10.42		C
		ANISOU	2743	CB	LEU	A	343	1520	1076	1360	-172	37	102	C
		ATOM	2744	CG	LEU	A	343	-10.255	-96.600	280.382	1.00	12.31		C
15		ANISOU	2744	CG	LEU	A	343	1848	867	1961	17	177	-59	C
		ATOM	2745	CD1	LEU	A	343	-11.407	-95.731	279.842	1.00	17.28		C
		ANISOU	2745	CD1	LEU	A	343	1965	2576	2022	423	-15	483	C
		ATOM	2746	CD2	LEU	A	343	-9.415	-95.942	281.458	1.00	14.67		C
		ANISOU	2746	CD2	LEU	A	343	2125	1646	1803	-392	34	241	C
20		ATOM	2747	C	LEU	A	343	-10.378	-100.169	282.077	1.00	10.74		C
		ANISOU	2747	C	LEU	A	343	1666	917	1496	-154	297	-69	C
		ATOM	2748	O	LEU	A	343	-10.678	-100.201	283.274	1.00	10.13		O
		ANISOU	2748	O	LEU	A	343	1545	1018	1285	-254	273	82	O
		ATOM	2749	N	ASP	A	344	-10.580	-101.164	281.257	1.00	10.69		N
25		ANISOU	2749	N	ASP	A	344	1657	1103	1301	-118	134	70	N
		ATOM	2750	CA	ASP	A	344	-11.183	-102.402	281.742	1.00	12.04		C
		ANISOU	2750	CA	ASP	A	344	1388	1545	1640	-282	258	226	C
		ATOM	2751	CB	ASP	A	344	-11.446	-103.363	280.625	1.00	14.57		C
		ANISOU	2751	CB	ASP	A	344	1982	1842	1712	-338	150	4	C
30		ATOM	2752	CG	ASP	A	344	-12.641	-103.069	279.833	1.00	15.12		C
		ANISOU	2752	CG	ASP	A	344	2343	1415	1985	-108	161	24	C
		ATOM	2753	OD1	ASP	A	344	-13.482	-102.265	280.213	1.00	18.32		O
		ANISOU	2753	OD1	ASP	A	344	2115	2403	2441	493	-44	169	O
		ATOM	2754	OD2	ASP	A	344	-12.784	-103.723	278.738	1.00	17.88		O
35		ANISOU	2754	OD2	ASP	A	344	2626	2190	1974	-805	-132	-40	O
		ATOM	2755	C	ASP	A	344	-10.267	-103.079	282.778	1.00	10.70		C

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		ANISOU	2755	C	ASP	A	344	1496	902	1666	-158	14	60	C
		ATOM	2756	O	ASP	A	344	-10.696	-103.591	283.811	1.00	13.40		O
		ANISOU	2756	O	ASP	A	344	1978	1624	1486	-232	394	26	O
		ATOM	2757	N	LEU	A	345	-8.949	-103.027	282.558	1.00	9.75		N
5		ANISOU	2757	N	LEU	A	345	1410	863	1432	-193	11	27	N
		ATOM	2758	CA	LEU	A	345	-7.957	-103.624	283.496	1.00	11.00		C
		ANISOU	2758	CA	LEU	A	345	1482	1095	1600	-8	71	83	C
		ATOM	2759	CB	LEU	A	345	-6.564	-103.636	282.838	1.00	12.65		C
		ANISOU	2759	CB	LEU	A	345	1601	1441	1762	46	80	-66	C
10		ATOM	2760	CG	LEU	A	345	-5.436	-104.196	283.604	1.00	14.38		C
		ANISOU	2760	CG	LEU	A	345	1750	1704	2007	209	103	137	C
		ATOM	2761	CD1	LEU	A	345	-5.760	-105.678	283.895	1.00	17.19		C
		ANISOU	2761	CD1	LEU	A	345	2338	1802	2391	511	328	530	C
		ATOM	2762	CD2	LEU	A	345	-4.172	-104.109	282.762	1.00	17.21		C
15		ANISOU	2762	CD2	LEU	A	345	1957	2251	2330	225	415	518	C
		ATOM	2763	C	LEU	A	345	-7.896	-102.815	284.814	1.00	10.91		C
		ANISOU	2763	C	LEU	A	345	1422	1292	1431	391	-39	33	C
		ATOM	2764	O	LEU	A	345	-7.893	-103.408	285.927	1.00	11.02		O
		ANISOU	2764	O	LEU	A	345	1750	1077	1360	110	214	116	O
20		ATOM	2765	N	LEU	A	346	-8.009	-101.477	284.716	1.00	11.46		N
		ANISOU	2765	N	LEU	A	346	1640	1098	1614	-38	226	58	N
		ATOM	2766	CA	LEU	A	346	-8.038	-100.648	285.929	1.00	10.09		C
		ANISOU	2766	CA	LEU	A	346	1245	1356	1233	-160	179	-57	C
		ATOM	2767	CB	LEU	A	346	-8.199	-99.090	285.623	1.00	13.14		C
25		ANISOU	2767	CB	LEU	A	346	1766	1526	1698	18	198	385	C
		ATOM	2768	CG	LEU	A	346	-6.982	-98.490	284.980	1.00	14.17		C
		ANISOU	2768	CG	LEU	A	346	2086	1551	1746	-10	217	261	C
		ATOM	2769	CD1	LEU	A	346	-7.275	-97.089	284.639	1.00	15.66		C
		ANISOU	2769	CD1	LEU	A	346	2716	1308	1926	-236	-337	173	C
30		ATOM	2770	CD2	LEU	A	346	-5.740	-98.496	285.876	1.00	13.20		C
		ANISOU	2770	CD2	LEU	A	346	1872	1654	1489	-401	162	529	C
		ATOM	2771	C	LEU	A	346	-9.232	-101.100	286.774	1.00	11.36		C
		ANISOU	2771	C	LEU	A	346	1418	1384	1511	-33	192	22	C
		ATOM	2772	O	LEU	A	346	-9.128	-101.200	287.974	1.00	12.61		O
35		ANISOU	2772	O	LEU	A	346	1799	1573	1418	-178	118	24	O
		ATOM	2773	N	AGLN	A	347	-10.356	-101.281	286.131	0.50	10.68		N

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		ANISOU	2773	N	AGLN	A	347	1470	1266	1322	-56	146	456	N
		ATOM	2774	N	BGLN	A	347	-10.366	-101.273	286.124	0.50	10.96		N
		ANISOU	2774	N	BGLN	A	347	1496	1316	1352	-69	132	458	N
		ATOM	2775	CA	AGLN	A	347	-11.560	-101.704	286.844	0.50	11.08		C
5		ANISOU	2775	CA	AGLN	A	347	1478	1328	1403	-106	325	204	C
		ATOM	2776	CA	BGLN	A	347	-11.597	-101.699	286.814	0.50	11.34		C
		ANISOU	2776	CA	BGLN	A	347	1533	1374	1400	-96	330	241	C
		ATOM	2777	CB	AGLN	A	347	-12.782	-101.652	285.928	0.50	12.36		C
		ANISOU	2777	CB	AGLN	A	347	1601	1284	1810	-125	241	-178	C
10		ATOM	2778	CB	BGLN	A	347	-12.838	-101.646	285.896	0.50	13.03		C
		ANISOU	2778	CB	BGLN	A	347	1680	1383	1885	-167	229	-155	C
		ATOM	2779	CG	AGLN	A	347	-14.116	-102.076	286.555	0.50	15.14		C
		ANISOU	2779	CG	AGLN	A	347	1849	1786	2115	-277	453	-89	C
		ATOM	2780	CG	BGLN	A	347	-14.167	-101.975	286.607	0.50	16.29		C
15		ANISOU	2780	CG	BGLN	A	347	2069	1888	2232	-536	429	75	C
		ATOM	2781	CD	AGLN	A	347	-14.530	-101.236	287.765	0.50	19.56		C
		ANISOU	2781	CD	AGLN	A	347	3035	1596	2800	609	1317	-14	C
		ATOM	2782	CD	BGLN	A	347	-15.398	-101.835	285.735	0.50	22.47		C
		ANISOU	2782	CD	BGLN	A	347	2436	2798	3301	-1050	-228	-54	C
20		ATOM	2783	OE1	AGLN	A	347	-14.142	-100.053	287.927	0.50	23.90		O
		ANISOU	2783	OE1	AGLN	A	347	3215	2317	3547	-699	687	887	O
		ATOM	2784	OE1	BGLN	A	347	-15.360	-101.208	284.683	0.50	49.36		O
		ANISOU	2784	OE1	BGLN	A	347	6825	8938	2991	-1814	706	907	O
		ATOM	2785	NE2	AGLN	A	347	-15.342	-101.852	288.635	0.50	30.09		N
25		ANISOU	2785	NE2	AGLN	A	347	3760	4042	3629	-1294	1161	96	N
		ATOM	2786	NE2	BGLN	A	347	-16.514	-102.321	286.219	0.50	31.26		N
		ANISOU	2786	NE2	BGLN	A	347	3310	4737	3829	-1457	575	740	N
		ATOM	2787	C	AGLN	A	347	-11.405	-103.118	287.420	0.50	11.93		C
		ANISOU	2787	C	AGLN	A	347	1559	1260	1713	-112	247	207	C
30		ATOM	2788	C	BGLN	A	347	-11.462	-103.117	287.397	0.50	12.24		C
		ANISOU	2788	C	BGLN	A	347	1631	1251	1766	-109	212	188	C
		ATOM	2789	O	AGLN	A	347	-11.638	-103.359	288.619	0.50	14.04		O
		ANISOU	2789	O	AGLN	A	347	1975	1800	1559	-96	307	389	O
		ATOM	2790	O	BGLN	A	347	-11.767	-103.355	288.582	0.50	14.48		O
35		ANISOU	2790	O	BGLN	A	347	1885	1987	1627	-99	351	330	O
		ATOM	2791	N	LYS	A	348	-10.994	-104.060	286.582	1.00	13.10		N

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		ANISOU	2791	N	LYS	A	348	1968	1603	1404	-243	283	255	N
		ATOM	2792	CA	LYS	A	348	-10.935	-105.472	287.022	1.00	13.28		C
		ANISOU	2792	CA	LYS	A	348	1924	1664	1458	-373	101	454	C
		ATOM	2793	CB	LYS	A	348	-10.389	-106.355	285.875	1.00	14.69		C
5		ANISOU	2793	CB	LYS	A	348	2448	1099	2033	-171	-190	-8	C
		ATOM	2794	CG	LYS	A	348	-10.079	-107.814	286.236	1.00	19.81		C
		ANISOU	2794	CG	LYS	A	348	3338	1533	2656	224	-8	365	C
		ATOM	2795	CD	LYS	A	348	-9.619	-108.528	285.003	1.00	21.88		C
		ANISOU	2795	CD	LYS	A	348	3607	1696	3010	-474	-122	33	C
10		ATOM	2796	CE	LYS	A	348	-9.549	-110.050	285.352	1.00	26.49		C
		ANISOU	2796	CE	LYS	A	348	4609	1614	3842	-1099	29	-520	C
		ATOM	2797	NZ	LYS	A	348	-9.357	-110.957	284.174	1.00	34.62		N
		ANISOU	2797	NZ	LYS	A	348	4921	4066	4166	304	263	-682	N
		ATOM	2798	C	LYS	A	348	-10.017	-105.704	288.207	1.00	12.18		C
15		ANISOU	2798	C	LYS	A	348	1518	1696	1412	-143	9	18	C
		ATOM	2799	O	LYS	A	348	-10.327	-106.494	289.086	1.00	16.03		O
		ANISOU	2799	O	LYS	A	348	2656	1563	1869	-541	213	309	O
		ATOM	2800	N	GLU	A	349	-8.877	-105.031	288.224	1.00	11.66		N
		ANISOU	2800	N	GLU	A	349	1707	1203	1521	-226	154	263	N
20		ATOM	2801	CA	GLU	A	349	-7.875	-105.098	289.266	1.00	12.61		C
		ANISOU	2801	CA	GLU	A	349	1659	1651	1480	84	212	3	C
		ATOM	2802	CB	GLU	A	349	-6.459	-105.052	288.645	1.00	11.88		C
		ANISOU	2802	CB	GLU	A	349	1610	1048	1856	-194	57	202	C
		ATOM	2803	CG	GLU	A	349	-6.196	-106.247	287.734	1.00	13.48		C
25		ANISOU	2803	CG	GLU	A	349	1858	1543	1718	-95	482	192	C
		ATOM	2804	CD	GLU	A	349	-4.782	-106.351	287.236	1.00	18.45		C
		ANISOU	2804	CD	GLU	A	349	2046	2325	2638	78	670	-703	C
		ATOM	2805	OE1	GLU	A	349	-3.942	-105.457	287.364	1.00	14.96		O
		ANISOU	2805	OE1	GLU	A	349	2129	1605	1949	37	359	-15	O
30		ATOM	2806	OE2	GLU	A	349	-4.384	-107.481	286.827	1.00	16.72		O
		ANISOU	2806	OE2	GLU	A	349	2537	1197	2617	-205	584	301	O
		ATOM	2807	C	GLU	A	349	-8.047	-104.047	290.337	1.00	9.18		C
		ANISOU	2807	C	GLU	A	349	1345	515	1626	-454	225	218	C
		ATOM	2808	O	GLU	A	349	-7.184	-104.018	291.245	1.00	12.27		O
35		ANISOU	2808	O	GLU	A	349	1795	1422	1444	-48	202	-92	O
		ATOM	2809	N	ASN	A	350	-9.144	-103.275	290.307	1.00	10.92		N

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		ANISOU	2809	N	ASN	A	350	1351	1366	1431	-132	169	307	N
		ATOM	2810	CA	ASN	A	350	-9.414	-102.288	291.373	1.00	11.99		C
		ANISOU	2810	CA	ASN	A	350	1627	1610	1318	-150	87	-91	C
		ATOM	2811	CB	ASN	A	350	-9.767	-103.055	292.678	1.00	11.83		C
5		ANISOU	2811	CB	ASN	A	350	1562	1298	1632	-387	228	216	C
		ATOM	2812	CG	ASN	A	350	-10.578	-102.241	293.638	1.00	14.57		C
		ANISOU	2812	CG	ASN	A	350	1863	1928	1744	-149	246	0	C
		ATOM	2813	OD1	ASN	A	350	-11.312	-101.386	293.262	1.00	16.04		O
		ANISOU	2813	OD1	ASN	A	350	2237	1754	2101	-272	436	482	O
10		ATOM	2814	ND2	ASN	A	350	-10.496	-102.573	294.893	1.00	16.30		N
		ANISOU	2814	ND2	ASN	A	350	2499	1819	1872	-96	357	426	N
		ATOM	2815	C	ASN	A	350	-8.223	-101.296	291.630	1.00	9.18		C
		ANISOU	2815	C	ASN	A	350	1332	912	1243	107	292	154	C
		ATOM	2816	O	ASN	A	350	-7.876	-100.940	292.776	1.00	10.36		O
15		ANISOU	2816	O	ASN	A	350	1700	882	1355	-302	28	160	O
		ATOM	2817	N	LEU	A	351	-7.551	-100.925	290.526	1.00	8.75		N
		ANISOU	2817	N	LEU	A	351	1537	612	1175	-108	263	24	N
		ATOM	2818	CA	LEU	A	351	-6.274	-100.221	290.641	1.00	9.08		C
		ANISOU	2818	CA	LEU	A	351	1366	981	1101	10	116	35	C
20		ATOM	2819	CB	LEU	A	351	-5.539	-100.254	289.307	1.00	9.14		C
		ANISOU	2819	CB	LEU	A	351	1447	780	1245	-117	332	330	C
		ATOM	2820	CG	LEU	A	351	-4.902	-101.637	289.040	1.00	10.63		C
		ANISOU	2820	CG	LEU	A	351	1568	1147	1323	-80	231	14	C
		ATOM	2821	CD1	LEU	A	351	-4.489	-101.870	287.646	1.00	11.23		C
25		ANISOU	2821	CD1	LEU	A	351	1579	1396	1292	-160	420	183	C
		ATOM	2822	CD2	LEU	A	351	-3.664	-101.859	289.910	1.00	14.58		C
		ANISOU	2822	CD2	LEU	A	351	1648	1975	1917	492	43	-105	C
		ATOM	2823	C	LEU	A	351	-6.403	-98.717	291.096	1.00	8.15		C
		ANISOU	2823	C	LEU	A	351	1324	729	1043	-23	90	369	C
30		ATOM	2824	O	LEU	A	351	-5.502	-98.279	291.768	1.00	9.09		O
		ANISOU	2824	O	LEU	A	351	1418	828	1206	-31	-44	264	O
		ATOM	2825	N	ILE	A	352	-7.521	-98.081	290.804	1.00	8.87		N
		ANISOU	2825	N	ILE	A	352	1386	1012	970	-367	196	226	N
		ATOM	2826	CA	ILE	A	352	-7.697	-96.744	291.330	1.00	9.12		C
35		ANISOU	2826	CA	ILE	A	352	1277	918	1269	-180	194	29	C
		ATOM	2827	CB	ILE	A	352	-8.910	-96.076	290.674	1.00	11.02		C

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		ANISOU	2827	CB	ILE	A	352	1381	1506	1298	-215	152	134	C
		ATOM	2828	CG1	ILE	A	352	-8.611	-95.884	289.163	1.00	13.77		C
		ANISOU	2828	CG1	ILE	A	352	1864	2058	1307	-412	-44	100	C
		ATOM	2829	CD1	ILE	A	352	-9.650	-95.289	288.337	1.00	16.12		C
5		ANISOU	2829	CD1	ILE	A	352	2553	1772	1798	369	11	-362	C
		ATOM	2830	CG2	ILE	A	352	-9.223	-94.720	291.291	1.00	11.82		C
		ANISOU	2830	CG2	ILE	A	352	1734	1218	1536	-310	23	352	C
		ATOM	2831	C	ILE	A	352	-7.774	-96.760	292.866	1.00	9.65		C
		ANISOU	2831	C	ILE	A	352	1337	1086	1240	-248	109	204	C
10		ATOM	2832	O	ILE	A	352	-7.181	-95.933	293.544	1.00	9.80		O
		ANISOU	2832	O	ILE	A	352	1476	1238	1008	-254	270	384	O
		ATOM	2833	N	GLN	A	353	-8.503	-97.807	293.380	1.00	9.44		N
		ANISOU	2833	N	GLN	A	353	1625	1064	896	-328	13	232	N
		ATOM	2834	CA	GLN	A	353	-8.565	-97.997	294.827	1.00	8.10		C
15		ANISOU	2834	CA	GLN	A	353	1137	1037	901	-238	133	-36	C
		ATOM	2835	CB	GLN	A	353	-9.672	-98.938	295.196	1.00	10.02		C
		ANISOU	2835	CB	GLN	A	353	1402	1260	1146	-328	167	181	C
		ATOM	2836	CG	GLN	A	353	-9.817	-99.217	296.701	1.00	9.89		C
		ANISOU	2836	CG	GLN	A	353	1345	1228	1184	18	-146	141	C
20		ATOM	2837	CD	GLN	A	353	-10.168	-98.023	297.500	1.00	9.67		C
		ANISOU	2837	CD	GLN	A	353	1412	899	1362	-263	240	-125	C
		ATOM	2838	OE1	GLN	A	353	-10.808	-97.070	297.027	1.00	12.86		O
		ANISOU	2838	OE1	GLN	A	353	1763	1774	1350	252	138	280	O
		ATOM	2839	NE2	GLN	A	353	-9.803	-98.121	298.772	1.00	11.51		N
25		ANISOU	2839	NE2	GLN	A	353	1773	1276	1323	-102	232	231	N
		ATOM	2840	C	GLN	A	353	-7.217	-98.373	295.441	1.00	8.68		C
		ANISOU	2840	C	GLN	A	353	1271	756	1269	27	238	109	C
		ATOM	2841	O	GLN	A	353	-6.836	-97.931	296.509	1.00	9.14		O
		ANISOU	2841	O	GLN	A	353	1443	918	1110	-239	102	343	O
30		ATOM	2842	N	GLN	A	354	-6.480	-99.277	294.722	1.00	7.94		N
		ANISOU	2842	N	GLN	A	354	1272	600	1144	-61	76	82	N
		ATOM	2843	CA	GLN	A	354	-5.153	-99.532	295.178	1.00	8.64		C
		ANISOU	2843	CA	GLN	A	354	1324	806	1153	-65	127	222	C
		ATOM	2844	CB	GLN	A	354	-4.480	-100.532	294.267	1.00	10.25		C
35		ANISOU	2844	CB	GLN	A	354	1555	988	1350	241	44	127	C
		ATOM	2845	CG	GLN	A	354	-4.997	-102.036	294.333	1.00	11.68		C

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		ANISOU	2845	CG	GLN	A	354	1835	835	1765	397	-210	304	C
		ATOM	2846	CD	GLN	A	354	-4.139	-103.066	293.575	1.00	13.57		C
		ANISOU	2846	CD	GLN	A	354	2036	770	2348	-136	-178	44	C
		ATOM	2847	OE1	GLN	A	354	-2.932	-103.101	293.737	1.00	15.69		O
5		ANISOU	2847	OE1	GLN	A	354	2049	1419	2493	-46	-134	19	O
		ATOM	2848	NE2	GLN	A	354	-4.736	-103.774	292.629	1.00	18.69		N
		ANISOU	2848	NE2	GLN	A	354	2399	2113	2588	307	-225	-269	N
		ATOM	2849	C	GLN	A	354	-4.296	-98.274	295.315	1.00	8.82		C
		ANISOU	2849	C	GLN	A	354	1266	831	1251	-110	-44	200	C
10		ATOM	2850	O	GLN	A	354	-3.519	-98.108	296.254	1.00	8.36		O
		ANISOU	2850	O	GLN	A	354	1250	687	1238	-110	-29	457	O
		ATOM	2851	N	SER	A	355	-4.405	-97.361	294.325	1.00	9.57		N
		ANISOU	2851	N	SER	A	355	1232	1263	1141	4	153	195	N
		ATOM	2852	CA	SER	A	355	-3.666	-96.143	294.402	1.00	9.11		C
15		ANISOU	2852	CA	SER	A	355	1323	1236	900	-220	66	363	C
		ATOM	2853	CB	SER	A	355	-3.941	-95.374	293.088	1.00	7.50		C
		ANISOU	2853	CB	SER	A	355	1257	697	893	125	8	67	C
		ATOM	2854	OG	SER	A	355	-3.484	-94.039	293.247	1.00	10.43		O
		ANISOU	2854	OG	SER	A	355	1602	950	1411	-260	123	121	O
20		ATOM	2855	C	SER	A	355	-4.061	-95.275	295.644	1.00	7.01		C
		ANISOU	2855	C	SER	A	355	1178	502	982	-48	-43	426	C
		ATOM	2856	O	SER	A	355	-3.239	-94.803	296.386	1.00	8.54		O
		ANISOU	2856	O	SER	A	355	1241	795	1206	-145	-77	441	O
		ATOM	2857	N	ALA	A	356	-5.390	-95.236	295.940	1.00	7.59		N
25		ANISOU	2857	N	ALA	A	356	1277	462	1142	-24	112	425	N
		ATOM	2858	CA	ALA	A	356	-5.831	-94.581	297.126	1.00	9.18		C
		ANISOU	2858	CA	ALA	A	356	1468	981	1039	-226	115	136	C
		ATOM	2859	CB	ALA	A	356	-7.360	-94.570	297.187	1.00	9.69		C
		ANISOU	2859	CB	ALA	A	356	1549	950	1180	129	47	454	C
30		ATOM	2860	C	ALA	A	356	-5.252	-95.168	298.415	1.00	8.76		C
		ANISOU	2860	C	ALA	A	356	1192	971	1165	21	132	271	C
		ATOM	2861	O	ALA	A	356	-4.936	-94.508	299.384	1.00	10.37		O
		ANISOU	2861	O	ALA	A	356	1606	1144	1190	-54	76	179	O
		ATOM	2862	N	GLU	A	357	-5.131	-96.509	298.405	1.00	8.79		N
35		ANISOU	2862	N	GLU	A	357	987	1198	1152	29	73	66	N
		ATOM	2863	CA	GLU	A	357	-4.633	-97.177	299.587	1.00	8.84		C

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		ANISOU	2863	CA	GLU	A	357	1282	1018	1056	-55	78	239	C
		ATOM	2864	CB	GLU	A	357	-5.042	-98.658	299.642	1.00	8.51		C
		ANISOU	2864	CB	GLU	A	357	1184	1076	972	13	199	282	C
		ATOM	2865	CG	GLU	A	357	-6.521	-98.863	299.727	1.00	8.27		C
5		ANISOU	2865	CG	GLU	A	357	1243	916	981	-41	246	360	C
		ATOM	2866	CD	GLU	A	357	-7.014	-100.291	299.656	1.00	10.58		C
		ANISOU	2866	CD	GLU	A	357	1325	1231	1464	80	338	175	C
		ATOM	2867	OE1	GLU	A	357	-6.199	-101.226	299.805	1.00	14.50		O
		ANISOU	2867	OE1	GLU	A	357	1809	1730	1970	-100	326	252	O
10		ATOM	2868	OE2	GLU	A	357	-8.239	-100.480	299.514	1.00	11.21		O
		ANISOU	2868	OE2	GLU	A	357	1482	1458	1319	-214	99	123	O
		ATOM	2869	C	GLU	A	357	-3.124	-97.076	299.758	1.00	9.17		C
		ANISOU	2869	C	GLU	A	357	1124	1216	1142	9	121	163	C
		ATOM	2870	O	GLU	A	357	-2.574	-97.232	300.868	1.00	9.47		O
15		ANISOU	2870	O	GLU	A	357	1522	867	1207	-125	66	385	O
		ATOM	2871	N	LEU	A	358	-2.391	-96.846	298.655	1.00	9.44		N
		ANISOU	2871	N	LEU	A	358	1236	1294	1057	69	10	322	N
		ATOM	2872	CA	LEU	A	358	-0.953	-96.707	298.701	1.00	9.46		C
		ANISOU	2872	CA	LEU	A	358	1294	1158	1141	69	172	302	C
20		ATOM	2873	CB	LEU	A	358	-0.314	-97.103	297.378	1.00	8.60		C
		ANISOU	2873	CB	LEU	A	358	1342	659	1265	-40	128	447	C
		ATOM	2874	CG	LEU	A	358	1.215	-97.104	297.357	1.00	10.88		C
		ANISOU	2874	CG	LEU	A	358	1315	1336	1479	5	166	262	C
		ATOM	2875	CD1	LEU	A	358	1.698	-98.191	298.269	1.00	13.37		C
25		ANISOU	2875	CD1	LEU	A	358	1514	1928	1638	144	86	479	C
		ATOM	2876	CD2	LEU	A	358	1.683	-97.374	295.924	1.00	11.33		C
		ANISOU	2876	CD2	LEU	A	358	1400	1170	1733	116	278	298	C
		ATOM	2877	C	LEU	A	358	-0.566	-95.287	299.133	1.00	8.02		C
		ANISOU	2877	C	LEU	A	358	1257	1027	761	-129	-12	498	C
30		ATOM	2878	O	LEU	A	358	0.535	-95.040	299.696	1.00	9.52		O
		ANISOU	2878	O	LEU	A	358	1282	960	1374	-50	9	313	O
		ATOM	2879	N	ALA	A	359	-1.376	-94.281	298.761	1.00	8.65		N
		ANISOU	2879	N	ALA	A	359	1327	1022	936	-81	-110	574	N
		ATOM	2880	CA	ALA	A	359	-1.053	-92.900	299.026	1.00	10.22		C
35		ANISOU	2880	CA	ALA	A	359	1241	1156	1483	-184	89	76	C
		ATOM	2881	CB	ALA	A	359	-2.148	-91.981	298.538	1.00	11.59		C

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		ANISOU	2881	CB	ALA	A	359	1520	1444	1440	-167	-48	565	C
		ATOM	2882	C	ALA	A	359	-0.576	-92.541	300.413	1.00	11.13		C
		ANISOU	2882	C	ALA	A	359	1582	1454	1193	-152	-28	357	C
		ATOM	2883	O	ALA	A	359	0.363	-91.739	300.594	1.00	10.82		O
5		ANISOU	2883	O	ALA	A	359	1489	1212	1409	-152	98	395	O
		ATOM	2884	N	PRO	A	360	-1.205	-93.066	301.501	1.00	11.10		N
		ANISOU	2884	N	PRO	A	360	1484	1358	1374	-234	47	271	N
		ATOM	2885	CA	PRO	A	360	-0.683	-92.774	302.826	1.00	10.12		C
		ANISOU	2885	CA	PRO	A	360	1522	902	1422	-410	76	101	C
10		ATOM	2886	CB	PRO	A	360	-1.756	-93.355	303.797	1.00	12.83		C
		ANISOU	2886	CB	PRO	A	360	1739	1711	1423	-12	363	335	C
		ATOM	2887	CG	PRO	A	360	-2.947	-93.511	302.975	1.00	14.80		C
		ANISOU	2887	CG	PRO	A	360	1740	1911	1973	-224	497	287	C
		ATOM	2888	CD	PRO	A	360	-2.494	-93.797	301.548	1.00	11.21		C
15		ANISOU	2888	CD	PRO	A	360	1477	1305	1475	-86	75	514	C
		ATOM	2889	C	PRO	A	360	0.720	-93.216	303.101	1.00	10.44		C
		ANISOU	2889	C	PRO	A	360	1613	1132	1220	-181	275	177	C
		ATOM	2890	O	PRO	A	360	1.514	-92.474	303.692	1.00	12.65		O
		ANISOU	2890	O	PRO	A	360	1604	1688	1513	-52	-46	393	O
20		ATOM	2891	N	HIS	A	361	1.034	-94.459	302.695	1.00	11.73		N
		ANISOU	2891	N	HIS	A	361	1608	1280	1568	-87	223	614	N
		ATOM	2892	CA	HIS	A	361	2.386	-94.941	302.886	1.00	12.88		C
		ANISOU	2892	CA	HIS	A	361	1543	1756	1593	-60	189	363	C
		ATOM	2893	CB	HIS	A	361	2.506	-96.392	302.553	1.00	13.82		C
25		ANISOU	2893	CB	HIS	A	361	2019	1532	1699	-31	386	825	C
		ATOM	2894	CG	HIS	A	361	3.827	-96.955	302.971	1.00	18.53		C
		ANISOU	2894	CG	HIS	A	361	1997	2768	2274	132	199	586	C
		ATOM	2895	ND1	HIS	A	361	4.071	-97.386	304.257	1.00	23.01		N
		ANISOU	2895	ND1	HIS	A	361	2388	3886	2469	246	357	910	N
30		ATOM	2896	CE1	HIS	A	361	5.338	-97.750	304.356	1.00	26.36		C
		ANISOU	2896	CE1	HIS	A	361	3115	4034	2867	1040	396	1074	C
		ATOM	2897	NE2	HIS	A	361	5.895	-97.630	303.165	1.00	19.27		N
		ANISOU	2897	NE2	HIS	A	361	1973	2409	2937	8	84	922	N
		ATOM	2898	CD2	HIS	A	361	4.983	-97.116	302.286	1.00	17.15		C
35		ANISOU	2898	CD2	HIS	A	361	2065	2272	2178	64	18	662	C
		ATOM	2899	C	HIS	A	361	3.407	-94.155	302.054	1.00	10.84		C

5	ANISOU	2899	C	HIS	A	361	1381	1426	1310	146	-120	474	C
	ATOM	2900	O	HIS	A	361	4.505	-93.804	302.504	1.00	11.89		O
	ANISOU	2900	O	HIS	A	361	1617	1251	1648	-151	25	440	O
	ATOM	2901	N	PHE	A	362	3.032	-93.903	300.812	1.00	9.60		N
	ANISOU	2901	N	PHE	A	362	1291	1111	1243	-293	-115	328	N
	ATOM	2902	CA	PHE	A	362	3.861	-93.004	299.951	1.00	9.15		C
10	ANISOU	2902	CA	PHE	A	362	1081	1028	1365	-173	111	157	C
	ATOM	2903	CB	PHE	A	362	3.101	-92.841	298.630	1.00	8.88		C
	ANISOU	2903	CB	PHE	A	362	1365	861	1148	-256	214	278	C
	ATOM	2904	CG	PHE	A	362	3.708	-91.887	297.632	1.00	8.63		C
	ANISOU	2904	CG	PHE	A	362	1216	905	1155	-117	126	328	C
	ATOM	2905	CD1	PHE	A	362	4.815	-92.207	296.948	1.00	9.90		C
15	ANISOU	2905	CD1	PHE	A	362	1056	1235	1470	-108	71	278	C
	ATOM	2906	CE1	PHE	A	362	5.383	-91.381	296.008	1.00	9.81		C
	ANISOU	2906	CE1	PHE	A	362	1139	1148	1438	97	50	353	C
	ATOM	2907	CZ	PHE	A	362	4.829	-90.149	295.765	1.00	9.71		C
	ANISOU	2907	CZ	PHE	A	362	1500	921	1265	-11	90	145	C
	ATOM	2908	CE2	PHE	A	362	3.711	-89.806	296.414	1.00	11.10		C
20	ANISOU	2908	CE2	PHE	A	362	1519	1266	1430	207	103	478	C
	ATOM	2909	CD2	PHE	A	362	3.142	-90.649	297.396	1.00	10.09		C
	ANISOU	2909	CD2	PHE	A	362	1104	1207	1522	88	213	308	C
	ATOM	2910	C	PHE	A	362	4.156	-91.645	300.594	1.00	10.29		C
	ANISOU	2910	C	PHE	A	362	1488	1168	1251	-77	-2	80	C
	ATOM	2911	O	PHE	A	362	5.321	-91.251	300.647	1.00	9.83		O
25	ANISOU	2911	O	PHE	A	362	1379	1200	1154	-60	-72	444	O
	ATOM	2912	N	GLU	A	363	3.099	-91.034	301.133	1.00	8.90		N
	ANISOU	2912	N	GLU	A	363	1415	858	1109	-246	319	473	N
	ATOM	2913	CA	GLU	A	363	3.247	-89.761	301.800	1.00	9.90		C
	ANISOU	2913	CA	GLU	A	363	1311	1244	1205	-248	93	-97	C
	ATOM	2914	CB	GLU	A	363	1.904	-89.250	302.346	1.00	10.20		C
30	ANISOU	2914	CB	GLU	A	363	1428	1176	1270	163	24	410	C
	ATOM	2915	CG	GLU	A	363	2.008	-88.016	303.190	1.00	12.41		C
	ANISOU	2915	CG	GLU	A	363	1465	1838	1410	-299	116	97	C
	ATOM	2916	CD	GLU	A	363	0.668	-87.487	303.602	1.00	13.98		C
	ANISOU	2916	CD	GLU	A	363	1933	1861	1516	342	277	245	C
	ATOM	2917	OE1	GLU	A	363	0.262	-87.749	304.730	1.00	20.69		C

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		ANISOU	2917	OE1	GLU	A	363	2590	3158	2110	624	994	1094	O
		ATOM	2918	OE2	GLU	A	363	-0.019	-86.772	302.836	1.00	12.17		O
		ANISOU	2918	OE2	GLU	A	363	1595	1592	1436	91	291	203	O
		ATOM	2919	C	GLU	A	363	4.277	-89.896	302.957	1.00	10.41		C
5		ANISOU	2919	C	GLU	A	363	1436	1259	1259	166	-21	244	C
		ATOM	2920	O	GLU	A	363	5.169	-89.074	303.097	1.00	11.29		O
		ANISOU	2920	O	GLU	A	363	1689	1439	1160	-328	25	86	O
		ATOM	2921	N	LYS	A	364	4.079	-90.932	303.806	1.00	11.81		N
		ANISOU	2921	N	LYS	A	364	1627	1545	1313	-217	137	426	N
10		ATOM	2922	CA	LYS	A	364	4.935	-91.057	304.971	1.00	10.21		C
		ANISOU	2922	CA	LYS	A	364	1536	1119	1221	-158	-20	110	C
		ATOM	2923	CB	LYS	A	364	4.401	-92.241	305.863	1.00	12.45		C
		ANISOU	2923	CB	LYS	A	364	1678	1422	1628	-326	47	388	C
		ATOM	2924	CG	LYS	A	364	5.189	-92.465	307.137	1.00	16.48		C
15		ANISOU	2924	CG	LYS	A	364	2047	2440	1772	-352	-131	565	C
		ATOM	2925	CD	LYS	A	364	4.723	-93.727	307.873	1.00	21.73		C
		ANISOU	2925	CD	LYS	A	364	3122	2691	2442	-955	-213	678	C
		ATOM	2926	CE	LYS	A	364	5.593	-93.830	309.143	1.00	28.79		C
		ANISOU	2926	CE	LYS	A	364	4133	3471	3334	576	-680	2163	C
20		ATOM	2927	NZ	LYS	A	364	4.912	-94.700	310.160	1.00	44.07		N
		ANISOU	2927	NZ	LYS	A	364	6156	5856	4733	-225	-208	3529	N
		ATOM	2928	C	LYS	A	364	6.402	-91.289	304.602	1.00	12.05		C
		ANISOU	2928	C	LYS	A	364	1651	1679	1245	-77	94	160	C
		ATOM	2929	O	LYS	A	364	7.340	-90.694	305.165	1.00	12.35		O
25		ANISOU	2929	O	LYS	A	364	1637	1520	1536	-109	-125	226	O
		ATOM	2930	N	ALA	A	365	6.619	-92.183	303.635	1.00	10.38		N
		ANISOU	2930	N	ALA	A	365	1473	1253	1216	-154	-146	375	N
		ATOM	2931	CA	ALA	A	365	7.984	-92.560	303.234	1.00	10.10		C
		ANISOU	2931	CA	ALA	A	365	1559	1154	1122	-272	-302	373	C
30		ATOM	2932	CB	ALA	A	365	8.000	-93.815	302.341	1.00	13.44		C
		ANISOU	2932	CB	ALA	A	365	1750	1837	1520	134	-9	311	C
		ATOM	2933	C	ALA	A	365	8.694	-91.270	302.665	1.00	11.51		C
		ANISOU	2933	C	ALA	A	365	1694	911	1768	-253	-371	206	C
		ATOM	2934	O	ALA	A	365	9.873	-91.019	302.866	1.00	12.44		O
35		ANISOU	2934	O	ALA	A	365	1531	1409	1787	91	-218	174	O
		ATOM	2935	N	LEU	A	366	7.993	-90.692	301.650	1.00	10.16		N

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	ANISOU	2935	N	LEU	A	366	1485	1123	1253	-130	-132	202	N
	ATOM	2936	CA	LEU	A	366	8.477	-89.425	300.993	1.00	10.88		C
	ANISOU	2936	CA	LEU	A	366	1308	1310	1513	99	-36	443	C
	ATOM	2937	CB	LEU	A	366	7.409	-89.008	300.006	1.00	8.82		C
5	ANISOU	2937	CB	LEU	A	366	1486	844	1019	-143	41	148	C
	ATOM	2938	CG	LEU	A	366	7.738	-87.671	299.302	1.00	9.95		C
	ANISOU	2938	CG	LEU	A	366	1538	940	1300	36	73	342	C
	ATOM	2939	CD1	LEU	A	366	8.879	-87.877	298.315	1.00	14.50		C
	ANISOU	2939	CD1	LEU	A	366	1790	1881	1838	-49	382	557	C
10	ATOM	2940	CD2	LEU	A	366	6.492	-87.178	298.591	1.00	13.16		C
	ANISOU	2940	CD2	LEU	A	366	1783	1784	1430	47	-72	628	C
	ATOM	2941	C	LEU	A	366	8.864	-88.332	301.981	1.00	10.45		C
	ANISOU	2941	C	LEU	A	366	1308	1340	1322	104	33	287	C
	ATOM	2942	O	LEU	A	366	10.004	-87.825	301.976	1.00	9.90		O
15	ANISOU	2942	O	LEU	A	366	1293	1204	1264	77	138	530	O
	ATOM	2943	N	HIS	A	367	7.952	-88.040	302.934	1.00	8.47		N
	ANISOU	2943	N	HIS	A	367	1240	729	1247	21	156	301	N
	ATOM	2944	CA	HIS	A	367	8.131	-87.019	303.906	1.00	10.54		C
	ANISOU	2944	CA	HIS	A	367	1431	1324	1249	-173	65	17	C
20	ATOM	2945	CB	HIS	A	367	6.848	-86.570	304.503	1.00	11.63		C
	ANISOU	2945	CB	HIS	A	367	1251	1714	1454	-51	-35	499	C
	ATOM	2946	CG	HIS	A	367	6.123	-85.600	303.641	1.00	9.61		C
	ANISOU	2946	CG	HIS	A	367	1345	1007	1296	-93	40	220	C
	ATOM	2947	ND1	HIS	A	367	6.370	-84.224	303.671	1.00	10.06		N
25	ANISOU	2947	ND1	HIS	A	367	1388	1018	1413	-223	-102	-60	N
	ATOM	2948	CE1	HIS	A	367	5.592	-83.644	302.777	1.00	10.80		C
	ANISOU	2948	CE1	HIS	A	367	1410	1282	1410	-174	206	103	C
	ATOM	2949	NE2	HIS	A	367	4.870	-84.548	302.170	1.00	10.72		N
	ANISOU	2949	NE2	HIS	A	367	1612	1288	1171	20	-174	269	N
30	ATOM	2950	CD2	HIS	A	367	5.205	-85.808	302.661	1.00	11.14		C
	ANISOU	2950	CD2	HIS	A	367	1416	1488	1327	136	24	479	C
	ATOM	2951	C	HIS	A	367	9.185	-87.288	304.962	1.00	9.25		C
	ANISOU	2951	C	HIS	A	367	1256	1169	1086	171	191	268	C
	ATOM	2952	O	HIS	A	367	9.742	-86.424	305.569	1.00	11.63		O
35	ANISOU	2952	O	HIS	A	367	1546	1402	1469	-114	-202	268	O
	ATOM	2953	N	GLY	A	368	9.526	-88.580	305.105	1.00	10.21		N

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		ANISOU	2953	N	GLY	A	368	1349	1134	1395	-47	-11	222	N
		ATOM	2954	CA	GLY	A	368	10.582	-89.094	305.950	1.00	14.25		C
		ANISOU	2954	CA	GLY	A	368	1657	2192	1563	-203	-404	533	C
		ATOM	2955	C	GLY	A	368	11.936	-88.526	305.573	1.00	12.59		C
5		ANISOU	2955	C	GLY	A	368	1613	1634	1535	10	-169	190	C
		ATOM	2956	O	GLY	A	368	12.867	-88.522	306.393	1.00	14.01		O
		ANISOU	2956	O	GLY	A	368	1724	1854	1742	139	-488	507	O
		ATOM	2957	N	LEU	A	369	12.073	-88.092	304.313	1.00	11.82		N
		ANISOU	2957	N	LEU	A	369	1464	1584	1440	39	-147	363	N
10		ATOM	2958	CA	LEU	A	369	13.298	-87.448	303.856	1.00	10.72		C
		ANISOU	2958	CA	LEU	A	369	1202	1635	1233	258	-182	311	C
		ATOM	2959	CB	LEU	A	369	13.461	-87.662	302.349	1.00	10.98		C
		ANISOU	2959	CB	LEU	A	369	1352	1397	1422	-67	-269	-27	C
		ATOM	2960	CG	LEU	A	369	13.545	-89.121	301.954	1.00	10.68		C
15		ANISOU	2960	CG	LEU	A	369	1507	1271	1280	76	-83	63	C
		ATOM	2961	CD1	LEU	A	369	13.576	-89.278	300.426	1.00	13.73		C
		ANISOU	2961	CD1	LEU	A	369	2060	1623	1532	267	219	187	C
		ATOM	2962	CD2	LEU	A	369	14.806	-89.796	302.527	1.00	15.17		C
		ANISOU	2962	CD2	LEU	A	369	1887	1818	2057	702	-154	151	C
20		ATOM	2963	C	LEU	A	369	13.546	-85.973	304.286	1.00	11.76		C
		ANISOU	2963	C	LEU	A	369	1623	1509	1334	13	-85	414	C
		ATOM	2964	O	LEU	A	369	14.601	-85.440	303.992	1.00	12.08		O
		ANISOU	2964	O	LEU	A	369	1557	1611	1421	195	-61	247	O
		ATOM	2965	N	LYS	A	370	12.639	-85.411	305.051	1.00	8.60		N
25		ANISOU	2965	N	LYS	A	370	1322	712	1234	-100	-85	257	N
		ATOM	2966	CA	LYS	A	370	12.858	-84.095	305.597	1.00	9.08		C
		ANISOU	2966	CA	LYS	A	370	1387	681	1378	-53	-133	82	C
		ATOM	2967	CB	LYS	A	370	11.689	-83.682	306.480	1.00	10.42		C
		ANISOU	2967	CB	LYS	A	370	1560	1043	1354	205	37	232	C
30		ATOM	2968	CG	LYS	A	370	11.868	-82.303	307.111	1.00	11.86		C
		ANISOU	2968	CG	LYS	A	370	1823	1240	1443	-73	-167	122	C
		ATOM	2969	CD	LYS	A	370	10.682	-81.933	307.999	1.00	15.37		C
		ANISOU	2969	CD	LYS	A	370	2257	1762	1819	340	278	419	C
		ATOM	2970	CE	LYS	A	370	10.894	-80.526	308.584	1.00	22.68		C
35		ANISOU	2970	CE	LYS	A	370	2719	2565	3330	-141	389	118	C
		ATOM	2971	NZ	LYS	A	370	9.820	-80.197	309.560	1.00	36.39		N

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		ANISOU	2971	NZ	LYS	A	370	4775	5064	3987	41	919	420	N
		ATOM	2972	C	LYS	A	370	14.173	-84.144	306.399	1.00	10.86		C
		ANISOU	2972	C	LYS	A	370	1398	1365	1361	-241	-302	309	C
		ATOM	2973	O	LYS	A	370	14.340	-85.042	307.211	1.00	13.12		O
5		ANISOU	2973	O	LYS	A	370	1909	1523	1551	89	-205	476	O
		ATOM	2974	N	GLY	A	371	15.061	-83.212	306.179	1.00	9.09		N
		ANISOU	2974	N	GLY	A	371	1220	895	1338	-19	-283	123	N
		ATOM	2975	CA	GLY	A	371	16.362	-83.128	306.845	1.00	10.38		C
		ANISOU	2975	CA	GLY	A	371	1373	1245	1326	-168	-345	128	C
10		ATOM	2976	C	GLY	A	371	17.506	-83.625	305.980	1.00	10.28		C
		ANISOU	2976	C	GLY	A	371	1508	1307	1090	-25	-396	344	C
		ATOM	2977	O	GLY	A	371	18.659	-83.349	306.268	1.00	11.40		O
		ANISOU	2977	O	GLY	A	371	1478	1492	1360	-95	-370	458	O
		ATOM	2978	N	THR	A	372	17.212	-84.321	304.892	1.00	9.01		N
15		ANISOU	2978	N	THR	A	372	1201	1034	1186	97	-72	370	N
		ATOM	2979	CA	THR	A	372	18.202	-84.738	303.901	1.00	11.15		C
		ANISOU	2979	CA	THR	A	372	1245	1311	1677	-196	-106	227	C
		ATOM	2980	CB	THR	A	372	17.507	-85.529	302.802	1.00	12.95		C
		ANISOU	2980	CB	THR	A	372	1983	1156	1782	-127	153	-3	C
20		ATOM	2981	OG1	THR	A	372	16.944	-86.734	303.353	1.00	14.67		O
		ANISOU	2981	OG1	THR	A	372	2170	1472	1930	-236	162	445	O
		ATOM	2982	CG2	THR	A	372	18.438	-86.031	301.723	1.00	14.21		C
		ANISOU	2982	CG2	THR	A	372	1676	1740	1983	55	-43	-38	C
		ATOM	2983	C	THR	A	372	18.863	-83.507	303.279	1.00	8.78		C
25		ANISOU	2983	C	THR	A	372	1318	1064	953	26	1	-11	C
		ATOM	2984	O	THR	A	372	18.320	-82.386	303.229	1.00	10.43		O
		ANISOU	2984	O	THR	A	372	1486	1069	1407	79	-179	286	O
		ATOM	2985	N	LYS	A	373	20.137	-83.717	302.890	1.00	10.36		N
		ANISOU	2985	N	LYS	A	373	1180	1392	1364	27	-73	397	N
30		ATOM	2986	CA	LYS	A	373	20.995	-82.656	302.437	1.00	9.95		C
		ANISOU	2986	CA	LYS	A	373	1226	1303	1249	-258	-489	282	C
		ATOM	2987	CB	LYS	A	373	22.301	-83.247	301.937	1.00	10.21		C
		ANISOU	2987	CB	LYS	A	373	1377	1491	1010	-253	-150	300	C
		ATOM	2988	CG	LYS	A	373	23.310	-82.189	301.519	1.00	9.97		C
35		ANISOU	2988	CG	LYS	A	373	1558	938	1290	-92	-31	322	C
		ATOM	2989	CD	LYS	A	373	24.637	-82.781	300.986	1.00	12.47		C

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		ANISOU	2989	CD	LYS	A	373	1815	1666	1255	-57	-146	414	C
		ATOM	2990	CE	LYS	A	373	25.680	-81.657	300.778	1.00	12.64		C
		ANISOU	2990	CE	LYS	A	373	1526	1907	1367	-223	-150	212	C
		ATOM	2991	NZ	LYS	A	373	26.915	-82.292	300.252	1.00	12.24		N
5		ANISOU	2991	NZ	LYS	A	373	1703	1611	1333	-150	-131	567	N
		ATOM	2992	C	LYS	A	373	20.354	-81.796	301.308	1.00	9.13		C
		ANISOU	2992	C	LYS	A	373	1460	1004	1004	1	-308	62	C
		ATOM	2993	O	LYS	A	373	19.929	-82.327	300.266	1.00	9.19		O
		ANISOU	2993	O	LYS	A	373	1202	1074	1216	9	-259	136	O
10		ATOM	2994	N	ASN	A	374	20.299	-80.511	301.579	1.00	10.02		N
		ANISOU	2994	N	ASN	A	374	1397	960	1450	107	-215	186	N
		ATOM	2995	CA	ASN	A	374	19.844	-79.472	300.587	1.00	9.47		C
		ANISOU	2995	CA	ASN	A	374	1429	1131	1034	107	-22	159	C
		ATOM	2996	CB	ASN	A	374	20.800	-79.284	299.424	1.00	10.78		C
15		ANISOU	2996	CB	ASN	A	374	1134	1544	1414	36	-189	560	C
		ATOM	2997	CG	ASN	A	374	22.050	-78.568	299.868	1.00	10.19		C
		ANISOU	2997	CG	ASN	A	374	1426	1155	1290	-113	4	96	C
		ATOM	2998	OD1	ASN	A	374	21.978	-77.615	300.648	1.00	12.55		O
		ANISOU	2998	OD1	ASN	A	374	1898	990	1878	-248	-194	85	O
20		ATOM	2999	ND2	ASN	A	374	23.197	-79.037	299.431	1.00	10.75		N
		ANISOU	2999	ND2	ASN	A	374	1434	1152	1496	2	-148	82	N
		ATOM	3000	C	ASN	A	374	18.414	-79.662	300.122	1.00	10.74		C
		ANISOU	3000	C	ASN	A	374	1157	1430	1492	31	118	175	C
		ATOM	3001	O	ASN	A	374	17.988	-79.062	299.107	1.00	11.92		O
25		ANISOU	3001	O	ASN	A	374	1689	1468	1371	-46	-297	380	O
		ATOM	3002	N	VAL	A	375	17.619	-80.389	300.894	1.00	9.62		N
		ANISOU	3002	N	VAL	A	375	1273	1079	1300	85	-147	317	N
		ATOM	3003	CA	VAL	A	375	16.201	-80.563	300.615	1.00	8.17		C
		ANISOU	3003	CA	VAL	A	375	1302	690	1109	-72	-497	315	C
30		ATOM	3004	CB	VAL	A	375	15.685	-81.960	301.079	1.00	9.14		C
		ANISOU	3004	CB	VAL	A	375	1301	859	1311	-266	-340	-44	C
		ATOM	3005	CG1	VAL	A	375	14.144	-81.952	301.042	1.00	10.21		C
		ANISOU	3005	CG1	VAL	A	375	1228	1197	1453	-256	29	279	C
		ATOM	3006	CG2	VAL	A	375	16.215	-83.063	300.235	1.00	10.27		C
35		ANISOU	3006	CG2	VAL	A	375	1317	1164	1421	-87	-392	111	C
		ATOM	3007	C	VAL	A	375	15.497	-79.397	301.266	1.00	10.63		C

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		ANISOU	3007	C	VAL	A	375	1167	1415	1454	66	-174	37	C
		ATOM	3008	O	VAL	A	375	15.511	-79.245	302.506	1.00	12.71		O
		ANISOU	3008	O	VAL	A	375	1702	1807	1318	105	-165	236	O
		ATOM	3009	N	ILE	A	376	14.750	-78.623	300.486	1.00	9.34		N
5		ANISOU	3009	N	ILE	A	376	1100	1246	1200	59	-250	-122	N
		ATOM	3010	CA	ILE	A	376	14.125	-77.397	301.019	1.00	9.98		C
		ANISOU	3010	CA	ILE	A	376	1406	988	1398	116	-302	-99	C
		ATOM	3011	CB	ILE	A	376	14.702	-76.149	300.393	1.00	12.71		C
		ANISOU	3011	CB	ILE	A	376	1515	1343	1970	10	42	40	C
10		ATOM	3012	CG1	ILE	A	376	14.562	-76.153	298.935	1.00	13.88		C
		ANISOU	3012	CG1	ILE	A	376	1752	1545	1977	-76	34	748	C
		ATOM	3013	CD1	ILE	A	376	14.970	-74.744	298.354	1.00	14.28		C
		ANISOU	3013	CD1	ILE	A	376	2213	1393	1817	85	101	620	C
		ATOM	3014	CG2	ILE	A	376	16.159	-75.977	300.885	1.00	14.50		C
15		ANISOU	3014	CG2	ILE	A	376	1779	1561	2168	-223	-17	-276	C
		ATOM	3015	C	ILE	A	376	12.602	-77.486	300.983	1.00	8.72		C
		ANISOU	3015	C	ILE	A	376	1414	687	1210	-149	-60	418	C
		ATOM	3016	O	ILE	A	376	11.949	-76.711	301.567	1.00	13.01		O
		ANISOU	3016	O	ILE	A	376	1390	1792	1761	250	-38	-101	O
20		ATOM	3017	N	ASP	A	377	12.080	-78.485	300.304	1.00	9.54		N
		ANISOU	3017	N	ASP	A	377	1327	1271	1024	-158	-69	120	N
		ATOM	3018	CA	ASP	A	377	10.609	-78.743	300.362	1.00	9.48		C
		ANISOU	3018	CA	ASP	A	377	1351	1026	1226	-55	-68	329	C
		ATOM	3019	CB	ASP	A	377	9.825	-77.715	299.527	1.00	11.39		C
25		ANISOU	3019	CB	ASP	A	377	1188	1649	1491	165	-200	373	C
		ATOM	3020	CG	ASP	A	377	8.384	-77.632	299.892	1.00	10.41		C
		ANISOU	3020	CG	ASP	A	377	1243	1715	998	405	-48	138	C
		ATOM	3021	OD1	ASP	A	377	7.884	-78.241	300.855	1.00	10.66		O
		ANISOU	3021	OD1	ASP	A	377	1511	1266	1274	-133	7	86	O
30		ATOM	3022	OD2	ASP	A	377	7.638	-76.893	299.137	1.00	9.32		O
		ANISOU	3022	OD2	ASP	A	377	1366	1004	1168	71	-159	403	O
		ATOM	3023	C	ASP	A	377	10.336	-80.165	299.904	1.00	8.48		C
		ANISOU	3023	C	ASP	A	377	1031	1176	1014	135	-183	258	C
		ATOM	3024	O	ASP	A	377	11.119	-80.765	299.132	1.00	9.31		O
35		ANISOU	3024	O	ASP	A	377	1284	1063	1188	-79	-15	300	O
		ATOM	3025	N	ILE	A	378	9.236	-80.726	300.389	1.00	8.58		N

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		ANISOU	3025	N	ILE	A	378	1118	1144	996	19	148	90	N
		ATOM	3026	CA	ILE	A	378	8.740	-82.010	299.955	1.00	9.18		C
		ANISOU	3026	CA	ILE	A	378	1235	1207	1046	82	-12	334	C
		ATOM	3027	CB	ILE	A	378	9.049	-83.146	300.988	1.00	10.07		C
5		ANISOU	3027	CB	ILE	A	378	1400	1260	1165	57	-38	411	C
		ATOM	3028	CG1	ILE	A	378	10.542	-83.335	301.108	1.00	9.69		C
		ANISOU	3028	CG1	ILE	A	378	1469	1073	1140	4	-94	361	C
		ATOM	3029	CD1	ILE	A	378	10.948	-84.274	302.269	1.00	11.11		C
		ANISOU	3029	CD1	ILE	A	378	1475	1201	1543	17	-362	461	C
10		ATOM	3030	CG2	ILE	A	378	8.359	-84.438	300.546	1.00	10.40		C
		ANISOU	3030	CG2	ILE	A	378	1372	1341	1236	-117	51	429	C
		ATOM	3031	C	ILE	A	378	7.213	-81.800	299.813	1.00	9.63		C
		ANISOU	3031	C	ILE	A	378	1215	1422	1021	15	-78	-156	C
		ATOM	3032	O	ILE	A	378	6.590	-81.210	300.733	1.00	8.50		O
15		ANISOU	3032	O	ILE	A	378	1273	873	1083	-70	64	228	O
		ATOM	3033	N	ARG	A	379	6.655	-82.262	298.692	1.00	7.86		N
		ANISOU	3033	N	ARG	A	379	1297	573	1117	32	-109	35	N
		ATOM	3034	CA	ARG	A	379	5.262	-82.026	298.322	1.00	7.98		C
		ANISOU	3034	CA	ARG	A	379	1238	777	1017	-105	103	312	C
20		ATOM	3035	CB	ARG	A	379	5.204	-80.851	297.302	1.00	7.86		C
		ANISOU	3035	CB	ARG	A	379	1122	534	1329	109	70	371	C
		ATOM	3036	CG	ARG	A	379	5.776	-79.516	297.742	1.00	10.44		C
		ANISOU	3036	CG	ARG	A	379	1636	931	1398	-317	-194	275	C
		ATOM	3037	CD	ARG	A	379	5.599	-78.368	296.755	1.00	9.83		C
25		ANISOU	3037	CD	ARG	A	379	1156	1346	1232	132	43	291	C
		ATOM	3038	NE	ARG	A	379	6.366	-78.526	295.547	1.00	8.90		N
		ANISOU	3038	NE	ARG	A	379	1337	751	1290	-113	-104	65	N
		ATOM	3039	CZ	ARG	A	379	7.590	-78.044	295.377	1.00	10.65		C
		ANISOU	3039	CZ	ARG	A	379	1245	1420	1378	167	-15	300	C
30		ATOM	3040	NH1	ARG	A	379	8.178	-77.260	296.287	1.00	10.63		N
		ANISOU	3040	NH1	ARG	A	379	1433	1301	1303	85	-130	330	N
		ATOM	3041	NH2	ARG	A	379	8.256	-78.278	294.229	1.00	10.01		N
		ANISOU	3041	NH2	ARG	A	379	1532	990	1278	-124	-87	-109	N
		ATOM	3042	C	ARG	A	379	4.631	-83.275	297.813	1.00	8.51		C
35		ANISOU	3042	C	ARG	A	379	1032	1110	1091	-48	-24	149	C
		ATOM	3043	O	ARG	A	379	5.307	-84.023	297.199	1.00	9.08		O

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		ANISOU	3043	O	ARG	A	379	1166	1032	1250	-47	99	103	O
		ATOM	3044	N	ASN	A	380	3.343	-83.450	298.103	1.00	9.05		N
		ANISOU	3044	N	ASN	A	380	1088	1109	1240	21	10	40	N
		ATOM	3045	CA	ASN	A	380	2.648	-84.576	297.635	1.00	8.96		C
5		ANISOU	3045	CA	ASN	A	380	1060	1249	1095	-184	92	233	C
		ATOM	3046	CB	ASN	A	380	2.841	-85.768	298.598	1.00	9.21		C
		ANISOU	3046	CB	ASN	A	380	1164	1078	1254	-68	-54	101	C
		ATOM	3047	CG	ASN	A	380	2.138	-85.550	299.922	1.00	8.98		C
		ANISOU	3047	CG	ASN	A	380	1213	1021	1178	119	22	221	C
10		ATOM	3048	OD1	ASN	A	380	2.481	-84.691	300.695	1.00	10.24		O
		ANISOU	3048	OD1	ASN	A	380	1515	1248	1125	-91	18	245	O
		ATOM	3049	ND2	ASN	A	380	1.128	-86.424	300.203	1.00	10.76		N
		ANISOU	3049	ND2	ASN	A	380	1354	1603	1128	-302	104	81	N
		ATOM	3050	C	ASN	A	380	1.159	-84.332	297.523	1.00	10.46		C
15		ANISOU	3050	C	ASN	A	380	1314	1451	1209	-195	-47	65	C
		ATOM	3051	O	ASN	A	380	0.582	-83.571	298.244	1.00	9.95		O
		ANISOU	3051	O	ASN	A	380	1201	1325	1253	-46	27	182	O
		ATOM	3052	N	ACYS	A	381	0.548	-85.120	296.625	0.80	8.22		N
		ANISOU	3052	N	ACYS	A	381	1339	669	1111	-78	129	88	N
20		ATOM	3053	N	BCYS	A	381	0.533	-85.078	296.620	0.20	8.17		N
		ANISOU	3053	N	BCYS	A	381	1355	550	1199	-31	110	86	N
		ATOM	3054	CA	ACYS	A	381	-0.888	-85.099	296.429	0.80	9.99		C
		ANISOU	3054	CA	ACYS	A	381	1324	837	1634	-241	261	-63	C
		ATOM	3055	CA	BCYS	A	381	-0.906	-85.230	296.664	0.20	10.00		C
25		ANISOU	3055	CA	BCYS	A	381	1348	939	1510	0	65	103	C
		ATOM	3056	CB	ACYS	A	381	-1.200	-83.834	295.601	0.80	12.79		C
		ANISOU	3056	CB	ACYS	A	381	1684	1446	1727	-223	-125	33	C
		ATOM	3057	CB	BCYS	A	381	-1.582	-83.960	296.226	0.20	9.57		C
		ANISOU	3057	CB	BCYS	A	381	1204	1493	939	192	-370	158	C
30		ATOM	3058	SG	ACYS	A	381	-3.005	-83.623	295.359	0.80	20.13		S
		ANISOU	3058	SG	ACYS	A	381	2222	2171	3253	526	-774	-294	S
		ATOM	3059	SG	BCYS	A	381	-1.090	-83.614	294.563	0.20	9.47		S
		ANISOU	3059	SG	BCYS	A	381	1640	664	1291	9	67	468	S
		ATOM	3060	C	ACYS	A	381	-1.197	-86.459	295.784	0.80	9.20		C
35		ANISOU	3060	C	ACYS	A	381	1411	875	1210	-33	-113	204	C
		ATOM	3061	C	BCYS	A	381	-1.276	-86.424	295.788	0.20	10.33		C

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		ANISOU	3061	C	BCYS	A	381	1546	1199	1177	-26	-3	103	C
		ATOM	3062	O	ACYS	A	381	-0.721	-86.711	294.700	0.80	10.42		O
		ANISOU	3062	O	ACYS	A	381	1450	1140	1369	-67	218	153	O
		ATOM	3063	O	BCYS	A	381	-0.879	-86.551	294.627	0.20	11.52		O
5		ANISOU	3063	O	BCYS	A	381	1784	1217	1375	-51	409	141	O
		ATOM	3064	N	GLY	A	382	-2.064	-87.307	296.367	1.00	11.77		N
		ANISOU	3064	N	GLY	A	382	1523	1337	1611	-221	38	-40	N
		ATOM	3065	CA	GLY	A	382	-2.290	-88.628	295.805	1.00	12.00		C
		ANISOU	3065	CA	GLY	A	382	1575	1502	1483	-212	79	-254	C
10		ATOM	3066	C	GLY	A	382	-0.961	-89.402	295.653	1.00	9.47		C
		ANISOU	3066	C	GLY	A	382	1527	722	1345	-188	120	362	C
		ATOM	3067	O	GLY	A	382	-0.070	-89.391	296.510	1.00	11.30		O
		ANISOU	3067	O	GLY	A	382	1675	1272	1345	-195	-156	-208	O
		ATOM	3068	N	LEU	A	383	-0.772	-90.026	294.526	1.00	9.46		N
15		ANISOU	3068	N	LEU	A	383	1254	1185	1155	-299	-30	152	N
		ATOM	3069	CA	LEU	A	383	0.445	-90.764	294.234	1.00	9.91		C
		ANISOU	3069	CA	LEU	A	383	1596	984	1185	-146	11	66	C
		ATOM	3070	CB	LEU	A	383	0.195	-92.146	293.627	1.00	11.53		C
		ANISOU	3070	CB	LEU	A	383	1966	817	1597	-460	0	327	C
20		ATOM	3071	CG	LEU	A	383	-0.110	-93.335	294.443	1.00	13.55		C
		ANISOU	3071	CG	LEU	A	383	2456	921	1770	-574	-105	423	C
		ATOM	3072	CD1	LEU	A	383	-0.107	-94.664	293.663	1.00	12.20		C
		ANISOU	3072	CD1	LEU	A	383	1972	1042	1622	142	-281	-22	C
		ATOM	3073	CD2	LEU	A	383	0.837	-93.507	295.625	1.00	14.07		C
25		ANISOU	3073	CD2	LEU	A	383	2081	2024	1241	-5	17	350	C
		ATOM	3074	C	LEU	A	383	1.386	-89.955	293.340	1.00	10.03		C
		ANISOU	3074	C	LEU	A	383	1204	1495	1110	160	-19	189	C
		ATOM	3075	O	LEU	A	383	2.042	-90.492	292.427	1.00	11.00		O
		ANISOU	3075	O	LEU	A	383	1384	1405	1391	-112	136	-44	O
30		ATOM	3076	N	ALA	A	384	1.419	-88.678	293.615	1.00	10.57		N
		ANISOU	3076	N	ALA	A	384	1319	1395	1299	-44	102	-4	N
		ATOM	3077	CA	ALA	A	384	2.401	-87.765	293.031	1.00	8.33		C
		ANISOU	3077	CA	ALA	A	384	1088	914	1162	162	56	51	C
		ATOM	3078	CB	ALA	A	384	1.714	-86.722	292.111	1.00	8.50		C
35		ANISOU	3078	CB	ALA	A	384	1134	886	1209	-64	31	88	C
		ATOM	3079	C	ALA	A	384	3.191	-87.072	294.148	1.00	8.94		C

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		ANISOU	3079	C	ALA	A	384	1109	977	1311	38	-10	-8	C
		ATOM	3080	O	ALA	A	384	2.547	-86.572	295.104	1.00	9.55		O
		ANISOU	3080	O	ALA	A	384	1145	1130	1350	-71	198	7	O
		ATOM	3081	N	GLY	A	385	4.518	-86.982	294.000	1.00	7.57		N
5		ANISOU	3081	N	GLY	A	385	1240	586	1050	26	131	177	N
		ATOM	3082	CA	GLY	A	385	5.334	-86.373	294.975	1.00	9.80		C
		ANISOU	3082	CA	GLY	A	385	1097	1555	1070	-146	-87	272	C
		ATOM	3083	C	GLY	A	385	6.566	-85.696	294.395	1.00	7.36		C
		ANISOU	3083	C	GLY	A	385	1142	728	926	-57	-24	143	C
10		ATOM	3084	O	GLY	A	385	6.959	-86.061	293.287	1.00	8.13		O
		ANISOU	3084	O	GLY	A	385	1092	1001	996	-7	53	56	O
		ATOM	3085	N	ALA	A	386	7.133	-84.729	295.113	1.00	8.07		N
		ANISOU	3085	N	ALA	A	386	1091	920	1053	-74	9	36	N
		ATOM	3086	CA	ALA	A	386	8.379	-84.157	294.674	1.00	7.03		C
15		ANISOU	3086	CA	ALA	A	386	949	394	1326	172	3	-27	C
		ATOM	3087	CB	ALA	A	386	8.104	-82.882	293.816	1.00	9.83		C
		ANISOU	3087	CB	ALA	A	386	1468	1106	1157	20	-226	379	C
		ATOM	3088	C	ALA	A	386	9.240	-83.789	295.860	1.00	7.71		C
		ANISOU	3088	C	ALA	A	386	1113	782	1033	153	-113	307	C
20		ATOM	3089	O	ALA	A	386	8.710	-83.412	296.945	1.00	9.47		O
		ANISOU	3089	O	ALA	A	386	1232	1211	1153	162	148	141	O
		ATOM	3090	N	ILE	A	387	10.538	-83.718	295.604	1.00	8.20		N
		ANISOU	3090	N	ILE	A	387	1091	1143	880	-67	-13	362	N
		ATOM	3091	CA	ILE	A	387	11.544	-83.236	296.551	1.00	9.09		C
25		ANISOU	3091	CA	ILE	A	387	1112	1311	1029	-37	15	226	C
		ATOM	3092	CB	ILE	A	387	12.540	-84.347	296.861	1.00	9.54		C
		ANISOU	3092	CB	ILE	A	387	1161	1100	1362	-167	-78	176	C
		ATOM	3093	CG1	ILE	A	387	11.857	-85.590	297.494	1.00	10.09		C
		ANISOU	3093	CG1	ILE	A	387	1371	1055	1407	-69	0	246	C
30		ATOM	3094	CD1	ILE	A	387	12.755	-86.777	297.758	1.00	12.33		C
		ANISOU	3094	CD1	ILE	A	387	1809	1245	1631	100	-263	660	C
		ATOM	3095	CG2	ILE	A	387	13.609	-83.780	297.793	1.00	9.35		C
		ANISOU	3095	CG2	ILE	A	387	1592	404	1556	168	-404	71	C
		ATOM	3096	C	ILE	A	387	12.278	-82.074	295.904	1.00	9.06		C
35		ANISOU	3096	C	ILE	A	387	1053	1329	1058	-41	-201	75	C
		ATOM	3097	O	ILE	A	387	12.900	-82.330	294.824	1.00	9.69		O

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		ANISOU	3097	O	ILE	A	387	1320	1129	1230	141	-63	280	O
		ATOM	3098	N	GLN	A	388	12.178	-80.897	296.481	1.00	8.06		N
		ANISOU	3098	N	GLN	A	388	1098	915	1048	-49	-79	315	N
		ATOM	3099	CA	GLN	A	388	12.852	-79.683	295.947	1.00	8.02		C
5		ANISOU	3099	CA	GLN	A	388	1220	919	907	147	-199	475	C
		ATOM	3100	CB	GLN	A	388	12.029	-78.468	296.266	1.00	8.78		C
		ANISOU	3100	CB	GLN	A	388	1317	904	1111	-14	-33	128	C
		ATOM	3101	CG	GLN	A	388	12.559	-77.154	295.617	1.00	8.83		C
		ANISOU	3101	CG	GLN	A	388	1264	993	1096	13	-178	218	C
10		ATOM	3102	CD	GLN	A	388	11.838	-75.916	296.056	1.00	9.04		C
		ANISOU	3102	CD	GLN	A	388	1368	1156	911	127	-38	245	C
		ATOM	3103	OE1	GLN	A	388	10.702	-75.952	296.526	1.00	10.27		O
		ANISOU	3103	OE1	GLN	A	388	1326	1112	1464	186	-80	125	O
		ATOM	3104	NE2	GLN	A	388	12.488	-74.760	295.910	1.00	16.60		N
15		ANISOU	3104	NE2	GLN	A	388	1781	1991	2534	-451	531	540	N
		ATOM	3105	C	GLN	A	388	14.235	-79.532	296.565	1.00	8.48		C
		ANISOU	3105	C	GLN	A	388	1060	943	1217	-29	51	-104	C
		ATOM	3106	O	GLN	A	388	14.383	-79.558	297.817	1.00	10.05		O
		ANISOU	3106	O	GLN	A	388	1410	1292	1115	15	-106	297	O
20		ATOM	3107	N	AILE	A	389	15.233	-79.334	295.710	0.50	7.68		N
		ANISOU	3107	N	AILE	A	389	1109	815	992	158	-131	349	N
		ATOM	3108	N	BILE	A	389	15.222	-79.328	295.711	0.50	7.88		N
		ANISOU	3108	N	BILE	A	389	1132	855	1006	143	-120	355	N
		ATOM	3109	CA	AILE	A	389	16.635	-79.218	296.123	0.50	8.31		C
25		ANISOU	3109	CA	AILE	A	389	1054	929	1173	-2	-138	130	C
		ATOM	3110	CA	BILE	A	389	16.609	-79.226	296.129	0.50	8.51		C
		ANISOU	3110	CA	BILE	A	389	1079	947	1204	2	-148	123	C
		ATOM	3111	CB	AILE	A	389	17.498	-80.256	295.352	0.50	9.14		C
		ANISOU	3111	CB	AILE	A	389	1283	1095	1091	98	-184	377	C
30		ATOM	3112	CB	BILE	A	389	17.472	-80.245	295.325	0.50	9.53		C
		ANISOU	3112	CB	BILE	A	389	1299	1199	1124	89	-163	331	C
		ATOM	3113	CG1AILE	A	389		16.904	-81.655	295.473	0.50	10.69		C
		ANISOU	3113	CG1AILE	A	389		1250	1353	1456	-178	-67	343	C
		ATOM	3114	CG1BILE	A	389		16.938	-81.693	295.342	0.50	10.55		C
35		ANISOU	3114	CG1BILE	A	389		1233	1278	1495	47	0	79	C
		ATOM	3115	CD1AILE	A	389		17.468	-82.710	294.575	0.50	12.63		C

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		ANISOU	3115	CD1AILE	A	389	1935	1376	1486	-146	-88	293	C
		ATOM	3116	CD1BILE	A	389	16.611	-82.246	296.711	0.50	13.34		C
		ANISOU	3116	CD1BILE	A	389	1543	1567	1956	134	-2	590	C
		ATOM	3117	CG2AILE	A	389	18.933	-80.249	295.857	0.50	10.27		C
5		ANISOU	3117	CG2AILE	A	389	1222	1141	1535	67	-98	-25	C
		ATOM	3118	CG2BILE	A	389	18.911	-80.222	295.800	0.50	10.16		C
		ANISOU	3118	CG2BILE	A	389	1257	1082	1520	106	-79	19	C
		ATOM	3119	C AILE	A	389	17.157	-77.803	295.906	0.50	9.28		C
		ANISOU	3119	C AILE	A	389	1195	1204	1123	-140	-172	502	C
10		ATOM	3120	C BILE	A	389	17.107	-77.788	295.930	0.50	9.42		C
		ANISOU	3120	C BILE	A	389	1202	1224	1153	-153	-176	500	C
		ATOM	3121	O AILE	A	389	16.978	-77.220	294.833	0.50	10.41		O
		ANISOU	3121	O AILE	A	389	1475	1454	1025	-133	-136	508	O
		ATOM	3122	O BILE	A	389	16.844	-77.168	294.890	0.50	10.72		O
15		ANISOU	3122	O BILE	A	389	1584	1510	978	-199	-36	530	O
		ATOM	3123	N ALA	A	390	17.853	-77.265	296.903	1.00	8.66		N
		ANISOU	3123	N ALA	A	390	1443	705	1139	88	-289	416	N
		ATOM	3124	CA ALA	A	390	18.454	-75.929	296.771	1.00	9.41		C
		ANISOU	3124	CA ALA	A	390	1179	963	1431	-61	-270	123	C
20		ATOM	3125	CB ALA	A	390	19.197	-75.603	298.103	1.00	10.57		C
		ANISOU	3125	CB ALA	A	390	1388	1328	1297	-26	-207	-119	C
		ATOM	3126	C ALA	A	390	19.450	-75.877	295.623	1.00	10.13		C
		ANISOU	3126	C ALA	A	390	1403	1097	1346	30	-138	96	C
		ATOM	3127	O ALA	A	390	20.194	-76.868	295.403	1.00	10.06		O
25		ANISOU	3127	O ALA	A	390	1404	1077	1339	135	-68	102	O
		ATOM	3128	N ALA	A	391	19.426	-74.785	294.862	1.00	12.47		N
		ANISOU	3128	N ALA	A	391	1698	1442	1597	-6	-240	343	N
		ATOM	3129	CA ALA	A	391	20.351	-74.653	293.772	1.00	10.97		C
		ANISOU	3129	CA ALA	A	391	1505	1078	1585	168	17	308	C
30		ATOM	3130	CB ALA	A	391	20.049	-73.340	293.042	1.00	12.96		C
		ANISOU	3130	CB ALA	A	391	1989	1334	1599	-32	-177	583	C
		ATOM	3131	C ALA	A	391	21.802	-74.571	294.236	1.00	11.31		C
		ANISOU	3131	C ALA	A	391	1680	1232	1385	10	2	490	C
		ATOM	3132	O ALA	A	391	22.101	-74.112	295.329	1.00	13.08		O
35		ANISOU	3132	O ALA	A	391	1940	1327	1702	-290	-169	437	O
		ATOM	3133	N ARG	A	392	22.688	-75.093	293.374	1.00	12.01		N

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		ANISOU	3133	N	ARG	A	392	1673	1337	1552	11	-139	383	N
		ATOM	3134	CA	ARG	A	392	24.163	-75.077	293.642	1.00	13.40		C
		ANISOU	3134	CA	ARG	A	392	1744	1665	1682	-18	-179	601	C
		ATOM	3135	CB	ARG	A	392	24.799	-76.376	293.171	1.00	11.75		C
5		ANISOU	3135	CB	ARG	A	392	1431	1512	1520	-289	-283	398	C
		ATOM	3136	CG	ARG	A	392	26.310	-76.394	293.492	1.00	15.37		C
		ANISOU	3136	CG	ARG	A	392	1440	2145	2255	-204	-360	173	C
		ATOM	3137	CD	ARG	A	392	27.025	-77.279	292.480	1.00	17.93		C
		ANISOU	3137	CD	ARG	A	392	1720	2479	2614	-321	-86	596	C
10		ATOM	3138	NE	ARG	A	392	26.777	-78.582	292.839	1.00	18.42		N
		ANISOU	3138	NE	ARG	A	392	1301	2322	3375	285	-737	502	N
		ATOM	3139	CZ	ARG	A	392	26.926	-79.723	292.148	1.00	17.26		C
		ANISOU	3139	CZ	ARG	A	392	1508	2838	2211	150	-272	-21	C
		ATOM	3140	NH1	ARG	A	392	27.280	-79.802	290.872	1.00	14.12		N
15		ANISOU	3140	NH1	ARG	A	392	1751	1681	1932	75	-268	130	N
		ATOM	3141	NH2	ARG	A	392	26.620	-80.838	292.771	1.00	15.64		N
		ANISOU	3141	NH2	ARG	A	392	1700	2554	1688	170	-168	468	N
		ATOM	3142	C	ARG	A	392	24.722	-73.806	292.946	1.00	13.22		C
		ANISOU	3142	C	ARG	A	392	1763	1486	1770	-28	-260	505	C
20		ATOM	3143	O	ARG	A	392	24.856	-73.818	291.705	1.00	13.20		O
		ANISOU	3143	O	ARG	A	392	1848	1441	1727	-335	-36	431	O
		ATOM	3144	N	AASP	A	393	25.020	-72.790	293.731	0.50	17.25		N
		ANISOU	3144	N	AASP	A	393	2278	2239	2034	-1026	-24	603	N
		ATOM	3145	N	BASP	A	393	25.015	-72.783	293.737	0.50	17.71		N
25		ANISOU	3145	N	BASP	A	393	2357	2285	2086	-1053	-3	567	N
		ATOM	3146	CA	AASP	A	393	25.588	-71.582	293.186	0.50	16.19		C
		ANISOU	3146	CA	AASP	A	393	2445	1637	2067	-368	-153	867	C
		ATOM	3147	CA	BASP	A	393	25.507	-71.500	293.233	0.50	17.50		C
		ANISOU	3147	CA	BASP	A	393	2542	1963	2143	-531	-125	875	C
30		ATOM	3148	CB	AASP	A	393	27.054	-71.841	292.790	0.50	18.84		C
		ANISOU	3148	CB	AASP	A	393	2444	2016	2699	-168	-410	589	C
		ATOM	3149	CB	BASP	A	393	27.003	-71.559	292.955	0.50	22.51		C
		ANISOU	3149	CB	BASP	A	393	2683	2602	3265	-88	25	1395	C
		ATOM	3150	CG	AASP	A	393	27.947	-72.246	294.003	0.50	17.32		C
35		ANISOU	3150	CG	AASP	A	393	2551	1319	2708	-2	-205	1192	C
		ATOM	3151	CG	BASP	A	393	27.613	-70.176	292.686	0.50	29.49		C

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		ANISOU	3151	CG	BASP	A	393	3870	2359	4975	-712	425	116	C
		ATOM	3152	OD1AASP	A	393		27.734	-71.735	295.128	0.50	30.58		O
		ANISOU	3152	OD1AASP	A	393	3665	4710	3243	-941	-761	-132		O
		ATOM	3153	OD1BASP	A	393		27.143	-69.166	293.244	0.50	27.08		O
5		ANISOU	3153	OD1BASP	A	393	4071	1285	4931	-1235	-1029	-145		O
		ATOM	3154	OD2AASP	A	393		28.812	-73.111	293.852	0.50	24.06		O
		ANISOU	3154	OD2AASP	A	393	2231	4042	2867	511	-103	-91		O
		ATOM	3155	OD2BASP	A	393		28.556	-70.102	291.892	0.50	36.24		O
		ANISOU	3155	OD2BASP	A	393	3954	4683	5130	-946	-78	1432		O
10		ATOM	3156	C	AASP	A	393	24.797	-71.073	291.940	0.50	15.31		C
		ANISOU	3156	C	AASP	A	393	2242	1507	2068	-51	-92	624	C
		ATOM	3157	C	BASP	A	393	24.783	-71.047	291.952	0.50	15.58		C
		ANISOU	3157	C	BASP	A	393	2264	1469	2185	-20	-51	649	C
		ATOM	3158	O	AASP	A	393	25.393	-70.826	290.886	0.50	20.92		O
15		ANISOU	3158	O	AASP	A	393	3164	2215	2568	-1000	-415	1151	O
		ATOM	3159	O	BASP	A	393	25.396	-70.814	290.902	0.50	21.68		O
		ANISOU	3159	O	BASP	A	393	3272	2343	2623	-1076	-413	1162	O
		ATOM	3160	N	GLY	A	394	23.466	-70.992	292.051	1.00	17.95		N
		ANISOU	3160	N	GLY	A	394	2442	1760	2615	-108	-370	783	N
20		ATOM	3161	CA	GLY	A	394	22.639	-70.525	290.995	1.00	16.43		C
		ANISOU	3161	CA	GLY	A	394	2166	2252	1822	-153	-382	-47	C
		ATOM	3162	C	GLY	A	394	22.180	-71.540	289.971	1.00	16.26		C
		ANISOU	3162	C	GLY	A	394	1964	1890	2323	-367	-413	4	C
		ATOM	3163	O	GLY	A	394	21.314	-71.204	289.110	1.00	18.06		O
25		ANISOU	3163	O	GLY	A	394	2642	1681	2538	159	-604	791	O
		ATOM	3164	N	ASP	A	395	22.728	-72.759	290.041	1.00	15.87		N
		ANISOU	3164	N	ASP	A	395	2301	1713	2014	-345	-126	654	N
		ATOM	3165	CA	ASP	A	395	22.406	-73.788	289.060	1.00	11.87		C
		ANISOU	3165	CA	ASP	A	395	1896	1245	1367	-269	149	640	C
30		ATOM	3166	CB	ASP	A	395	23.645	-74.515	288.631	1.00	13.36		C
		ANISOU	3166	CB	ASP	A	395	1799	1805	1472	-371	87	400	C
		ATOM	3167	CG	ASP	A	395	23.383	-75.607	287.595	1.00	13.73		C
		ANISOU	3167	CG	ASP	A	395	1971	1494	1750	-105	-6	349	C
		ATOM	3168	OD1	ASP	A	395	22.241	-76.116	287.456	1.00	14.12		O
35		ANISOU	3168	OD1	ASP	A	395	1712	1741	1911	-161	-262	453	O
		ATOM	3169	OD2	ASP	A	395	24.376	-75.966	286.894	1.00	17.49		O

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		ANISOU	3169	OD2	ASP	A	395	2117	2176	2350	-371	422	227	O
		ATOM	3170	C	ASP	A	395	21.319	-74.684	289.661	1.00	11.92		C
		ANISOU	3170	C	ASP	A	395	1417	1534	1576	-221	-110	628	C
		ATOM	3171	O	ASP	A	395	21.624	-75.458	290.583	1.00	12.63		O
5		ANISOU	3171	O	ASP	A	395	1798	1375	1626	-173	-274	751	O
		ATOM	3172	N	ALA	A	396	20.087	-74.519	289.275	1.00	12.22		N
		ANISOU	3172	N	ALA	A	396	1746	1389	1508	-8	-124	622	N
		ATOM	3173	CA	ALA	A	396	18.966	-75.178	289.838	1.00	13.01		C
		ANISOU	3173	CA	ALA	A	396	1510	1805	1628	-154	-17	76	C
10		ATOM	3174	CB	ALA	A	396	17.711	-74.404	289.605	1.00	14.17		C
		ANISOU	3174	CB	ALA	A	396	1986	1243	2153	-353	262	277	C
		ATOM	3175	C	ALA	A	396	18.737	-76.588	289.334	1.00	9.97		C
		ANISOU	3175	C	ALA	A	396	1257	1305	1224	168	-174	354	C
		ATOM	3176	O	ALA	A	396	17.931	-77.300	289.961	1.00	12.83		O
15		ANISOU	3176	O	ALA	A	396	1374	1873	1626	-311	-129	491	O
		ATOM	3177	N	ILE	A	397	19.340	-77.000	288.221	1.00	10.11		N
		ANISOU	3177	N	ILE	A	397	1490	1017	1334	-117	44	104	N
		ATOM	3178	CA	ILE	A	397	19.130	-78.328	287.653	1.00	9.60		C
		ANISOU	3178	CA	ILE	A	397	1495	955	1197	-41	7	284	C
20		ATOM	3179	CB	ILE	A	397	18.943	-78.345	286.128	1.00	11.62		C
		ANISOU	3179	CB	ILE	A	397	1480	1524	1410	-167	-370	204	C
		ATOM	3180	CG1	ILE	A	397	20.234	-77.955	285.363	1.00	13.83		C
		ANISOU	3180	CG1	ILE	A	397	1871	1921	1463	81	44	438	C
		ATOM	3181	CD1	ILE	A	397	20.110	-78.121	283.840	1.00	13.87		C
25		ANISOU	3181	CD1	ILE	A	397	2079	1368	1821	-31	-179	415	C
		ATOM	3182	CG2	ILE	A	397	17.721	-77.471	285.785	1.00	14.00		C
		ANISOU	3182	CG2	ILE	A	397	1956	1661	1701	-59	-271	423	C
		ATOM	3183	C	ILE	A	397	20.157	-79.379	288.014	1.00	11.20		C
		ANISOU	3183	C	ILE	A	397	1663	1219	1373	178	-377	355	C
30		ATOM	3184	O	ILE	A	397	19.887	-80.590	287.873	1.00	10.80		O
		ANISOU	3184	O	ILE	A	397	1340	1411	1351	-127	-68	91	O
		ATOM	3185	N	VAL	A	398	21.363	-78.948	288.385	1.00	9.70		N
		ANISOU	3185	N	VAL	A	398	1367	1092	1226	-44	-48	360	N
		ATOM	3186	CA	VAL	A	398	22.428	-79.933	288.442	1.00	10.73		C
35		ANISOU	3186	CA	VAL	A	398	1271	1539	1265	37	37	355	C
		ATOM	3187	CB	VAL	A	398	23.812	-79.190	288.473	1.00	11.02		C

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		ANISOU	3187	CB	VAL	A	398	1395	1286	1506	-91	31	280	C
		ATOM	3188	CG1	VAL	A	398	24.034	-78.333	289.736	1.00	10.85		C
		ANISOU	3188	CG1	VAL	A	398	1404	897	1822	-275	71	511	C
		ATOM	3189	CG2	VAL	A	398	24.907	-80.184	288.196	1.00	11.54		C
5		ANISOU	3189	CG2	VAL	A	398	1603	1158	1621	-64	86	387	C
		ATOM	3190	C	VAL	A	398	22.359	-80.916	289.633	1.00	8.93		C
		ANISOU	3190	C	VAL	A	398	916	1248	1227	12	-31	207	C
		ATOM	3191	O	VAL	A	398	22.667	-82.069	289.419	1.00	10.52		O
		ANISOU	3191	O	VAL	A	398	1540	1183	1272	-162	-85	310	O
10		ATOM	3192	N	ARG	A	399	21.844	-80.462	290.768	1.00	10.32		N
		ANISOU	3192	N	ARG	A	399	1503	1195	1220	23	-106	303	N
		ATOM	3193	CA	ARG	A	399	21.760	-81.435	291.920	1.00	10.04		C
		ANISOU	3193	CA	ARG	A	399	1460	1323	1031	18	-12	383	C
		ATOM	3194	CB	ARG	A	399	21.577	-80.761	293.225	1.00	9.18		C
15		ANISOU	3194	CB	ARG	A	399	1392	1114	983	27	-275	393	C
		ATOM	3195	CG	ARG	A	399	22.790	-80.007	293.769	1.00	9.34		C
		ANISOU	3195	CG	ARG	A	399	1343	889	1314	5	-163	200	C
		ATOM	3196	CD	ARG	A	399	22.529	-79.256	295.071	1.00	9.09		C
		ANISOU	3196	CD	ARG	A	399	1249	1045	1159	110	-247	261	C
20		ATOM	3197	NE	ARG	A	399	23.751	-78.807	295.673	1.00	10.33		N
		ANISOU	3197	NE	ARG	A	399	1479	1353	1091	11	-174	273	N
		ATOM	3198	CZ	ARG	A	399	23.845	-77.763	296.442	1.00	10.37		C
		ANISOU	3198	CZ	ARG	A	399	1525	1118	1294	29	-238	97	C
		ATOM	3199	NH1	ARG	A	399	22.861	-76.869	296.610	1.00	11.00		N
25		ANISOU	3199	NH1	ARG	A	399	1521	1152	1505	90	-155	368	N
		ATOM	3200	NH2	ARG	A	399	25.053	-77.561	297.030	1.00	12.85		N
		ANISOU	3200	NH2	ARG	A	399	1449	1770	1661	-225	-356	233	N
		ATOM	3201	C	ARG	A	399	20.715	-82.531	291.689	1.00	9.85		C
		ANISOU	3201	C	ARG	A	399	1227	1182	1332	246	15	241	C
30		ATOM	3202	O	ARG	A	399	21.002	-83.711	291.866	1.00	9.46		O
		ANISOU	3202	O	ARG	A	399	1440	1021	1132	-69	142	314	O
		ATOM	3203	N	PRO	A	400	19.479	-82.216	291.157	1.00	10.62		N
		ANISOU	3203	N	PRO	A	400	1292	1264	1478	188	-13	116	N
		ATOM	3204	CA	PRO	A	400	18.578	-83.274	290.864	1.00	10.38		C
35		ANISOU	3204	CA	PRO	A	400	1164	1649	1129	63	3	279	C
		ATOM	3205	CB	PRO	A	400	17.299	-82.535	290.416	1.00	9.89		C

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		ANISOU	3205	CB	PRO	A	400	1286	1075	1394	-185	-26	149	C
		ATOM	3206	CG	PRO	A	400	17.380	-81.191	291.081	1.00	9.40		C
		ANISOU	3206	CG	PRO	A	400	1278	855	1439	241	92	152	C
		ATOM	3207	CD	PRO	A	400	18.869	-80.887	291.164	1.00	9.69		C
5		ANISOU	3207	CD	PRO	A	400	1276	1272	1131	168	40	191	C
		ATOM	3208	C	PRO	A	400	19.118	-84.223	289.801	1.00	8.20		C
		ANISOU	3208	C	PRO	A	400	1066	905	1142	-269	-29	182	C
		ATOM	3209	O	PRO	A	400	18.969	-85.463	289.870	1.00	8.96		O
		ANISOU	3209	O	PRO	A	400	1354	867	1181	28	-15	123	O
10		ATOM	3210	N	PHE	A	401	19.816	-83.698	288.766	1.00	9.50		N
		ANISOU	3210	N	PHE	A	401	1465	1009	1135	41	168	259	N
		ATOM	3211	CA	PHE	A	401	20.471	-84.471	287.765	1.00	10.04		C
		ANISOU	3211	CA	PHE	A	401	1460	1286	1068	124	16	471	C
		ATOM	3212	CB	PHE	A	401	21.133	-83.514	286.684	1.00	9.88		C
15		ANISOU	3212	CB	PHE	A	401	1457	1165	1132	-357	-73	172	C
		ATOM	3213	CG	PHE	A	401	22.193	-84.218	285.861	1.00	10.00		C
		ANISOU	3213	CG	PHE	A	401	1362	1175	1259	-283	90	261	C
		ATOM	3214	CD1	PHE	A	401	21.871	-85.134	284.882	1.00	13.06		C
		ANISOU	3214	CD1	PHE	A	401	1820	1654	1486	24	-11	319	C
20		ATOM	3215	CE1	PHE	A	401	22.874	-85.783	284.138	1.00	14.25		C
		ANISOU	3215	CE1	PHE	A	401	1698	2087	1627	11	-37	456	C
		ATOM	3216	CZ	PHE	A	401	24.192	-85.557	284.469	1.00	13.26		C
		ANISOU	3216	CZ	PHE	A	401	1831	1772	1432	-24	165	486	C
		ATOM	3217	CE2	PHE	A	401	24.501	-84.666	285.429	1.00	13.58		C
25		ANISOU	3217	CE2	PHE	A	401	1731	1666	1762	491	-150	344	C
		ATOM	3218	CD2	PHE	A	401	23.519	-84.071	286.161	1.00	12.52		C
		ANISOU	3218	CD2	PHE	A	401	1368	2055	1332	177	-122	220	C
		ATOM	3219	C	PHE	A	401	21.478	-85.435	288.410	1.00	7.83		C
		ANISOU	3219	C	PHE	A	401	1066	972	938	111	130	158	C
30		ATOM	3220	O	PHE	A	401	21.458	-86.672	288.107	1.00	9.60		O
		ANISOU	3220	O	PHE	A	401	1312	1168	1168	45	-67	-47	O
		ATOM	3221	N	GLU	A	402	22.387	-84.939	289.212	1.00	8.66		N
		ANISOU	3221	N	GLU	A	402	1376	806	1106	3	-71	311	N
		ATOM	3222	CA	GLU	A	402	23.455	-85.758	289.798	1.00	10.41		C
35		ANISOU	3222	CA	GLU	A	402	1081	1400	1473	61	-116	397	C
		ATOM	3223	CB	GLU	A	402	24.448	-84.911	290.562	1.00	11.42		C

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		ANISOU	3223	CB	GLU	A	402	1303	1778	1255	-168	-164	558	C
		ATOM	3224	CG	GLU	A	402	25.338	-84.111	289.644	1.00	11.20		C
		ANISOU	3224	CG	GLU	A	402	1278	1567	1410	-103	-58	277	C
		ATOM	3225	CD	GLU	A	402	26.403	-83.354	290.392	1.00	12.89		C
5		ANISOU	3225	CD	GLU	A	402	1492	1679	1724	-480	37	62	C
		ATOM	3226	OE1	GLU	A	402	26.491	-83.442	291.629	1.00	15.35		O
		ANISOU	3226	OE1	GLU	A	402	1994	2074	1762	-410	38	412	O
		ATOM	3227	OE2	GLU	A	402	27.188	-82.628	289.725	1.00	14.59		O
		ANISOU	3227	OE2	GLU	A	402	1689	1900	1952	-376	90	560	O
10		ATOM	3228	C	GLU	A	402	22.802	-86.866	290.680	1.00	9.30		C
		ANISOU	3228	C	GLU	A	402	1370	1040	1121	-222	-22	-34	C
		ATOM	3229	O	GLU	A	402	23.238	-88.014	290.650	1.00	11.55		O
		ANISOU	3229	O	GLU	A	402	1401	1468	1518	176	-66	558	O
		ATOM	3230	N	ALA	A	403	21.792	-86.477	291.466	1.00	10.38		N
15		ANISOU	3230	N	ALA	A	403	1307	1220	1416	57	-11	465	N
		ATOM	3231	CA	ALA	A	403	21.171	-87.421	292.378	1.00	9.96		C
		ANISOU	3231	CA	ALA	A	403	1417	1182	1183	-73	141	349	C
		ATOM	3232	CB	ALA	A	403	20.137	-86.752	293.244	1.00	11.19		C
		ANISOU	3232	CB	ALA	A	403	1376	1559	1313	-89	46	154	C
20		ATOM	3233	C	ALA	A	403	20.532	-88.572	291.557	1.00	9.32		C
		ANISOU	3233	C	ALA	A	403	1324	1009	1205	78	-63	258	C
		ATOM	3234	O	ALA	A	403	20.623	-89.802	291.831	1.00	10.11		O
		ANISOU	3234	O	ALA	A	403	1469	1053	1317	23	-45	276	O
		ATOM	3235	N	ASER	A	404	19.817	-88.209	290.494	0.70	9.75		N
25		ANISOU	3235	N	ASER	A	404	1499	1152	1052	-103	-84	347	N
		ATOM	3236	N	BSER	A	404	19.825	-88.180	290.495	0.30	10.46		N
		ANISOU	3236	N	BSER	A	404	1633	1262	1077	-87	-95	359	N
		ATOM	3237	CA	ASER	A	404	19.157	-89.121	289.668	0.70	9.92		C
		ANISOU	3237	CA	ASER	A	404	1352	1356	1060	66	-46	341	C
30		ATOM	3238	CA	BSER	A	404	19.166	-89.125	289.629	0.30	10.39		C
		ANISOU	3238	CA	BSER	A	404	1406	1398	1141	64	-43	276	C
		ATOM	3239	CB	ASER	A	404	18.210	-88.405	288.678	0.70	8.55		C
		ANISOU	3239	CB	ASER	A	404	1136	864	1248	137	92	212	C
		ATOM	3240	CB	BSER	A	404	18.282	-88.418	288.608	0.30	8.98		C
35		ANISOU	3240	CB	BSER	A	404	1260	977	1175	116	43	167	C
		ATOM	3241	OG	ASER	A	404	17.608	-89.360	287.840	0.70	9.54		O

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		ANISOU	3241	OG	ASER	A	404	1317	1085	1221	184	-109	105	O
		ATOM	3242	OG	BSER	A	404	17.046	-88.115	289.172	0.30	10.10		O
		ANISOU	3242	OG	BSER	A	404	1122	1399	1315	408	-109	668	O
		ATOM	3243	C	ASER	A	404	20.125	-90.039	288.932	0.70	9.19		C
5		ANISOU	3243	C	ASER	A	404	1292	1138	1059	-107	-54	132	C
		ATOM	3244	C	BSER	A	404	20.131	-90.040	288.900	0.30	9.61		C
		ANISOU	3244	C	BSER	A	404	1366	1119	1164	-78	-78	169	C
		ATOM	3245	O	ASER	A	404	19.841	-91.264	288.732	0.70	9.27		O
		ANISOU	3245	O	ASER	A	404	1251	1012	1260	-85	-49	190	O
10		ATOM	3246	O	BSER	A	404	19.837	-91.245	288.684	0.30	9.85		O
		ANISOU	3246	O	BSER	A	404	1389	990	1363	-69	-14	292	O
		ATOM	3247	N	MET	A	405	21.285	-89.491	288.498	1.00	10.26		N
		ANISOU	3247	N	MET	A	405	1314	1263	1322	96	-21	179	N
		ATOM	3248	CA	MET	A	405	22.284	-90.364	287.909	1.00	11.73		C
15		ANISOU	3248	CA	MET	A	405	1534	1731	1189	33	296	169	C
		ATOM	3249	CB	MET	A	405	23.399	-89.506	287.339	1.00	12.95		C
		ANISOU	3249	CB	MET	A	405	1427	1980	1512	-154	210	402	C
		ATOM	3250	CG	MET	A	405	22.967	-88.657	286.157	1.00	14.17		C
		ANISOU	3250	CG	MET	A	405	1803	1820	1758	79	227	142	C
20		ATOM	3251	SD	MET	A	405	22.404	-89.578	284.727	1.00	17.32		S
		ANISOU	3251	SD	MET	A	405	2901	1952	1727	403	114	357	S
		ATOM	3252	CE	MET	A	405	20.802	-89.394	284.818	1.00	18.77		C
		ANISOU	3252	CE	MET	A	405	2729	2314	2088	-773	-634	776	C
		ATOM	3253	C	MET	A	405	22.832	-91.438	288.882	1.00	10.31		C
25		ANISOU	3253	C	MET	A	405	1088	1409	1419	-48	-25	87	C
		ATOM	3254	O	MET	A	405	23.031	-92.610	288.437	1.00	12.52		O
		ANISOU	3254	O	MET	A	405	1525	1646	1585	376	-60	217	O
		ATOM	3255	N	LYS	A	406	23.059	-91.013	290.128	1.00	10.20		N
		ANISOU	3255	N	LYS	A	406	1580	899	1396	162	20	235	N
30		ATOM	3256	CA	LYS	A	406	23.481	-91.992	291.170	1.00	11.70		C
		ANISOU	3256	CA	LYS	A	406	1409	1563	1473	129	122	751	C
		ATOM	3257	CB	LYS	A	406	23.832	-91.289	292.440	1.00	12.41		C
		ANISOU	3257	CB	LYS	A	406	1621	1457	1635	48	-28	400	C
		ATOM	3258	CG	LYS	A	406	24.269	-92.211	293.585	1.00	20.01		C
35		ANISOU	3258	CG	LYS	A	406	2823	2435	2343	-181	-207	1057	C
		ATOM	3259	CD	LYS	A	406	25.503	-93.053	293.257	1.00	24.79		C

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		ANISOU	3259	CD	LYS	A	406	3177	3042	3199	73	-386	307	C
		ATOM	3260	CE	LYS	A	406	26.034	-93.623	294.562	1.00	31.15		C
		ANISOU	3260	CE	LYS	A	406	3941	4320	3572	492	-548	699	C
		ATOM	3261	NZ	LYS	A	406	27.430	-94.010	294.386	1.00	39.84		N
5		ANISOU	3261	NZ	LYS	A	406	5002	4751	5383	801	906	387	N
		ATOM	3262	C	LYS	A	406	22.406	-93.052	291.293	1.00	11.64		C
		ANISOU	3262	C	LYS	A	406	1375	1472	1573	120	52	525	C
		ATOM	3263	O	LYS	A	406	22.683	-94.276	291.353	1.00	12.01		O
		ANISOU	3263	O	LYS	A	406	1322	1464	1776	381	-160	267	O
10		ATOM	3264	N	LEU	A	407	21.145	-92.634	291.380	1.00	10.97		N
		ANISOU	3264	N	LEU	A	407	1217	1591	1359	190	-241	494	N
		ATOM	3265	CA	LEU	A	407	20.038	-93.513	291.531	1.00	10.21		C
		ANISOU	3265	CA	LEU	A	407	1593	982	1303	270	-80	262	C
		ATOM	3266	CB	LEU	A	407	18.708	-92.756	291.805	1.00	10.66		C
15		ANISOU	3266	CB	LEU	A	407	1468	1195	1387	121	2	438	C
		ATOM	3267	CG	LEU	A	407	18.646	-92.207	293.209	1.00	10.03		C
		ANISOU	3267	CG	LEU	A	407	1241	1293	1277	36	-75	478	C
		ATOM	3268	CD1	LEU	A	407	17.816	-90.928	293.226	1.00	10.67		C
		ANISOU	3268	CD1	LEU	A	407	1430	1382	1239	126	-106	256	C
20		ATOM	3269	CD2	LEU	A	407	18.171	-93.243	294.224	1.00	12.22		C
		ANISOU	3269	CD2	LEU	A	407	1926	1352	1362	120	-88	655	C
		ATOM	3270	C	LEU	A	407	19.942	-94.548	290.461	1.00	9.66		C
		ANISOU	3270	C	LEU	A	407	1111	1198	1360	180	172	166	C
		ATOM	3271	O	LEU	A	407	19.742	-95.753	290.659	1.00	10.52		O
25		ANISOU	3271	O	LEU	A	407	1328	1246	1424	6	-53	376	O
		ATOM	3272	N	TRP	A	408	20.130	-94.104	289.214	1.00	11.57		N
		ANISOU	3272	N	TRP	A	408	1560	1340	1496	118	45	171	N
		ATOM	3273	CA	TRP	A	408	20.109	-94.988	288.082	1.00	10.94		C
		ANISOU	3273	CA	TRP	A	408	1634	1279	1244	-13	-135	410	C
30		ATOM	3274	CB	TRP	A	408	20.338	-94.144	286.785	1.00	11.06		C
		ANISOU	3274	CB	TRP	A	408	1622	1264	1313	137	-18	382	C
		ATOM	3275	CG	TRP	A	408	20.249	-94.926	285.517	1.00	12.65		C
		ANISOU	3275	CG	TRP	A	408	1914	1495	1397	14	130	543	C
		ATOM	3276	CD1	TRP	A	408	21.309	-95.476	284.824	1.00	16.59		C
35		ANISOU	3276	CD1	TRP	A	408	2807	1727	1766	707	47	505	C
		ATOM	3277	NE1	TRP	A	408	20.844	-96.149	283.734	1.00	18.12		N

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		ANISOU	3277	NE1	TRP	A	408	2589	2284	2010	15	181	777	N
		ATOM	3278	CE2	TRP	A	408	19.494	-96.046	283.676	1.00	15.42		C
		ANISOU	3278	CE2	TRP	A	408	2651	1744	1463	-812	-18	809	C
		ATOM	3279	CD2	TRP	A	408	19.056	-95.330	284.812	1.00	15.78		C
5		ANISOU	3279	CD2	TRP	A	408	2001	2572	1423	-30	435	720	C
		ATOM	3280	CE3	TRP	A	408	17.701	-95.000	284.920	1.00	17.95		C
		ANISOU	3280	CE3	TRP	A	408	2251	3166	1400	-899	185	21	C
		ATOM	3281	CZ3	TRP	A	408	16.803	-95.553	283.989	1.00	24.64		C
		ANISOU	3281	CZ3	TRP	A	408	2565	4435	2359	-615	-464	-635	C
10		ATOM	3282	CH2	TRP	A	408	17.299	-96.317	282.897	1.00	17.96		C
		ANISOU	3282	CH2	TRP	A	408	2851	1603	2369	-841	-359	577	C
		ATOM	3283	CZ2	TRP	A	408	18.612	-96.606	282.762	1.00	18.43		C
		ANISOU	3283	CZ2	TRP	A	408	2790	2326	1884	-413	8	228	C
		ATOM	3284	C	TRP	A	408	21.198	-96.065	288.183	1.00	12.95		C
15		ANISOU	3284	C	TRP	A	408	1777	1423	1719	-65	124	-39	C
		ATOM	3285	O	TRP	A	408	20.911	-97.263	287.993	1.00	12.76		O
		ANISOU	3285	O	TRP	A	408	2001	1247	1600	63	-45	280	O
		ATOM	3286	N	ALYS	A	409	22.402	-95.676	288.568	0.50	12.38		N
		ANISOU	3286	N	ALYS	A	409	1566	1420	1716	123	164	451	N
20		ATOM	3287	N	BLYS	A	409	22.395	-95.661	288.578	0.50	12.75		N
		ANISOU	3287	N	BLYS	A	409	1597	1480	1768	79	141	477	N
		ATOM	3288	CA	ALYS	A	409	23.462	-96.656	288.801	0.50	12.74		C
		ANISOU	3288	CA	ALYS	A	409	1434	1711	1694	252	273	122	C
		ATOM	3289	CA	BLYS	A	409	23.487	-96.598	288.835	0.50	13.95		C
25		ANISOU	3289	CA	BLYS	A	409	1645	1875	1777	342	286	156	C
		ATOM	3290	CB	ALYS	A	409	24.806	-95.969	288.976	0.50	14.53		C
		ANISOU	3290	CB	ALYS	A	409	1541	1685	2294	147	-27	390	C
		ATOM	3291	CB	BLYS	A	409	24.765	-95.812	289.109	0.50	19.80		C
		ANISOU	3291	CB	BLYS	A	409	2066	2345	3109	-66	-151	593	C
30		ATOM	3292	CG	ALYS	A	409	25.227	-95.092	287.810	0.50	15.25		C
		ANISOU	3292	CG	ALYS	A	409	2130	1492	2172	427	215	343	C
		ATOM	3293	CG	BLYS	A	409	26.043	-96.576	288.886	0.50	32.24		C
		ANISOU	3293	CG	BLYS	A	409	3304	3379	5567	813	384	-424	C
		ATOM	3294	CD	ALYS	A	409	26.577	-94.485	288.175	0.50	16.84		C
35		ANISOU	3294	CD	ALYS	A	409	1974	1846	2576	255	647	56	C
		ATOM	3295	CD	BLYS	A	409	26.572	-97.127	290.186	0.50	40.73		C

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		ANISOU	3295	CD	BLYS	A	409	5945	4153	5378	-1138	48	295	C
		ATOM	3296	CE	ALYS	A	409	27.165	-93.765	286.970	0.50	26.08		C
		ANISOU	3296	CE	ALYS	A	409	3682	3470	2753	-784	446	727	C
		ATOM	3297	CE	BLYS	A	409	27.236	-96.068	291.024	0.50	33.51		C
5		ANISOU	3297	CE	BLYS	A	409	4546	4613	3570	435	-393	-531	C
		ATOM	3298	NZ	ALYS	A	409	28.580	-93.485	287.235	0.50	33.53		N
		ANISOU	3298	NZ	ALYS	A	409	4379	2870	5491	-697	295	-222	N
		ATOM	3299	NZ	BLYS	A	409	26.805	-96.489	292.364	0.50	35.15		N
		ANISOU	3299	NZ	BLYS	A	409	3688	5806	3861	1500	-1105	1097	N
10		ATOM	3300	C	ALYS	A	409	23.131	-97.616	289.934	0.50	12.42		C
		ANISOU	3300	C	ALYS	A	409	1911	1129	1676	547	-95	181	C
		ATOM	3301	C	BLYS	A	409	23.149	-97.595	289.937	0.50	12.77		C
		ANISOU	3301	C	BLYS	A	409	1939	1203	1708	583	-83	128	C
		ATOM	3302	O	ALYS	A	409	23.509	-98.845	289.877	0.50	14.49		O
15		ANISOU	3302	O	ALYS	A	409	1804	1149	2550	619	-276	186	O
		ATOM	3303	O	BLYS	A	409	23.542	-98.818	289.862	0.50	15.40		O
		ANISOU	3303	O	BLYS	A	409	1902	1231	2715	670	-217	196	O
		ATOM	3304	N	GLU	A	410	22.385	-97.143	290.926	1.00	13.02		N
		ANISOU	3304	N	GLU	A	410	1412	1666	1868	300	31	730	N
20		ATOM	3305	CA	GLU	A	410	21.966	-98.016	292.050	1.00	12.59		C
		ANISOU	3305	CA	GLU	A	410	1649	1346	1789	-192	-197	551	C
		ATOM	3306	CB	GLU	A	410	21.755	-97.183	293.273	1.00	14.38		C
		ANISOU	3306	CB	GLU	A	410	1952	1570	1941	215	-41	240	C
		ATOM	3307	CG	GLU	A	410	23.022	-96.580	293.836	1.00	15.64		C
25		ANISOU	3307	CG	GLU	A	410	2187	1778	1975	34	-270	203	C
		ATOM	3308	CD	GLU	A	410	23.973	-97.572	294.437	1.00	18.97		C
		ANISOU	3308	CD	GLU	A	410	2325	2264	2617	-61	-373	1215	C
		ATOM	3309	OE1	GLU	A	410	23.493	-98.465	295.121	1.00	24.66		O
		ANISOU	3309	OE1	GLU	A	410	3482	2097	3790	-418	-423	1509	O
30		ATOM	3310	OE2	GLU	A	410	25.154	-97.552	294.112	1.00	31.08		O
		ANISOU	3310	OE2	GLU	A	410	2677	4222	4908	1133	-515	762	O
		ATOM	3311	C	GLU	A	410	20.750	-98.924	291.777	1.00	12.55		C
		ANISOU	3311	C	GLU	A	410	1718	1384	1664	-104	-265	194	C
		ATOM	3312	O	GLU	A	410	20.388	-99.736	292.607	1.00	17.22		O
35		ANISOU	3312	O	GLU	A	410	2048	2271	2223	-418	-125	902	O
		ATOM	3313	N	GLY	A	411	20.078	-98.720	290.648	1.00	11.47		N

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		ANISOU	3313	N	GLY	A	411	1495	1252	1608	26	-89	21	N
		ATOM	3314	CA	GLY	A	411	18.960	-99.547	290.253	1.00	13.44		C
		ANISOU	3314	CA	GLY	A	411	1385	1847	1874	124	-8	223	C
		ATOM	3315	C	GLY	A	411	17.596	-98.895	290.416	1.00	9.92		C
5		ANISOU	3315	C	GLY	A	411	1419	988	1363	136	-79	410	C
		ATOM	3316	O	GLY	A	411	16.605	-99.633	290.524	1.00	11.35		O
		ANISOU	3316	O	GLY	A	411	1425	1410	1477	77	-231	425	O
		ATOM	3317	N	PHE	A	412	17.520	-97.529	290.391	1.00	10.42		N
		ANISOU	3317	N	PHE	A	412	1535	1089	1335	79	116	569	N
10		ATOM	3318	CA	PHE	A	412	16.246	-96.878	290.552	1.00	11.33		C
		ANISOU	3318	CA	PHE	A	412	1559	1284	1460	71	-77	378	C
		ATOM	3319	CB	PHE	A	412	16.173	-96.182	291.899	1.00	10.51		C
		ANISOU	3319	CB	PHE	A	412	1558	1092	1342	120	80	249	C
		ATOM	3320	CG	PHE	A	412	16.389	-97.108	293.080	1.00	11.62		C
15		ANISOU	3320	CG	PHE	A	412	1551	1356	1506	-100	-37	425	C
		ATOM	3321	CD1	PHE	A	412	17.627	-97.330	293.555	1.00	10.81		C
		ANISOU	3321	CD1	PHE	A	412	1526	1209	1370	-255	-14	323	C
		ATOM	3322	CE1	PHE	A	412	17.788	-98.250	294.631	1.00	12.54		C
		ANISOU	3322	CE1	PHE	A	412	1748	1236	1779	107	-151	395	C
20		ATOM	3323	CZ	PHE	A	412	16.701	-98.912	295.149	1.00	13.71		C
		ANISOU	3323	CZ	PHE	A	412	1789	1814	1606	82	50	268	C
		ATOM	3324	CE2	PHE	A	412	15.461	-98.660	294.689	1.00	12.73		C
		ANISOU	3324	CE2	PHE	A	412	1806	1502	1528	8	128	569	C
		ATOM	3325	CD2	PHE	A	412	15.299	-97.818	293.587	1.00	10.63		C
25		ANISOU	3325	CD2	PHE	A	412	1504	1149	1385	46	128	467	C
		ATOM	3326	C	PHE	A	412	16.157	-95.768	289.451	1.00	10.91		C
		ANISOU	3326	C	PHE	A	412	1240	1392	1513	-56	-145	306	C
		ATOM	3327	O	PHE	A	412	17.064	-94.954	289.324	1.00	11.43		O
		ANISOU	3327	O	PHE	A	412	1531	1188	1622	110	-126	784	O
30		ATOM	3328	N	TYR	A	413	15.058	-95.766	288.712	1.00	8.07		N
		ANISOU	3328	N	TYR	A	413	1259	517	1289	20	-31	359	N
		ATOM	3329	CA	TYR	A	413	14.753	-94.605	287.806	1.00	7.99		C
		ANISOU	3329	CA	TYR	A	413	1175	714	1144	127	19	379	C
		ATOM	3330	CB	TYR	A	413	13.963	-95.108	286.608	1.00	9.96		C
35		ANISOU	3330	CB	TYR	A	413	1394	1076	1313	238	-194	371	C
		ATOM	3331	CG	TYR	A	413	13.157	-94.028	285.901	1.00	8.57		C

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		ANISOU	3331	CG	TYR	A	413	1227	909	1118	212	-184	145	C
		ATOM	3332	CD1	TYR	A	413	13.744	-92.818	285.516	1.00	11.27		C
		ANISOU	3332	CD1	TYR	A	413	1236	1376	1668	-116	53	381	C
		ATOM	3333	CE1	TYR	A	413	13.000	-91.799	284.909	1.00	10.71		C
5		ANISOU	3333	CE1	TYR	A	413	1351	1213	1505	33	128	209	C
		ATOM	3334	CZ	TYR	A	413	11.634	-91.956	284.749	1.00	9.82		C
		ANISOU	3334	CZ	TYR	A	413	1385	963	1383	175	-214	-137	C
		ATOM	3335	OH	TYR	A	413	10.877	-90.960	284.109	1.00	9.21		O
		ANISOU	3335	OH	TYR	A	413	1358	917	1224	70	61	117	O
10		ATOM	3336	CE2	TYR	A	413	11.060	-93.127	285.087	1.00	10.51		C
		ANISOU	3336	CE2	TYR	A	413	1063	1353	1575	-114	28	116	C
		ATOM	3337	CD2	TYR	A	413	11.815	-94.165	285.672	1.00	9.50		C
		ANISOU	3337	CD2	TYR	A	413	1057	1203	1347	77	236	192	C
		ATOM	3338	C	TYR	A	413	13.932	-93.655	288.583	1.00	9.67		C
15		ANISOU	3338	C	TYR	A	413	1100	1535	1037	-108	-70	-70	C
		ATOM	3339	O	TYR	A	413	12.833	-93.959	289.040	1.00	8.70		O
		ANISOU	3339	O	TYR	A	413	1144	849	1310	-101	100	186	O
		ATOM	3340	N	VAL	A	414	14.524	-92.498	288.822	1.00	9.24		N
		ANISOU	3340	N	VAL	A	414	1250	955	1302	159	-180	350	N
20		ATOM	3341	CA	VAL	A	414	13.918	-91.325	289.502	1.00	9.90		C
		ANISOU	3341	CA	VAL	A	414	1598	559	1604	-141	-6	169	C
		ATOM	3342	CB	VAL	A	414	14.562	-90.991	290.857	1.00	8.36		C
		ANISOU	3342	CB	VAL	A	414	1052	763	1358	105	-86	444	C
		ATOM	3343	CG1	VAL	A	414	13.932	-89.753	291.457	1.00	9.69		C
25		ANISOU	3343	CG1	VAL	A	414	1376	1125	1181	-108	37	133	C
		ATOM	3344	CG2	VAL	A	414	14.462	-92.216	291.774	1.00	9.86		C
		ANISOU	3344	CG2	VAL	A	414	1370	957	1417	8	37	573	C
		ATOM	3345	C	VAL	A	414	13.958	-90.089	288.612	1.00	8.38		C
		ANISOU	3345	C	VAL	A	414	1042	798	1343	-19	-78	52	C
30		ATOM	3346	O	VAL	A	414	15.037	-89.591	288.203	1.00	9.01		O
		ANISOU	3346	O	VAL	A	414	1121	892	1407	51	85	289	O
		ATOM	3347	N	ARG	A	415	12.758	-89.711	288.178	1.00	7.11		N
		ANISOU	3347	N	ARG	A	415	1069	362	1270	-48	29	271	N
		ATOM	3348	CA	ARG	A	415	12.630	-88.462	287.385	1.00	7.77		C
35		ANISOU	3348	CA	ARG	A	415	1246	528	1177	0	53	370	C
		ATOM	3349	CB	ARG	A	415	11.139	-88.242	287.114	1.00	8.50		C

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		ANISOU	3349	CB	ARG	A	415	1089	872	1267	4	125	260	C
		ATOM	3350	CG	ARG	A	415	10.824	-86.907	286.389	1.00	8.90		C
		ANISOU	3350	CG	ARG	A	415	1179	725	1474	-34	87	75	C
		ATOM	3351	CD	ARG	A	415	11.178	-86.951	284.937	1.00	12.03		C
5		ANISOU	3351	CD	ARG	A	415	1814	914	1843	22	-81	429	C
		ATOM	3352	NE	ARG	A	415	10.755	-85.697	284.266	1.00	11.12		N
		ANISOU	3352	NE	ARG	A	415	1608	1130	1486	140	-42	314	N
		ATOM	3353	CZ	ARG	A	415	11.362	-85.268	283.151	1.00	12.39		C
		ANISOU	3353	CZ	ARG	A	415	1601	1334	1772	-128	-371	397	C
10		ATOM	3354	NH1	ARG	A	415	12.372	-85.829	282.613	1.00	16.20		N
		ANISOU	3354	NH1	ARG	A	415	2740	2210	1204	-332	66	52	N
		ATOM	3355	NH2	ARG	A	415	10.969	-84.053	282.719	1.00	17.96		N
		ANISOU	3355	NH2	ARG	A	415	2783	1284	2757	-26	-570	758	N
		ATOM	3356	C	ARG	A	415	13.225	-87.194	288.018	1.00	8.95		C
15		ANISOU	3356	C	ARG	A	415	1237	910	1251	-19	64	157	C
		ATOM	3357	O	ARG	A	415	13.031	-86.918	289.171	1.00	8.12		O
		ANISOU	3357	O	ARG	A	415	1456	564	1062	-43	34	166	O
		ATOM	3358	N	PHE	A	416	14.038	-86.520	287.199	1.00	9.33		N
		ANISOU	3358	N	PHE	A	416	1259	1179	1105	-34	210	123	N
20		ATOM	3359	CA	PHE	A	416	14.522	-85.202	287.551	1.00	9.22		C
		ANISOU	3359	CA	PHE	A	416	1327	1081	1094	-48	74	288	C
		ATOM	3360	CB	PHE	A	416	16.056	-85.081	287.664	1.00	8.37		C
		ANISOU	3360	CB	PHE	A	416	1379	732	1069	19	39	327	C
		ATOM	3361	CG	PHE	A	416	16.819	-85.400	286.426	1.00	7.37		C
25		ANISOU	3361	CG	PHE	A	416	962	738	1100	-44	-191	18	C
		ATOM	3362	CD1	PHE	A	416	17.025	-86.711	286.015	1.00	8.08		C
		ANISOU	3362	CD1	PHE	A	416	1320	666	1084	82	-72	230	C
		ATOM	3363	CE1	PHE	A	416	17.711	-87.009	284.836	1.00	11.41		C
		ANISOU	3363	CE1	PHE	A	416	1267	1520	1546	90	30	605	C
30		ATOM	3364	CZ	PHE	A	416	18.207	-85.977	284.084	1.00	8.97		C
		ANISOU	3364	CZ	PHE	A	416	1277	811	1318	-74	0	-105	C
		ATOM	3365	CE2	PHE	A	416	18.049	-84.664	284.487	1.00	7.69		C
		ANISOU	3365	CE2	PHE	A	416	1175	511	1235	-12	-245	303	C
		ATOM	3366	CD2	PHE	A	416	17.338	-84.386	285.641	1.00	10.78		C
35		ANISOU	3366	CD2	PHE	A	416	1542	1292	1260	-311	-42	98	C
		ATOM	3367	C	PHE	A	416	14.008	-84.202	286.524	1.00	8.84		C

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		ANISOU	3367	C	PHE	A	416	1241	1046	1070	73	-39	-40	C
		ATOM	3368	O	PHE	A	416	13.979	-84.515	285.319	1.00	9.08		O
		ANISOU	3368	O	PHE	A	416	1317	990	1140	-57	-121	301	O
		ATOM	3369	N	GLY	A	417	13.689	-83.010	286.994	1.00	8.77		N
5		ANISOU	3369	N	GLY	A	417	1300	915	1118	212	75	179	N
		ATOM	3370	CA	GLY	A	417	13.248	-81.903	286.110	1.00	10.33		C
		ANISOU	3370	CA	GLY	A	417	1536	1188	1201	121	104	401	C
		ATOM	3371	C	GLY	A	417	13.220	-80.626	286.902	1.00	9.80		C
		ANISOU	3371	C	GLY	A	417	1309	1077	1336	295	-76	324	C
10		ATOM	3372	O	GLY	A	417	12.740	-80.574	288.048	1.00	9.17		O
		ANISOU	3372	O	GLY	A	417	1537	829	1119	53	58	376	O
		ATOM	3373	N	GLY	A	418	13.738	-79.525	286.302	1.00	9.86		N
		ANISOU	3373	N	GLY	A	418	1440	1195	1111	282	109	234	N
		ATOM	3374	CA	GLY	A	418	13.862	-78.318	287.111	1.00	9.78		C
15		ANISOU	3374	CA	GLY	A	418	1323	1289	1101	60	-12	214	C
		ATOM	3375	C	GLY	A	418	14.660	-78.615	288.414	1.00	8.27		C
		ANISOU	3375	C	GLY	A	418	1145	1017	978	-185	34	151	C
		ATOM	3376	O	GLY	A	418	15.657	-79.368	288.370	1.00	9.63		O
		ANISOU	3376	O	GLY	A	418	1377	946	1332	37	71	416	O
20		ATOM	3377	N	ASP	A	419	14.207	-78.044	289.511	1.00	7.79		N
		ANISOU	3377	N	ASP	A	419	1203	803	953	53	25	245	N
		ATOM	3378	CA	ASP	A	419	14.850	-78.180	290.834	1.00	9.68		C
		ANISOU	3378	CA	ASP	A	419	1234	1284	1157	-187	-367	495	C
		ATOM	3379	CB	ASP	A	419	14.835	-76.877	291.594	1.00	11.11		C
25		ANISOU	3379	CB	ASP	A	419	1446	1572	1202	141	-80	290	C
		ATOM	3380	CG	ASP	A	419	13.505	-76.359	292.024	1.00	9.43		C
		ANISOU	3380	CG	ASP	A	419	1529	962	1092	59	-70	220	C
		ATOM	3381	OD1	ASP	A	419	12.446	-76.958	291.680	1.00	11.51		O
		ANISOU	3381	OD1	ASP	A	419	1348	1586	1440	-33	-76	406	O
30		ATOM	3382	OD2	ASP	A	419	13.450	-75.271	292.663	1.00	11.49		O
		ANISOU	3382	OD2	ASP	A	419	1631	1158	1575	202	-26	79	O
		ATOM	3383	C	ASP	A	419	14.249	-79.314	291.664	1.00	8.98		C
		ANISOU	3383	C	ASP	A	419	1401	737	1274	-154	-131	44	C
		ATOM	3384	O	ASP	A	419	14.479	-79.287	292.882	1.00	9.34		O
35		ANISOU	3384	O	ASP	A	419	1304	1207	1036	-64	-199	255	O
		ATOM	3385	N	THR	A	420	13.559	-80.275	291.072	1.00	8.82		N

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		ANISOU	3385	N	THR	A	420	1387	1050	911	-235	-7	28	N
		ATOM	3386	CA	THR	A	420	12.987	-81.449	291.792	1.00	8.43		C
		ANISOU	3386	CA	THR	A	420	989	1159	1052	-87	-67	127	C
		ATOM	3387	CB	THR	A	420	11.425	-81.342	291.849	1.00	9.53		C
5		ANISOU	3387	CB	THR	A	420	1037	1434	1147	-113	-96	149	C
		ATOM	3388	OG1	THR	A	420	10.857	-81.210	290.541	1.00	10.16		O
		ANISOU	3388	OG1	THR	A	420	1332	1269	1258	-31	-237	193	O
		ATOM	3389	CG2	THR	A	420	10.968	-80.190	292.658	1.00	9.80		C
		ANISOU	3389	CG2	THR	A	420	1050	1399	1274	-100	-332	49	C
10		ATOM	3390	C	THR	A	420	13.345	-82.772	291.278	1.00	9.26		C
		ANISOU	3390	C	THR	A	420	1440	1191	886	33	-8	197	C
		ATOM	3391	O	THR	A	420	13.610	-83.061	290.114	1.00	9.29		O
		ANISOU	3391	O	THR	A	420	1494	1104	931	108	22	430	O
		ATOM	3392	N	LEU	A	421	13.343	-83.675	292.240	1.00	8.00		N
15		ANISOU	3392	N	LEU	A	421	1283	795	960	45	-144	112	N
		ATOM	3393	CA	LEU	A	421	13.138	-85.073	291.947	1.00	7.16		C
		ANISOU	3393	CA	LEU	A	421	1086	739	895	-56	-87	117	C
		ATOM	3394	CB	LEU	A	421	13.867	-86.072	292.947	1.00	8.57		C
		ANISOU	3394	CB	LEU	A	421	1256	807	1193	185	-36	312	C
20		ATOM	3395	CG	LEU	A	421	15.372	-85.964	292.911	1.00	9.04		C
		ANISOU	3395	CG	LEU	A	421	1334	779	1322	-61	-57	380	C
		ATOM	3396	CD1	LEU	A	421	15.996	-86.872	293.972	1.00	10.30		C
		ANISOU	3396	CD1	LEU	A	421	1218	1329	1362	151	-213	367	C
		ATOM	3397	CD2	LEU	A	421	15.996	-86.213	291.592	1.00	9.30		C
25		ANISOU	3397	CD2	LEU	A	421	1361	653	1518	10	-91	179	C
		ATOM	3398	C	LEU	A	421	11.603	-85.314	292.104	1.00	7.97		C
		ANISOU	3398	C	LEU	A	421	1132	896	998	88	-173	367	C
		ATOM	3399	O	LEU	A	421	10.995	-84.837	293.007	1.00	9.43		O
		ANISOU	3399	O	LEU	A	421	1251	1222	1108	-125	42	156	O
30		ATOM	3400	N	GLN	A	422	11.033	-86.050	291.149	1.00	7.64		N
		ANISOU	3400	N	GLN	A	422	1161	840	901	-46	15	417	N
		ATOM	3401	CA	GLN	A	422	9.587	-86.351	291.095	1.00	6.77		C
		ANISOU	3401	CA	GLN	A	422	1163	655	751	97	-76	34	C
		ATOM	3402	CB	GLN	A	422	9.037	-85.791	289.769	1.00	8.15		C
35		ANISOU	3402	CB	GLN	A	422	1164	943	986	-42	-194	176	C
		ATOM	3403	CG	GLN	A	422	9.160	-84.249	289.740	1.00	10.34		C

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		ANISOU	3403	CG	GLN	A	422	1578	1137	1214	31	91	198	C
		ATOM	3404	CD	GLN	A	422	9.036	-83.738	288.343	1.00	13.18		C
		ANISOU	3404	CD	GLN	A	422	2033	1641	1332	-318	-298	310	C
		ATOM	3405	OE1	GLN	A	422	8.287	-84.222	287.527	1.00	13.16		O
5		ANISOU	3405	OE1	GLN	A	422	1955	1274	1770	-213	-463	437	O
		ATOM	3406	NE2	GLN	A	422	9.791	-82.670	288.098	1.00	15.35		N
		ANISOU	3406	NE2	GLN	A	422	2538	2000	1291	-428	-530	558	N
		ATOM	3407	C	GLN	A	422	9.317	-87.862	291.215	1.00	7.39		C
		ANISOU	3407	C	GLN	A	422	952	700	1154	-83	40	313	C
10		ATOM	3408	O	GLN	A	422	10.153	-88.652	290.781	1.00	8.63		O
		ANISOU	3408	O	GLN	A	422	1229	864	1186	-269	258	143	O
		ATOM	3409	N	PHE	A	423	8.119	-88.177	291.752	1.00	7.31		N
		ANISOU	3409	N	PHE	A	423	1060	609	1106	202	164	286	N
		ATOM	3410	CA	PHE	A	423	7.779	-89.570	292.054	1.00	6.86		C
15		ANISOU	3410	CA	PHE	A	423	1220	487	897	80	-62	187	C
		ATOM	3411	CB	PHE	A	423	8.005	-89.854	293.571	1.00	7.61		C
		ANISOU	3411	CB	PHE	A	423	1194	861	835	-83	54	108	C
		ATOM	3412	CG	PHE	A	423	9.457	-89.636	293.990	1.00	8.03		C
		ANISOU	3412	CG	PHE	A	423	1088	961	1001	-4	-56	5	C
20		ATOM	3413	CD1	PHE	A	423	10.378	-90.614	293.849	1.00	8.77		C
		ANISOU	3413	CD1	PHE	A	423	1284	899	1147	90	-9	263	C
		ATOM	3414	CE1	PHE	A	423	11.696	-90.396	294.159	1.00	8.71		C
		ANISOU	3414	CE1	PHE	A	423	1114	1023	1169	101	-54	63	C
		ATOM	3415	CZ	PHE	A	423	12.055	-89.149	294.610	1.00	9.66		C
25		ANISOU	3415	CZ	PHE	A	423	1107	1219	1343	-211	-86	75	C
		ATOM	3416	CE2	PHE	A	423	11.145	-88.171	294.720	1.00	10.51		C
		ANISOU	3416	CE2	PHE	A	423	1414	1087	1490	-136	98	308	C
		ATOM	3417	CD2	PHE	A	423	9.839	-88.404	294.413	1.00	8.32		C
		ANISOU	3417	CD2	PHE	A	423	1347	844	968	259	-135	64	C
30		ATOM	3418	C	PHE	A	423	6.305	-89.735	291.724	1.00	8.82		C
		ANISOU	3418	C	PHE	A	423	1260	1029	1060	-142	-35	-54	C
		ATOM	3419	O	PHE	A	423	5.455	-88.882	292.008	1.00	9.28		O
		ANISOU	3419	O	PHE	A	423	1222	1103	1199	-60	19	291	O
		ATOM	3420	N	GLY	A	424	6.050	-90.857	291.065	1.00	7.35		N
35		ANISOU	3420	N	GLY	A	424	1009	844	938	4	2	11	N
		ATOM	3421	CA	GLY	A	424	4.713	-91.260	290.583	1.00	9.16		C

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		ANISOU	3421	CA	GLY	A	424	1143	954	1382	204	-126	-73	C
		ATOM	3422	C	GLY	A	424	4.658	-92.759	290.449	1.00	8.73		C
		ANISOU	3422	C	GLY	A	424	1198	1053	1066	-98	276	21	C
		ATOM	3423	O	GLY	A	424	4.645	-93.247	289.329	1.00	9.14		O
5		ANISOU	3423	O	GLY	A	424	1329	1063	1081	-138	56	40	O
		ATOM	3424	N	PRO	A	425	4.596	-93.505	291.561	1.00	8.56		N
		ANISOU	3424	N	PRO	A	425	1249	804	1197	-143	57	216	N
		ATOM	3425	CA	PRO	A	425	4.726	-94.979	291.425	1.00	8.85		C
		ANISOU	3425	CA	PRO	A	425	1218	884	1259	41	148	-4	C
10		ATOM	3426	CB	PRO	A	425	4.921	-95.428	292.889	1.00	11.95		C
		ANISOU	3426	CB	PRO	A	425	1623	1707	1210	-219	-186	363	C
		ATOM	3427	CG	PRO	A	425	4.459	-94.304	293.671	1.00	13.01		C
		ANISOU	3427	CG	PRO	A	425	1910	1665	1367	153	282	794	C
		ATOM	3428	CD	PRO	A	425	4.623	-93.021	292.953	1.00	9.57		C
15		ANISOU	3428	CD	PRO	A	425	1394	1217	1023	-96	31	162	C
		ATOM	3429	C	PRO	A	425	3.532	-95.565	290.799	1.00	9.04		C
		ANISOU	3429	C	PRO	A	425	1272	929	1230	135	251	119	C
		ATOM	3430	O	PRO	A	425	2.448	-95.034	290.707	1.00	8.85		O
		ANISOU	3430	O	PRO	A	425	1234	849	1278	-96	44	223	O
20		ATOM	3431	N	THR	A	426	3.724	-96.850	290.413	1.00	7.77		N
		ANISOU	3431	N	THR	A	426	1075	753	1122	78	37	1	N
		ATOM	3432	CA	THR	A	426	2.607	-97.614	289.867	1.00	8.39		C
		ANISOU	3432	CA	THR	A	426	1332	793	1061	33	-14	72	C
		ATOM	3433	CB	THR	A	426	2.977	-98.961	289.312	1.00	9.80		C
25		ANISOU	3433	CB	THR	A	426	1353	1017	1352	-238	177	-219	C
		ATOM	3434	OG1	THR	A	426	3.639	-99.700	290.335	1.00	11.34		O
		ANISOU	3434	OG1	THR	A	426	1628	1321	1358	234	321	432	O
		ATOM	3435	CG2	THR	A	426	3.993	-98.789	288.173	1.00	10.52		C
		ANISOU	3435	CG2	THR	A	426	1465	1134	1396	147	173	278	C
30		ATOM	3436	C	THR	A	426	1.516	-97.829	290.938	1.00	8.34		C
		ANISOU	3436	C	THR	A	426	1127	895	1145	-55	43	-11	C
		ATOM	3437	O	THR	A	426	1.797	-97.780	292.175	1.00	8.86		O
		ANISOU	3437	O	THR	A	426	1334	892	1137	-207	67	318	O
		ATOM	3438	N	PHE	A	427	0.255	-97.948	290.498	1.00	7.95		N
35		ANISOU	3438	N	PHE	A	427	1166	812	1042	20	122	8	N
		ATOM	3439	CA	PHE	A	427	-0.860	-97.975	291.471	1.00	7.99		C

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		ANISOU	3439	CA	PHE	A	427	1180	784	1071	11	138	241	C
		ATOM	3440	CB	PHE	A	427	-2.184	-97.981	290.674	1.00	10.43		C
		ANISOU	3440	CB	PHE	A	427	1497	1226	1240	153	52	532	C
		ATOM	3441	CG	PHE	A	427	-2.381	-96.765	289.736	1.00	8.20		C
5		ANISOU	3441	CG	PHE	A	427	1127	786	1202	46	5	152	C
		ATOM	3442	CD1	PHE	A	427	-1.714	-95.538	289.953	1.00	8.93		C
		ANISOU	3442	CD1	PHE	A	427	1238	1054	1099	-168	-21	134	C
		ATOM	3443	CE1	PHE	A	427	-1.904	-94.517	289.040	1.00	9.39		C
		ANISOU	3443	CE1	PHE	A	427	1281	1101	1183	-56	-114	118	C
10		ATOM	3444	CZ	PHE	A	427	-2.783	-94.665	288.002	1.00	8.56		C
		ANISOU	3444	CZ	PHE	A	427	1162	1104	983	-153	197	302	C
		ATOM	3445	CE2	PHE	A	427	-3.461	-95.849	287.771	1.00	10.08		C
		ANISOU	3445	CE2	PHE	A	427	1409	1338	1083	-37	-73	284	C
		ATOM	3446	CD2	PHE	A	427	-3.231	-96.908	288.646	1.00	9.01		C
15		ANISOU	3446	CD2	PHE	A	427	1417	718	1287	-86	-50	114	C
		ATOM	3447	C	PHE	A	427	-0.775	-99.260	292.326	1.00	8.55		C
		ANISOU	3447	C	PHE	A	427	1365	580	1302	94	-63	145	C
		ATOM	3448	O	PHE	A	427	-1.314	-99.254	293.468	1.00	9.68		O
		ANISOU	3448	O	PHE	A	427	1475	878	1324	24	264	238	O
20		ATOM	3449	N	ASN	A	428	-0.210	-100.325	291.754	1.00	9.60		N
		ANISOU	3449	N	ASN	A	428	1342	1221	1082	43	158	219	N
		ATOM	3450	CA	ASN	A	428	0.026	-101.630	292.384	1.00	10.46		C
		ANISOU	3450	CA	ASN	A	428	1547	1106	1319	85	40	245	C
		ATOM	3451	CB	ASN	A	428	-0.300	-102.723	291.430	1.00	9.75		C
25		ANISOU	3451	CB	ASN	A	428	1086	1353	1265	-102	32	146	C
		ATOM	3452	CG	ASN	A	428	0.410	-102.608	290.092	1.00	11.13		C
		ANISOU	3452	CG	ASN	A	428	1441	1200	1585	-81	89	-45	C
		ATOM	3453	OD1	ASN	A	428	1.370	-101.846	289.943	1.00	13.80		O
		ANISOU	3453	OD1	ASN	A	428	1679	1712	1853	-513	307	224	O
30		ATOM	3454	ND2	ASN	A	428	-0.080	-103.332	289.102	1.00	11.92		N
		ANISOU	3454	ND2	ASN	A	428	1729	1285	1516	-68	150	36	N
		ATOM	3455	C	ASN	A	428	1.420	-101.741	292.961	1.00	11.62		C
		ANISOU	3455	C	ASN	A	428	1404	1429	1582	-200	35	256	C
		ATOM	3456	O	ASN	A	428	1.862	-102.850	293.272	1.00	13.55		O
35		ANISOU	3456	O	ASN	A	428	1768	1384	1995	191	19	122	O
		ATOM	3457	N	ALA	A	429	2.124	-100.611	293.162	1.00	9.73		N

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		ANISOU	3457	N	ALA	A	429	1370	1174	1154	-69	134	404	N
		ATOM	3458	CA	ALA	A	429	3.464	-100.640	293.802	1.00	9.12		C
		ANISOU	3458	CA	ALA	A	429	1349	914	1201	-41	130	282	C
		ATOM	3459	CB	ALA	A	429	4.090	-99.288	293.757	1.00	11.36		C
5		ANISOU	3459	CB	ALA	A	429	1577	1091	1646	-215	159	484	C
		ATOM	3460	C	ALA	A	429	3.349	-101.214	295.248	1.00	10.12		C
		ANISOU	3460	C	ALA	A	429	1569	1056	1217	67	107	426	C
		ATOM	3461	O	ALA	A	429	2.341	-101.077	295.925	1.00	11.54		O
		ANISOU	3461	O	ALA	A	429	1524	1257	1604	45	246	524	O
10		ATOM	3462	N	LYS	A	430	4.455	-101.810	295.683	1.00	12.89		N
		ANISOU	3462	N	LYS	A	430	1447	1922	1526	64	181	466	N
		ATOM	3463	CA	LYS	A	430	4.538	-102.400	297.030	1.00	12.71		C
		ANISOU	3463	CA	LYS	A	430	1585	1730	1512	-161	-75	661	C
		ATOM	3464	CB	LYS	A	430	5.491	-103.622	296.946	1.00	13.83		C
15		ANISOU	3464	CB	LYS	A	430	2263	1190	1799	-36	140	974	C
		ATOM	3465	CG	LYS	A	430	5.041	-104.758	296.057	1.00	19.72		C
		ANISOU	3465	CG	LYS	A	430	2478	2100	2911	-271	-47	532	C
		ATOM	3466	CD	LYS	A	430	6.109	-105.947	296.019	1.00	27.82		C
		ANISOU	3466	CD	LYS	A	430	4105	1413	5051	240	699	574	C
20		ATOM	3467	CE	LYS	A	430	5.923	-106.958	294.875	1.00	43.04		C
		ANISOU	3467	CE	LYS	A	430	5818	6132	4403	-1325	801	-405	C
		ATOM	3468	NZ	LYS	A	430	4.753	-107.862	295.122	1.00	64.61		N
		ANISOU	3468	NZ	LYS	A	430	7721	8204	8622	-2592	839	-583	N
		ATOM	3469	C	LYS	A	430	5.127	-101.426	297.976	1.00	11.07		C
25		ANISOU	3469	C	LYS	A	430	1625	1024	1554	234	-96	390	C
		ATOM	3470	O	LYS	A	430	6.183	-100.733	297.683	1.00	12.32		O
		ANISOU	3470	O	LYS	A	430	1626	1441	1613	-100	67	570	O
		ATOM	3471	N	PRO	A	431	4.521	-101.234	299.163	1.00	12.23		N
		ANISOU	3471	N	PRO	A	431	1600	1317	1730	35	216	498	N
30		ATOM	3472	CA	PRO	A	431	5.124	-100.421	300.186	1.00	12.79		C
		ANISOU	3472	CA	PRO	A	431	1701	1523	1632	-288	187	623	C
		ATOM	3473	CB	PRO	A	431	4.209	-100.742	301.414	1.00	14.74		C
		ANISOU	3473	CB	PRO	A	431	2090	1844	1664	-19	458	490	C
		ATOM	3474	CG	PRO	A	431	2.901	-101.009	300.795	1.00	17.23		C
35		ANISOU	3474	CG	PRO	A	431	2306	2301	1937	299	159	366	C
		ATOM	3475	CD	PRO	A	431	3.212	-101.804	299.559	1.00	12.70		C

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		ANISOU	3475	CD	PRO	A	431	1655	1349	1820	-11	233	569	C
		ATOM	3476	C	PRO	A	431	6.613-100.663	300.414	1.00	12.34			C
		ANISOU	3476	C	PRO	A	431	1813	1706	1168	-282	53	73	C
		ATOM	3477	O	PRO	A	431	7.374	-99.702	300.599	1.00	12.59		O
5		ANISOU	3477	O	PRO	A	431	2113	1296	1372	-427	-113	501	O
		ATOM	3478	N	AGLU	A	432	7.032-101.922	300.435	0.50	13.82			N
		ANISOU	3478	N	AGLU	A	432	1766	1918	1563	4	163	327	N
		ATOM	3479	N	BGLU	A	432	7.017-101.930	300.446	0.50	14.00			N
		ANISOU	3479	N	BGLU	A	432	1775	1924	1618	34	124	335	N
10		ATOM	3480	CA	AGLU	A	432	8.428-102.248	300.739	0.50	13.99			C
		ANISOU	3480	CA	AGLU	A	432	1838	1676	1800	180	325	540	C
		ATOM	3481	CA	BGLU	A	432	8.407-102.275	300.745	0.50	13.74			C
		ANISOU	3481	CA	BGLU	A	432	1861	1542	1815	266	285	628	C
		ATOM	3482	CB	AGLU	A	432	8.614-103.772	300.939	0.50	18.72			C
15		ANISOU	3482	CB	AGLU	A	432	2805	1518	2790	75	166	153	C
		ATOM	3483	CB	BGLU	A	432	8.599-103.815	300.933	0.50	18.25			C
		ANISOU	3483	CB	BGLU	A	432	2267	1720	2943	891	-370	971	C
		ATOM	3484	CG	AGLU	A	432	9.877-104.164	301.748	0.50	28.06			C
		ANISOU	3484	CG	AGLU	A	432	3414	3235	4010	793	188	1043	C
20		ATOM	3485	CG	BGLU	A	432	8.252-104.629	299.681	0.50	25.40			C
		ANISOU	3485	CG	BGLU	A	432	3234	2793	3623	951	-296	538	C
		ATOM	3486	CD	AGLU	A	432	9.980-105.656	302.049	0.50	30.83			C
		ANISOU	3486	CD	AGLU	A	432	3934	3164	4616	935	347	501	C
		ATOM	3487	CD	BGLU	A	432	8.585-106.139	299.649	0.50	24.69			C
25		ANISOU	3487	CD	BGLU	A	432	2562	2350	4466	-326	-318	1752	C
		ATOM	3488	OE1AGLU	A	432	8.929-106.342	301.995	0.50	36.32				O
		ANISOU	3488	OE1AGLU	A	432	5019	2799	5979	197	49	1210		O
		ATOM	3489	OE1BGLU	A	432	9.719-106.582	299.996	0.50	19.06				O
		ANISOU	3489	OE1BGLU	A	432	2806	990	3446	1026	614	469		O
30		ATOM	3490	OE2AGLU	A	432	11.106-106.126	302.385	0.50	30.61				O
		ANISOU	3490	OE2AGLU	A	432	3425	4138	4065	554	1069	1450		O
		ATOM	3491	OE2BGLU	A	432	7.704-106.897	299.186	0.50	44.64				O
		ANISOU	3491	OE2BGLU	A	432	6220	4197	6543	-1610	-2510	471		O
		ATOM	3492	C	AGLU	A	432	9.355-101.751	299.627	0.50	11.77			C
35		ANISOU	3492	C	AGLU	A	432	1785	987	1699	0	-111	743	C
		ATOM	3493	C	BGLU	A	432	9.330-101.751	299.641	0.50	11.75			C

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	ANISOU	3493	C	BGLU	A	432	1801	948	1716	43	-134	746	C
	ATOM	3494	O	AGLU	A	432	10.515	-101.360	299.860	0.50	11.28		O
	ANISOU	3494	O	AGLU	A	432	1839	641	1806	55	-80	510	O
	ATOM	3495	O	BGLU	A	432	10.465	-101.332	299.904	0.50	11.44		O
5	ANISOU	3495	O	BGLU	A	432	1868	580	1896	48	-107	565	O
	ATOM	3496	N	ASP	A	433	8.826	-101.756	298.408	1.00	12.28		N
	ANISOU	3496	N	ASP	A	433	1460	1509	1696	-35	111	302	N
	ATOM	3497	CA	ASP	A	433	9.594	-101.174	297.295	1.00	10.90		C
	ANISOU	3497	CA	ASP	A	433	1401	1367	1372	243	109	187	C
10	ATOM	3498	CB	ASP	A	433	9.052	-101.549	295.970	1.00	11.44		C
	ANISOU	3498	CB	ASP	A	433	1501	1363	1480	-159	-3	413	C
	ATOM	3499	CG	ASP	A	433	9.227	-103.044	295.541	1.00	15.01		C
	ANISOU	3499	CG	ASP	A	433	1847	1877	1978	-79	-75	126	C
	ATOM	3500	OD1	ASP	A	433	10.152	-103.715	296.030	1.00	16.84		O
15	ANISOU	3500	OD1	ASP	A	433	2393	1528	2478	632	-283	-111	O
	ATOM	3501	OD2	ASP	A	433	8.456	-103.475	294.655	1.00	13.48		O
	ANISOU	3501	OD2	ASP	A	433	1975	1366	1778	98	120	257	O
	ATOM	3502	C	ASP	A	433	9.711	-99.609	297.413	1.00	10.68		C
	ANISOU	3502	C	ASP	A	433	1446	1270	1341	23	-104	440	C
20	ATOM	3503	O	ASP	A	433	10.800	-98.993	297.135	1.00	12.30		O
	ANISOU	3503	O	ASP	A	433	1661	1452	1561	-214	114	422	O
	ATOM	3504	N	LEU	A	434	8.684	-98.989	297.935	1.00	11.64		N
	ANISOU	3504	N	LEU	A	434	1532	1373	1516	-120	183	563	N
	ATOM	3505	CA	LEU	A	434	8.815	-97.557	298.184	1.00	10.98		C
25	ANISOU	3505	CA	LEU	A	434	1659	1043	1470	264	-130	422	C
	ATOM	3506	CB	LEU	A	434	7.438	-96.889	298.510	1.00	11.19		C
	ANISOU	3506	CB	LEU	A	434	1695	1105	1451	217	-157	349	C
	ATOM	3507	CG	LEU	A	434	6.318	-97.072	297.510	1.00	13.22		C
	ANISOU	3507	CG	LEU	A	434	1534	1874	1613	-127	108	435	C
30	ATOM	3508	CD1	LEU	A	434	5.103	-96.336	298.016	1.00	12.47		C
	ANISOU	3508	CD1	LEU	A	434	1658	1100	1980	-64	-55	593	C
	ATOM	3509	CD2	LEU	A	434	6.783	-96.545	296.120	1.00	14.57		C
	ANISOU	3509	CD2	LEU	A	434	1838	2161	1535	-36	-202	663	C
	ATOM	3510	C	LEU	A	434	9.811	-97.256	299.294	1.00	12.29		C
35	ANISOU	3510	C	LEU	A	434	1538	1518	1613	-81	-231	257	C
	ATOM	3511	O	LEU	A	434	10.528	-96.230	299.274	1.00	11.18		O

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	ANISOU	3511	O	LEU	A	434	1614	1166	1469	-59	121	345	O
	ATOM	3512	N	ASP	A	435	9.835	-98.124	300.334	1.00	12.25		N
	ANISOU	3512	N	ASP	A	435	1681	1226	1746	77	-97	433	N
	ATOM	3513	CA	ASP	A	435	10.794	-97.940	301.394	1.00	11.81		C
5	ANISOU	3513	CA	ASP	A	435	1776	1099	1610	-173	-173	399	C
	ATOM	3514	CB	ASP	A	435	10.572	-98.980	302.514	1.00	12.08		C
	ANISOU	3514	CB	ASP	A	435	1649	1497	1443	-35	-81	494	C
	ATOM	3515	CG	ASP	A	435	9.243	-98.848	303.181	1.00	14.12		C
	ANISOU	3515	CG	ASP	A	435	2208	1538	1618	-200	395	291	C
10	ATOM	3516	OD1	ASP	A	435	8.650	-97.759	303.261	1.00	17.35		O
	ANISOU	3516	OD1	ASP	A	435	1973	2670	1948	287	165	233	O
	ATOM	3517	OD2	ASP	A	435	8.876	-99.908	303.770	1.00	19.10		O
	ANISOU	3517	OD2	ASP	A	435	2472	2538	2246	-505	133	1163	O
	ATOM	3518	C	ASP	A	435	12.207	-97.984	300.863	1.00	10.27		C
15	ANISOU	3518	C	ASP	A	435	1894	886	1120	185	-160	341	C
	ATOM	3519	O	ASP	A	435	13.071	-97.175	301.222	1.00	12.41		O
	ANISOU	3519	O	ASP	A	435	1734	1629	1352	-90	-129	646	O
	ATOM	3520	N	ARG	A	436	12.461	-99.023	300.032	1.00	10.03		N
	ANISOU	3520	N	ARG	A	436	1537	838	1434	-55	-52	334	N
20	ATOM	3521	CA	ARG	A	436	13.794	-99.189	299.443	1.00	10.48		C
	ANISOU	3521	CA	ARG	A	436	1637	874	1470	109	54	415	C
	ATOM	3522	CB	ARG	A	436	13.966	-100.490	298.664	1.00	13.56		C
	ANISOU	3522	CB	ARG	A	436	2087	1239	1823	318	180	349	C
	ATOM	3523	CG	ARG	A	436	14.050	-101.718	299.585	1.00	16.96		C
25	ANISOU	3523	CG	ARG	A	436	2797	1459	2186	-73	143	570	C
	ATOM	3524	CD	ARG	A	436	14.324	-102.947	298.784	1.00	22.46		C
	ANISOU	3524	CD	ARG	A	436	3168	1966	3398	31	83	238	C
	ATOM	3525	NE	ARG	A	436	13.054	-103.454	298.326	1.00	26.54		N
	ANISOU	3525	NE	ARG	A	436	4220	2076	3786	383	-480	1216	N
30	ATOM	3526	CZ	ARG	A	436	12.266	-104.271	299.027	1.00	32.55		C
	ANISOU	3526	CZ	ARG	A	436	4623	3943	3801	-1271	-64	549	C
	ATOM	3527	NH1	ARG	A	436	12.576	-104.691	300.280	1.00	29.86		N
	ANISOU	3527	NH1	ARG	A	436	4217	2778	4350	-446	-1205	654	N
	ATOM	3528	NH2	ARG	A	436	11.134	-104.629	298.456	1.00	28.01		N
35	ANISOU	3528	NH2	ARG	A	436	3923	2886	3833	474	-191	630	N
	ATOM	3529	C	ARG	A	436	14.177	-97.936	298.562	1.00	9.74		C

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		ANISOU	3529	C	ARG	A	436	1371	994	1334	-11	-131	407	C
		ATOM	3530	O	ARG	A	436	15.317	-97.483	298.556	1.00	11.93		O
		ANISOU	3530	O	ARG	A	436	1609	1216	1706	51	43	490	O
		ATOM	3531	N	LEU	A	437	13.191	-97.533	297.776	1.00	9.81		N
5		ANISOU	3531	N	LEU	A	437	1433	826	1466	-226	-85	490	N
		ATOM	3532	CA	LEU	A	437	13.366	-96.334	296.901	1.00	8.69		C
		ANISOU	3532	CA	LEU	A	437	1200	814	1284	-205	108	349	C
		ATOM	3533	CB	LEU	A	437	12.069	-96.141	296.109	1.00	9.77		C
		ANISOU	3533	CB	LEU	A	437	1495	746	1469	6	20	471	C
10		ATOM	3534	CG	LEU	A	437	11.958	-94.780	295.384	1.00	8.95		C
		ANISOU	3534	CG	LEU	A	437	1485	556	1357	98	29	240	C
		ATOM	3535	CD1	LEU	A	437	12.925	-94.794	294.158	1.00	11.99		C
		ANISOU	3535	CD1	LEU	A	437	1606	1452	1495	-40	66	413	C
		ATOM	3536	CD2	LEU	A	437	10.535	-94.595	294.943	1.00	10.61		C
15		ANISOU	3536	CD2	LEU	A	437	1541	1261	1228	211	70	380	C
		ATOM	3537	C	LEU	A	437	13.752	-95.086	297.696	1.00	8.50		C
		ANISOU	3537	C	LEU	A	437	1281	846	1100	345	-175	352	C
		ATOM	3538	O	LEU	A	437	14.777	-94.486	297.414	1.00	10.85		O
		ANISOU	3538	O	LEU	A	437	1329	1295	1496	145	-57	383	O
20		ATOM	3539	N	PHE	A	438	13.010	-94.739	298.725	1.00	9.31		N
		ANISOU	3539	N	PHE	A	438	1340	1047	1148	84	53	393	N
		ATOM	3540	CA	PHE	A	438	13.256	-93.522	299.401	1.00	10.36		C
		ANISOU	3540	CA	PHE	A	438	1476	1195	1266	-117	-18	148	C
		ATOM	3541	CB	PHE	A	438	12.014	-93.042	300.161	1.00	9.96		C
25		ANISOU	3541	CB	PHE	A	438	1480	1060	1244	-39	26	110	C
		ATOM	3542	CG	PHE	A	438	10.924	-92.547	299.256	1.00	11.35		C
		ANISOU	3542	CG	PHE	A	438	1300	1491	1522	91	19	400	C
		ATOM	3543	CD1	PHE	A	438	11.211	-91.507	298.384	1.00	11.28		C
		ANISOU	3543	CD1	PHE	A	438	1311	1475	1500	-97	-28	351	C
30		ATOM	3544	CE1	PHE	A	438	10.256	-91.051	297.500	1.00	11.35		C
		ANISOU	3544	CE1	PHE	A	438	1451	1734	1127	81	203	240	C
		ATOM	3545	CZ	PHE	A	438	9.018	-91.568	297.466	1.00	11.54		C
		ANISOU	3545	CZ	PHE	A	438	1630	1033	1722	88	-315	260	C
		ATOM	3546	CE2	PHE	A	438	8.710	-92.674	298.268	1.00	12.87		C
35		ANISOU	3546	CE2	PHE	A	438	1499	1501	1889	-55	-141	569	C
		ATOM	3547	CD2	PHE	A	438	9.694	-93.149	299.165	1.00	10.30		C

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		ANISOU	3547	CD2	PHE	A	438	1541	1102	1271	185	-135	280	C
		ATOM	3548	C	PHE	A	438	14.495	-93.607	300.271	1.00	9.12		C
		ANISOU	3548	C	PHE	A	438	1207	1007	1251	155	-37	71	C
		ATOM	3549	O	PHE	A	438	15.182	-92.613	300.423	1.00	10.23		O
5		ANISOU	3549	O	PHE	A	438	1612	1125	1151	-143	-46	152	O
		ATOM	3550	N	ASP	A	439	14.836	-94.844	300.750	1.00	10.25		N
		ANISOU	3550	N	ASP	A	439	1446	1045	1403	86	-29	241	N
		ATOM	3551	CA	ASP	A	439	16.103	-94.933	301.480	1.00	12.12		C
		ANISOU	3551	CA	ASP	A	439	1720	1355	1528	288	-163	435	C
10		ATOM	3552	CB	ASP	A	439	16.315	-96.352	302.005	1.00	11.68		C
		ANISOU	3552	CB	ASP	A	439	1449	1313	1676	223	-342	433	C
		ATOM	3553	CG	ASP	A	439	15.388	-96.703	303.219	1.00	17.10		C
		ANISOU	3553	CG	ASP	A	439	2249	2430	1816	170	80	400	C
		ATOM	3554	OD1	ASP	A	439	14.766	-95.776	303.787	1.00	16.75		O
15		ANISOU	3554	OD1	ASP	A	439	2489	2401	1473	324	65	501	O
		ATOM	3555	OD2	ASP	A	439	15.383	-97.903	303.586	1.00	23.09		O
		ANISOU	3555	OD2	ASP	A	439	3254	3244	2273	-171	-153	1269	O
		ATOM	3556	C	ASP	A	439	17.261	-94.586	300.510	1.00	12.39		C
		ANISOU	3556	C	ASP	A	439	1652	1736	1319	241	-139	63	C
20		ATOM	3557	O	ASP	A	439	18.211	-93.907	300.833	1.00	12.26		O
		ANISOU	3557	O	ASP	A	439	1490	1612	1554	124	12	591	O
		ATOM	3558	N	ALA	A	440	17.159	-95.182	299.311	1.00	9.01		N
		ANISOU	3558	N	ALA	A	440	1402	602	1418	9	-43	404	N
		ATOM	3559	CA	ALA	A	440	18.213	-94.951	298.301	1.00	11.24		C
25		ANISOU	3559	CA	ALA	A	440	1295	1489	1486	47	-11	53	C
		ATOM	3560	CB	ALA	A	440	17.967	-95.782	297.088	1.00	10.98		C
		ANISOU	3560	CB	ALA	A	440	1566	1059	1543	279	152	303	C
		ATOM	3561	C	ALA	A	440	18.238	-93.447	297.844	1.00	11.03		C
		ANISOU	3561	C	ALA	A	440	1305	1636	1248	138	-155	493	C
30		ATOM	3562	O	ALA	A	440	19.294	-92.888	297.629	1.00	11.29		O
		ANISOU	3562	O	ALA	A	440	1360	1428	1499	-34	-197	202	O
		ATOM	3563	N	VAL	A	441	17.064	-92.794	297.758	1.00	8.92		N
		ANISOU	3563	N	VAL	A	441	1340	869	1179	62	33	205	N
		ATOM	3564	CA	VAL	A	441	17.000	-91.361	297.444	1.00	8.86		C
35		ANISOU	3564	CA	VAL	A	441	1339	779	1249	38	112	266	C
		ATOM	3565	CB	VAL	A	441	15.568	-90.934	297.215	1.00	9.37		C

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		ANISOU	3565	CB	VAL	A	441	1276	1102	1178	-95	149	230	C
		ATOM	3566	CG1	VAL	A	441	15.462	-89.378	297.152	1.00	10.58		C
		ANISOU	3566	CG1	VAL	A	441	1524	1325	1169	84	-18	198	C
		ATOM	3567	CG2	VAL	A	441	14.935	-91.623	295.963	1.00	10.69		C
5		ANISOU	3567	CG2	VAL	A	441	1373	1286	1402	94	25	221	C
		ATOM	3568	C	VAL	A	441	17.735	-90.517	298.492	1.00	10.62		C
		ANISOU	3568	C	VAL	A	441	1204	1548	1282	-320	90	-7	C
		ATOM	3569	O	VAL	A	441	18.537	-89.647	298.167	1.00	9.71		O
		ANISOU	3569	O	VAL	A	441	1474	1069	1145	-155	-151	381	O
10		ATOM	3570	N	GLY	A	442	17.510	-90.816	299.768	1.00	9.30		N
		ANISOU	3570	N	GLY	A	442	1461	849	1224	173	-135	237	N
		ATOM	3571	CA	GLY	A	442	18.200	-90.112	300.835	1.00	10.83		C
		ANISOU	3571	CA	GLY	A	442	1459	1597	1059	-65	-226	362	C
		ATOM	3572	C	GLY	A	442	19.705	-90.289	300.765	1.00	10.93		C
15		ANISOU	3572	C	GLY	A	442	1439	1487	1226	46	-384	211	C
		ATOM	3573	O	GLY	A	442	20.427	-89.306	300.920	1.00	11.75		O
		ANISOU	3573	O	GLY	A	442	1523	1556	1385	-258	-172	255	O
		ATOM	3574	N	AGLU	A	443	20.164	-91.522	300.562	0.50	11.60		N
		ANISOU	3574	N	AGLU	A	443	1422	1630	1353	-125	-22	694	N
20		ATOM	3575	N	BGLU	A	443	20.139	-91.525	300.571	0.50	11.69		N
		ANISOU	3575	N	BGLU	A	443	1427	1631	1382	-113	-54	692	N
		ATOM	3576	CA	AGLU	A	443	21.610	-91.777	300.433	0.50	12.00		C
		ANISOU	3576	CA	AGLU	A	443	1383	1739	1437	269	-256	460	C
		ATOM	3577	CA	BGLU	A	443	21.558	-91.835	300.441	0.50	12.30		C
25		ANISOU	3577	CA	BGLU	A	443	1423	1812	1435	281	-203	407	C
		ATOM	3578	CB	AGLU	A	443	21.948	-93.245	300.274	0.50	14.02		C
		ANISOU	3578	CB	AGLU	A	443	1607	1758	1962	182	-158	596	C
		ATOM	3579	CB	BGLU	A	443	21.754	-93.349	300.347	0.50	14.15		C
		ANISOU	3579	CB	BGLU	A	443	1424	1891	2060	104	-268	713	C
30		ATOM	3580	CG	AGLU	A	443	23.449	-93.533	300.493	0.50	19.25		C
		ANISOU	3580	CG	AGLU	A	443	1693	2733	2887	311	-348	555	C
		ATOM	3581	CG	BGLU	A	443	21.490	-94.033	301.712	0.50	17.94		C
		ANISOU	3581	CG	BGLU	A	443	2388	2521	1908	-291	481	430	C
		ATOM	3582	CD	AGLU	A	443	23.795	-94.994	300.268	0.50	27.33		C
35		ANISOU	3582	CD	AGLU	A	443	3161	2802	4419	433	1274	694	C
		ATOM	3583	CD	BGLU	A	443	21.350	-95.543	301.712	0.50	30.83		C

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		ANISOU	3583	CD	BGLU	A	443	5468	2755	3490	-54	-513	-30	C
		ATOM	3584	OE1AGLU	A	443	23.115	-95.876	300.809	0.50	30.63			O
		ANISOU	3584	OE1AGLU	A	443	3080	3644	4913	484	163	2074		O
		ATOM	3585	OE1BGLU	A	443	21.328	-96.182	300.624	0.50	30.79			O
5		ANISOU	3585	OE1BGLU	A	443	7051	375	4270	-615	-608	568		O
		ATOM	3586	OE2AGLU	A	443	24.733	-95.257	299.528	0.50	24.01			O
		ANISOU	3586	OE2AGLU	A	443	3131	1707	4283	1111	814	245		O
		ATOM	3587	OE2BGLU	A	443	21.238	-96.089	302.853	0.50	37.32			O
		ANISOU	3587	OE2BGLU	A	443	7851	1773	4556	-1220	726	160		O
10		ATOM	3588	C	AGLU	A	443	22.201	-91.056	299.243	0.50	12.92		C
		ANISOU	3588	C	AGLU	A	443	1376	2030	1500	-109	-196	326	C
		ATOM	3589	C	BGLU	A	443	22.179	-91.082	299.259	0.50	12.83		C
		ANISOU	3589	C	BGLU	A	443	1360	1993	1520	-109	-210	287	C
		ATOM	3590	O	AGLU	A	443	23.266	-90.443	299.332	0.50	13.18		O
15		ANISOU	3590	O	AGLU	A	443	1489	1590	1929	-194	-241	732	O
		ATOM	3591	O	BGLU	A	443	23.203	-90.406	299.401	0.50	12.94		O
		ANISOU	3591	O	BGLU	A	443	1534	1442	1937	-202	-253	733	O
		ATOM	3592	N	ALA	A	444	21.516	-91.111	298.116	1.00	11.11		N
		ANISOU	3592	N	ALA	A	444	1469	1331	1420	-151	-86	349	N
20		ATOM	3593	CA	ALA	A	444	22.030	-90.368	296.966	1.00	10.29		C
		ANISOU	3593	CA	ALA	A	444	1315	1282	1310	-93	-12	299	C
		ATOM	3594	CB	ALA	A	444	21.146	-90.681	295.765	1.00	10.64		C
		ANISOU	3594	CB	ALA	A	444	1592	1266	1181	158	119	161	C
		ATOM	3595	C	ALA	A	444	22.111	-88.835	297.192	1.00	10.57		C
25		ANISOU	3595	C	ALA	A	444	1516	1159	1341	-39	-139	341	C
		ATOM	3596	O	ALA	A	444	23.134	-88.217	296.919	1.00	12.41		O
		ANISOU	3596	O	ALA	A	444	1532	1665	1516	205	56	445	O
		ATOM	3597	N	LEU	A	445	21.035	-88.286	297.759	1.00	9.02		N
		ANISOU	3597	N	LEU	A	445	1303	892	1232	-156	40	394	N
30		ATOM	3598	CA	LEU	A	445	21.037	-86.846	297.998	1.00	8.76		C
		ANISOU	3598	CA	LEU	A	445	1287	857	1182	18	-232	120	C
		ATOM	3599	CB	LEU	A	445	19.689	-86.359	298.485	1.00	9.93		C
		ANISOU	3599	CB	LEU	A	445	1357	1167	1247	-83	-85	-148	C
		ATOM	3600	CG	LEU	A	445	18.604	-86.312	297.428	1.00	11.76		C
35		ANISOU	3600	CG	LEU	A	445	1583	1394	1491	-50	-228	117	C
		ATOM	3601	CD1	LEU	A	445	17.277	-86.103	298.103	1.00	14.40		C

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		ANISOU	3601	CD1	LEU	A	445	1447	2025	1998	43	-349	-77	C
		ATOM	3602	CD2	LEU	A	445	18.956	-85.194	296.445	1.00	15.09		C
		ANISOU	3602	CD2	LEU	A	445	1729	1768	2236	101	-360	547	C
		ATOM	3603	C	LEU	A	445	22.165	-86.451	298.990	1.00	9.66		C
5		ANISOU	3603	C	LEU	A	445	1461	1100	1110	-151	-410	349	C
		ATOM	3604	O	LEU	A	445	22.772	-85.362	298.862	1.00	10.41		O
		ANISOU	3604	O	LEU	A	445	1413	1032	1509	-219	-154	340	O
		ATOM	3605	N	ASN	A	446	22.385	-87.269	300.040	1.00	11.34		N
		ANISOU	3605	N	ASN	A	446	1581	1588	1139	0	-186	558	N
10		ATOM	3606	CA	ASN	A	446	23.350	-86.936	300.993	1.00	10.46		C
		ANISOU	3606	CA	ASN	A	446	1420	1240	1312	-287	-87	35	C
		ATOM	3607	CB	ASN	A	446	23.202	-87.891	302.231	1.00	11.46		C
		ANISOU	3607	CB	ASN	A	446	1533	1465	1355	-447	-383	202	C
		ATOM	3608	CG	ASN	A	446	22.068	-87.480	303.186	1.00	10.29		C
15		ANISOU	3608	CG	ASN	A	446	1451	1256	1202	-99	-250	86	C
		ATOM	3609	OD1	ASN	A	446	21.605	-86.330	303.288	1.00	10.93		O
		ANISOU	3609	OD1	ASN	A	446	1836	1119	1195	164	-109	121	O
		ATOM	3610	ND2	ASN	A	446	21.657	-88.530	303.992	1.00	14.04		N
		ANISOU	3610	ND2	ASN	A	446	1832	1820	1681	-55	-145	682	N
20		ATOM	3611	C	ASN	A	446	24.784	-86.936	300.472	1.00	10.78		C
		ANISOU	3611	C	ASN	A	446	1702	1127	1264	-3	7	321	C
		ATOM	3612	O	ASN	A	446	25.690	-86.436	301.098	1.00	13.36		O
		ANISOU	3612	O	ASN	A	446	1564	1824	1687	-360	-386	392	O
		ATOM	3613	N	GLY	A	447	24.995	-87.554	299.335	1.00	9.52		N
25		ANISOU	3613	N	GLY	A	447	1365	1074	1176	-13	-73	400	N
		ATOM	3614	CA	GLY	A	447	26.288	-87.575	298.714	1.00	12.11		C
		ANISOU	3614	CA	GLY	A	447	1661	1075	1863	-72	-165	507	C
		ATOM	3615	C	GLY	A	447	26.498	-86.559	297.554	1.00	13.36		C
		ANISOU	3615	C	GLY	A	447	1805	1784	1484	104	18	510	C
30		ATOM	3616	O	GLY	A	447	27.572	-86.572	296.916	1.00	15.58		O
		ANISOU	3616	O	GLY	A	447	1695	2225	1998	176	67	1089	O
		ATOM	3617	N	VAL	A	448	25.499	-85.807	297.242	1.00	11.86		N
		ANISOU	3617	N	VAL	A	448	1493	1535	1477	-223	-249	503	N
		ATOM	3618	CA	VAL	A	448	25.672	-84.765	296.198	1.00	11.54		C
35		ANISOU	3618	CA	VAL	A	448	1259	1630	1494	4	-69	387	C
		ATOM	3619	CB	VAL	A	448	24.286	-84.519	295.503	1.00	11.52		C

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		ANISOU	3619	CB	VAL	A	448	1327	1327	1720	65	-141	542	C
		ATOM	3620	CG1	VAL	A	448	24.311	-83.263	294.570	1.00	10.41		C
		ANISOU	3620	CG1	VAL	A	448	1504	1158	1293	181	73	308	C
		ATOM	3621	CG2	VAL	A	448	23.812	-85.781	294.770	1.00	15.01		C
5		ANISOU	3621	CG2	VAL	A	448	2001	1899	1803	-268	-257	165	C
		ATOM	3622	C	VAL	A	448	26.247	-83.491	296.751	1.00	11.38		C
		ANISOU	3622	C	VAL	A	448	1223	1465	1633	90	-114	419	C
		ATOM	3623	O	VAL	A	448	25.780	-82.938	297.771	1.00	10.89		O
		ANISOU	3623	O	VAL	A	448	1576	1217	1343	15	-145	342	O
10		ATOM	3624	N	ALA	A	449	27.278	-82.955	296.090	1.00	11.65		N
		ANISOU	3624	N	ALA	A	449	1412	1580	1432	316	85	568	N
		ATOM	3625	CA	ALA	A	449	27.834	-81.649	296.529	1.00	13.52		C
		ANISOU	3625	CA	ALA	A	449	1812	1735	1590	0	37	426	C
		ATOM	3626	CB	ALA	A	449	29.131	-81.356	295.696	1.00	12.63		C
15		ANISOU	3626	CB	ALA	A	449	1615	1268	1913	2	-8	245	C
		ATOM	3627	C	ALA	A	449	26.947	-80.425	296.448	1.00	12.08		C
		ANISOU	3627	C	ALA	A	449	1564	1496	1529	-190	-35	93	C
		ATOM	3628	O	ALA	A	449	26.053	-80.445	295.578	1.00	11.80		O
		ANISOU	3628	O	ALA	A	449	1642	1311	1529	-72	-149	674	O
20		ATOM	3629	OXT	ALA	A	449	27.140	-79.503	297.187	1.00	15.20		O
		ANISOU	3629	OXT	ALA	A	449	1894	1802	2079	-174	-661	185	O
		HETATM	3630	MG	MG	B	1	-0.000	-60.998	283.818	0.50	8.31		MG
		ANISOU	3630	MG	MG	B	1	1302	843	1013	84	0	0	MG
		HETATM	3631	MG	MG	B	2	-21.186	-89.294	282.139	1.00	23.35		MG
25		ANISOU	3631	MG	MG	B	2	2845	2941	3085	51	364	156	MG
		HETATM	3632	O3P	PLP	X	460	3.543	-85.068	276.384	1.00	15.67		O
		ANISOU	3632	O3P	PLP	X	460	1884	2058	2011	159	-147	-198	O
		HETATM	3633	P	PLP	X	460	2.124	-84.879	275.832	1.00	15.93		P
		ANISOU	3633	P	PLP	X	460	2018	1913	2122	332	-285	-261	P
30		HETATM	3634	O1P	PLP	X	460	2.279	-84.080	274.727	1.00	12.35		O
		ANISOU	3634	O1P	PLP	X	460	2421	1302	967	-777	842	-68	O
		HETATM	3635	O2P	PLP	X	460	1.446	-86.214	275.583	1.00	14.53		O
		ANISOU	3635	O2P	PLP	X	460	2048	1625	1847	-621	120	12	O
		HETATM	3636	O4P	PLP	X	460	1.319	-84.260	277.182	1.00	14.12		O
35		ANISOU	3636	O4P	PLP	X	460	2067	1234	2061	226	325	-20	O
		HETATM	3637	C5A	PLP	X	460	1.684	-82.962	277.513	1.00	16.67		C

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	ANISOU 3637	C5A	PLP	X	460	1675	2703	1955	134	472	-816	C
	HETATM 3638	C5	PLP	X	460	1.094	-82.567	278.819	1.00	16.17		C
	ANISOU 3638	C5	PLP	X	460	2233	1960	1948	356	330	-194	C
	HETATM 3639	C6	PLP	X	460	0.045	-81.665	278.841	1.00	13.69		C
5	ANISOU 3639	C6	PLP	X	460	1593	1219	2389	191	675	-215	C
	HETATM 3640	N1	PLP	X	460	-0.441	-81.360	280.312	1.00	14.95		N
	ANISOU 3640	N1	PLP	X	460	1664	1998	2019	-215	-76	333	N
	HETATM 3641	C4	PLP	X	460	1.705	-83.213	280.007	1.00	19.27		C
	ANISOU 3641	C4	PLP	X	460	2636	2562	2122	117	393	-313	C
10	HETATM 3642	C4A	PLP	X	460	2.819	-84.118	279.926	1.00	18.35		C
	ANISOU 3642	C4A	PLP	X	460	2493	1906	2573	527	-268	180	C
	HETATM 3643	O4A	PLP	X	460	3.650	-84.108	280.738	1.00	32.58		O
	ANISOU 3643	O4A	PLP	X	460	5590	3758	3028	535	-151	418	O
	HETATM 3644	C3	PLP	X	460	1.158	-82.818	281.316	1.00	18.26		C
15	ANISOU 3644	C3	PLP	X	460	2382	2199	2356	506	-11	211	C
	HETATM 3645	O3	PLP	X	460	1.668	-83.246	282.427	1.00	16.86		O
	ANISOU 3645	O3	PLP	X	460	2779	2014	1612	-170	-356	69	O
	HETATM 3646	C2	PLP	X	460	0.015	-81.799	281.324	1.00	14.01		C
	ANISOU 3646	C2	PLP	X	460	1841	1848	1632	-250	607	-63	C
20	HETATM 3647	C2A	PLP	X	460	-0.535	-81.540	282.700	1.00	18.47		C
	ANISOU 3647	C2A	PLP	X	460	2387	2186	2441	-269	458	-252	C
	HETATM 3648	O	HOH	W	1	6.707	-68.769	286.172	1.00	9.79		O
	ANISOU 3648	O	HOH	W	1	1515	815	1388	-83	40	-57	O
	HETATM 3649	O	HOH	W	2	3.228	-75.907	278.713	1.00	8.12		O
25	ANISOU 3649	O	HOH	W	2	1113	1051	920	-366	92	43	O
	HETATM 3650	O	HOH	W	3	12.540	-87.474	269.330	1.00	9.51		O
	ANISOU 3650	O	HOH	W	3	1245	1386	981	-207	-124	275	O
	HETATM 3651	O	HOH	W	4	5.496	-73.436	278.375	1.00	8.89		O
	ANISOU 3651	O	HOH	W	4	1158	1314	906	-131	1	15	O
30	HETATM 3652	O	HOH	W	5	6.025	-75.698	276.688	1.00	10.21		O
	ANISOU 3652	O	HOH	W	5	1340	1634	906	-154	121	-121	O
	HETATM 3653	O	HOH	W	6	-5.927	-55.574	287.311	1.00	10.72		O
	ANISOU 3653	O	HOH	W	6	1336	1734	1001	-57	-189	-134	O
	HETATM 3654	O	HOH	W	7	0.528	-77.950	273.730	1.00	7.92		O
35	ANISOU 3654	O	HOH	W	7	960	1013	1036	-36	297	-70	O
	HETATM 3655	O	HOH	W	8	0.673	-77.909	300.102	1.00	15.19		O

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	ANISOU 3655	O	HOH W	8	1852	1947	1970	500	-207	755	O
	HETATM 3656	O	HOH W	9	17.872	-81.139	272.609	1.00	9.73		O
	ANISOU 3656	O	HOH W	9	1382	943	1372	-44	-65	382	O
	HETATM 3657	O	HOH W	10	5.576	-74.539	280.857	1.00	8.03		O
5	ANISOU 3657	O	HOH W	10	1123	1118	810	67	35	56	O
	HETATM 3658	O	HOH W	11	-9.482	-50.652	286.020	1.00	11.09		O
	ANISOU 3658	O	HOH W	11	1284	1731	1197	158	278	-155	O
	HETATM 3659	O	HOH W	12	21.044	-86.874	269.502	1.00	10.33		O
	ANISOU 3659	O	HOH W	12	1363	1155	1407	229	16	0	O
10	HETATM 3660	O	HOH W	13	15.511	-82.207	273.611	1.00	10.15		O
	ANISOU 3660	O	HOH W	13	1352	1382	1121	259	106	276	O
	HETATM 3661	O	HOH W	14	2.658	-64.183	267.306	1.00	19.51		O
	ANISOU 3661	O	HOH W	14	2290	3127	1993	-1005	-956	1168	O
	HETATM 3662	O	HOH W	15	0.870	-73.922	288.178	1.00	9.38		O
15	ANISOU 3662	O	HOH W	15	1118	1407	1037	1	179	471	O
	HETATM 3663	O	HOH W	16	18.464	-77.704	292.611	1.00	13.12		O
	ANISOU 3663	O	HOH W	16	1676	1658	1650	16	-421	295	O
	HETATM 3664	O	HOH W	17	-12.935	-58.079	288.985	1.00	13.52		O
	ANISOU 3664	O	HOH W	17	1508	1986	1642	335	190	-135	O
20	HETATM 3665	O	HOH W	18	2.390	-81.121	299.810	1.00	11.76		O
	ANISOU 3665	O	HOH W	18	1527	1554	1388	-30	144	-104	O
	HETATM 3666	O	HOH W	19	2.322	-92.164	261.128	1.00	11.07		O
	ANISOU 3666	O	HOH W	19	1377	1347	1480	1	-23	-43	O
	HETATM 3667	O	HOH W	20	2.960	-74.445	298.984	1.00	16.84		O
25	ANISOU 3667	O	HOH W	20	1871	2135	2392	-104	247	1000	O
	HETATM 3668	O	HOH W	21	8.496	-75.793	275.167	1.00	8.30		O
	ANISOU 3668	O	HOH W	21	1087	1138	926	-122	3	-235	O
	HETATM 3669	O	HOH W	22	0.208	-73.913	298.923	1.00	12.90		O
	ANISOU 3669	O	HOH W	22	1843	1814	1242	-295	74	328	O
30	HETATM 3670	O	HOH W	23	3.379	-78.143	285.969	1.00	10.07		O
	ANISOU 3670	O	HOH W	23	1626	1171	1028	180	-66	21	O
	HETATM 3671	O	HOH W	24	-15.614	-57.389	283.967	1.00	12.55		O
	ANISOU 3671	O	HOH W	24	1718	1727	1323	480	147	-538	O
	HETATM 3672	O	HOH W	25	-19.855	-59.684	269.214	1.00	9.87		O
35	ANISOU 3672	O	HOH W	25	923	1444	1380	145	24	198	O
	HETATM 3673	O	HOH W	26	2.532	-81.403	284.378	1.00	11.42		O

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	ANISOU 3673	O	HOH W	26	1460	1624	1254	482	27	-25	O
	HETATM 3674	O	HOH W	27	5.192	-78.735	301.104	1.00	13.41		O
	ANISOU 3674	O	HOH W	27	1615	2466	1014	-29	-139	568	O
	HETATM 3675	O	HOH W	28	1.521	-63.602	280.423	1.00	11.76		O
5	ANISOU 3675	O	HOH W	28	1283	1186	1998	-142	-168	524	O
	HETATM 3676	O	HOH W	29	3.209	-66.793	290.746	1.00	11.35		O
	ANISOU 3676	O	HOH W	29	1306	1588	1416	95	-186	-321	O
	HETATM 3677	O	HOH W	30	-12.595	-53.502	284.329	1.00	12.68		O
	ANISOU 3677	O	HOH W	30	1136	1923	1756	-7	377	82	O
10	HETATM 3678	O	HOH W	31	17.200	-81.144	286.967	1.00	11.61		O
	ANISOU 3678	O	HOH W	31	1552	1635	1223	-100	52	201	O
	HETATM 3679	O	HOH W	32	8.276	-79.126	281.853	1.00	16.38		O
	ANISOU 3679	O	HOH W	32	2392	1519	2313	-178	471	485	O
	HETATM 3680	O	HOH W	33	12.684	-72.856	284.057	1.00	13.07		O
15	ANISOU 3680	O	HOH W	33	1938	1667	1360	117	-459	358	O
	HETATM 3681	O	HOH W	34	21.091	-77.858	291.750	1.00	11.81		O
	ANISOU 3681	O	HOH W	34	1291	1775	1419	14	-339	615	O
	HETATM 3682	O	HOH W	35	2.367	-77.038	296.911	1.00	12.04		O
	ANISOU 3682	O	HOH W	35	1463	1697	1415	-382	-15	165	O
20	HETATM 3683	O	HOH W	36	0.806	-88.819	269.950	1.00	14.40		O
	ANISOU 3683	O	HOH W	36	1599	1780	2092	34	661	321	O
	HETATM 3684	O	HOH W	37	10.169	-76.243	293.095	1.00	12.78		O
	ANISOU 3684	O	HOH W	37	1456	1612	1786	-453	-14	541	O
	HETATM 3685	O	HOH W	38	5.203	-82.800	276.542	1.00	12.61		O
25	ANISOU 3685	O	HOH W	38	1418	2020	1352	-308	259	-237	O
	HETATM 3686	O	HOH W	39	13.344	-83.805	280.692	1.00	13.08		O
	ANISOU 3686	O	HOH W	39	2092	1796	1081	-90	159	497	O
	HETATM 3687	O	HOH W	40	19.799	-87.259	278.360	1.00	13.34		O
	ANISOU 3687	O	HOH W	40	2026	1162	1879	121	517	435	O
30	HETATM 3688	O	HOH W	41	1.720	-63.821	286.184	1.00	13.40		O
	ANISOU 3688	O	HOH W	41	1755	1402	1932	-200	183	598	O
	HETATM 3689	O	HOH W	42	16.775	-81.157	284.270	1.00	12.94		O
	ANISOU 3689	O	HOH W	42	1773	1599	1544	-151	16	761	O
	HETATM 3690	O	HOH W	43	-8.557	-55.634	290.936	1.00	14.05		O
35	ANISOU 3690	O	HOH W	43	1891	1832	1615	56	-29	-253	O
	HETATM 3691	O	HOH W	44	0.157	-89.043	299.113	1.00	14.27		O

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	ANISOU 3691	O	HOH W	44	2127	1914	1382	-328	-166	-179	O
	HETATM 3692	O	HOH W	45	3.064	-66.563	293.510	1.00	16.90		O
	ANISOU 3692	O	HOH W	45	2169	2684	1566	475	269	276	O
	HETATM 3693	O	HOH W	46	15.319	-74.962	294.600	1.00	14.47		O
5	ANISOU 3693	O	HOH W	46	2053	1737	1706	3	-465	519	O
	HETATM 3694	O	HOH W	47	21.388	-83.060	297.982	1.00	12.29		O
	ANISOU 3694	O	HOH W	47	1473	1717	1479	-147	-305	724	O
	HETATM 3695	O	HOH W	48	-13.656	-52.827	281.853	1.00	13.48		O
	ANISOU 3695	O	HOH W	48	1829	1780	1511	130	37	-112	O
10	HETATM 3696	O	HOH W	49	7.907	-68.542	273.785	1.00	13.91		O
	ANISOU 3696	O	HOH W	49	1715	1794	1775	179	-161	-191	O
	HETATM 3697	O	HOH W	50	15.006	-79.067	283.747	1.00	14.16		O
	ANISOU 3697	O	HOH W	50	2142	1860	1379	721	214	361	O
	HETATM 3698	O	HOH W	51	23.425	-81.296	297.743	1.00	13.31		O
15	ANISOU 3698	O	HOH W	51	1670	1869	1516	195	-250	593	O
	HETATM 3699	O	HOH W	52	14.576	-87.861	284.341	1.00	14.90		O
	ANISOU 3699	O	HOH W	52	1485	2696	1477	348	2	89	O
	HETATM 3700	O	HOH W	53	5.498	-85.621	281.195	1.00	14.15		O
	ANISOU 3700	O	HOH W	53	1722	1691	1960	-83	281	-457	O
20	HETATM 3701	O	HOH W	54	21.394	-79.247	303.802	1.00	20.71		O
	ANISOU 3701	O	HOH W	54	3471	1694	2703	72	-805	217	O
	HETATM 3702	O	HOH W	55	27.753	-84.740	301.358	1.00	14.80		O
	ANISOU 3702	O	HOH W	55	1697	2448	1476	-5	-319	962	O
	HETATM 3703	O	HOH W	56	1.674	-64.359	293.900	1.00	19.59		O
25	ANISOU 3703	O	HOH W	56	2495	2933	2015	-733	-385	264	O
	HETATM 3704	O	HOH W	57	7.383	-67.662	293.035	1.00	17.39		O
	ANISOU 3704	O	HOH W	57	1871	2830	1905	-498	-323	40	O
	HETATM 3705	O	HOH W	58	10.744	-78.448	289.835	1.00	17.12		O
	ANISOU 3705	O	HOH W	58	1718	2397	2389	-94	-315	774	O
30	HETATM 3706	O	HOH W	59	-12.542	-57.145	291.551	1.00	20.15		O
	ANISOU 3706	O	HOH W	59	2588	2367	2701	983	-307	-935	O
	HETATM 3707	O	HOH W	60	5.448	-75.603	300.341	1.00	18.98		O
	ANISOU 3707	O	HOH W	60	2118	2556	2533	597	587	457	O
	HETATM 3708	O	HOH W	61	-17.542	-53.848	281.787	1.00	18.89		O
35	ANISOU 3708	O	HOH W	61	1733	3261	2182	418	10	141	O
	HETATM 3709	O	HOH W	62	8.367	-83.778	305.484	1.00	16.87		O

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	ANISOU	3709	O	HOH	W	62	2061	2172	2175	-87	-368	363	O
	HETATM	3710	O	HOH	W	63	13.219	-72.461	275.917	1.00	15.28		O
	ANISOU	3710	O	HOH	W	63	2247	1434	2124	-491	530	-492	O
	HETATM	3711	O	HOH	W	64	-9.064	-55.811	277.240	1.00	26.89		O
5	ANISOU	3711	O	HOH	W	64	4108	2727	3382	-805	762	1340	O
	HETATM	3712	O	HOH	W	65	-9.964	-57.679	292.158	1.00	19.50		O
	ANISOU	3712	O	HOH	W	65	2156	2224	3028	-329	-244	384	O
	HETATM	3713	O	HOH	W	66	9.832	-81.661	285.086	1.00	15.62		O
	ANISOU	3713	O	HOH	W	66	1741	2330	1862	161	-67	591	O
10	HETATM	3714	O	HOH	W	67	-1.679	-59.345	291.644	1.00	16.62		O
	ANISOU	3714	O	HOH	W	67	1832	2419	2062	-69	177	500	O
	HETATM	3715	O	HOH	W	68	20.858	-96.472	264.766	1.00	19.23		O
	ANISOU	3715	O	HOH	W	68	2156	2535	2615	-96	-199	303	O
	HETATM	3716	O	HOH	W	69	15.075	-76.269	284.093	1.00	20.30		O
15	ANISOU	3716	O	HOH	W	69	2340	2398	2972	449	178	1005	O
	HETATM	3717	O	HOH	W	70	25.765	-77.876	300.618	1.00	21.80		O
	ANISOU	3717	O	HOH	W	70	1830	3318	3131	-475	-377	-339	O
	HETATM	3718	O	HOH	W	71	2.530	-64.402	289.664	1.00	14.91		O
	ANISOU	3718	O	HOH	W	71	1950	2100	1612	70	-365	-49	O
20	HETATM	3719	O	HOH	W	72	-14.585	-55.190	285.296	1.00	14.53		O
	ANISOU	3719	O	HOH	W	72	1836	1924	1759	-336	252	56	O
	HETATM	3720	O	HOH	W	73	15.140	-83.121	283.161	1.00	12.78		O
	ANISOU	3720	O	HOH	W	73	1433	2074	1346	244	0	406	O
	HETATM	3721	O	HOH	W	74	22.982	-91.129	304.031	1.00	19.26		O
25	ANISOU	3721	O	HOH	W	74	2492	1346	3479	54	-647	581	O
	HETATM	3722	O	HOH	W	75	-8.830	-59.809	293.730	1.00	19.74		O
	ANISOU	3722	O	HOH	W	75	3004	2411	2082	230	135	-245	O
	HETATM	3723	O	HOH	W	76	7.038	-89.160	307.335	1.00	22.48		O
	ANISOU	3723	O	HOH	W	76	2908	3704	1929	-649	225	56	O
30	HETATM	3724	O	HOH	W	77	-12.161	-51.148	285.870	1.00	15.47		O
	ANISOU	3724	O	HOH	W	77	1812	2027	2037	-18	-32	-44	O
	HETATM	3725	O	HOH	W	78	15.522	-72.432	277.946	1.00	18.60		O
	ANISOU	3725	O	HOH	W	78	2724	911	3432	-404	-396	202	O
	HETATM	3726	O	HOH	W	79	2.933	-65.224	277.569	1.00	25.12		O
35	ANISOU	3726	O	HOH	W	79	2055	4905	2584	-1574	-458	1494	O
	HETATM	3727	O	HOH	W	80	3.060	-78.552	299.105	1.00	18.45		O

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	ANISOU 3727	O	HOH W	80	1979	3143	1888	124	-192	102	O
	HETATM 3728	O	HOH W	81	8.167	-84.486	284.994	1.00	21.00		O
	ANISOU 3728	O	HOH W	81	4190	2312	1474	1783	-331	134	O
	HETATM 3729	O	HOH W	82	-22.179	-60.042	272.253	1.00	21.25		O
5	ANISOU 3729	O	HOH W	82	2360	2139	3574	737	-251	-705	O
	HETATM 3730	O	HOH W	83	17.122	-72.994	295.084	1.00	20.32		O
	ANISOU 3730	O	HOH W	83	3089	1541	3089	160	79	-8	O
	HETATM 3731	O	HOH W	84	1.174	-80.871	306.826	1.00	19.86		O
	ANISOU 3731	O	HOH W	84	3231	2638	1677	-818	673	-102	O
10	HETATM 3732	O	HOH W	85	-1.371	-58.431	275.838	1.00	18.04		O
	ANISOU 3732	O	HOH W	85	1684	2794	2374	-617	240	-526	O
	HETATM 3733	O	HOH W	86	19.921	-88.144	306.324	1.00	19.67		O
	ANISOU 3733	O	HOH W	86	2553	2520	2398	-639	64	601	O
	HETATM 3734	O	HOH W	87	-13.613	-55.738	287.742	1.00	17.98		O
15	ANISOU 3734	O	HOH W	87	2189	2128	2514	690	-37	188	O
	HETATM 3735	O	HOH W	88	28.062	-79.695	299.701	1.00	19.27		O
	ANISOU 3735	O	HOH W	88	3282	1919	2118	-661	-710	782	O
	HETATM 3736	O	HOH W	89	8.251	-75.403	291.236	1.00	18.02		O
	ANISOU 3736	O	HOH W	89	1891	2735	2221	-96	-692	255	O
20	HETATM 3737	O	HOH W	90	15.818	-81.064	304.537	1.00	22.06		O
	ANISOU 3737	O	HOH W	90	3768	2971	1642	-598	-1035	745	O
	HETATM 3738	O	HOH W	91	27.611	-77.765	273.620	1.00	19.32		O
	ANISOU 3738	O	HOH W	91	2122	2701	2515	44	-337	248	O
	HETATM 3739	O	HOH W	92	25.575	-90.728	300.624	1.00	22.93		O
25	ANISOU 3739	O	HOH W	92	2038	2956	3718	190	-698	891	O
	HETATM 3740	O	HOH W	93	9.250	-74.336	298.427	1.00	22.97		O
	ANISOU 3740	O	HOH W	93	2363	3496	2868	350	-653	435	O
	HETATM 3741	O	HOH W	94	-23.426	-60.998	268.673	0.50	12.61		O
	ANISOU 3741	O	HOH W	94	1346	1635	1810	0	0	359	O
30	HETATM 3742	O	HOH W	95	10.353	-74.030	289.771	1.00	20.84		O
	ANISOU 3742	O	HOH W	95	2660	2718	2537	914	6	379	O
	HETATM 3743	O	HOH W	96	13.206	-66.986	269.553	1.00	27.08		O
	ANISOU 3743	O	HOH W	96	4143	1397	4748	-567	2500	39	O
	HETATM 3744	O	HOH W	97	1.944	-68.605	295.260	1.00	17.09		O
35	ANISOU 3744	O	HOH W	97	1853	2423	2216	-93	-572	-195	O
	HETATM 3745	O	HOH W	98	10.249	-78.676	286.994	1.00	16.01		O

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	ANISOU 3745	O	HOH W 98	1680	2296	2106	81	125	141	O
	HETATM 3746	O	HOH W 99	25.415	-89.079	283.055	1.00	22.71		O
	ANISOU 3746	O	HOH W 99	3441	3032	2154	380	-391	709	O
	HETATM 3747	O	HOH W 100	13.442	-81.275	281.711	1.00	19.59		O
5	ANISOU 3747	O	HOH W 100	2712	2336	2392	439	160	-136	O
	HETATM 3748	O	HOH W 101	-19.110	-60.409	284.690	1.00	25.76		O
	ANISOU 3748	O	HOH W 101	3292	2793	3701	936	532	442	O
	HETATM 3749	O	HOH W 102	22.009	-80.330	306.127	1.00	22.88		O
	ANISOU 3749	O	HOH W 102	3838	1539	3316	1005	-762	-40	O
10	HETATM 3750	O	HOH W 103	-1.876	-60.360	278.362	1.00	22.02		O
	ANISOU 3750	O	HOH W 103	2759	3469	2138	-442	611	-141	O
	HETATM 3751	O	HOH W 104	8.914	-72.854	305.417	1.00	27.12		O
	ANISOU 3751	O	HOH W 104	3827	1674	4800	720	31	-327	O
	HETATM 3752	O	HOH W 105	27.499	-82.811	286.952	1.00	24.37		O
15	ANISOU 3752	O	HOH W 105	3119	4079	2060	-439	-48	-113	O
	HETATM 3753	O	HOH W 106	-12.841	-60.998	268.673	0.50	15.37		O
	ANISOU 3753	O	HOH W 106	1499	2334	2007	-3	-1	-219	O
	HETATM 3754	O	HOH W 107	25.351	-89.256	295.570	1.00	21.56		O
	ANISOU 3754	O	HOH W 107	2482	2099	3609	-98	592	774	O
20	HETATM 3755	O	HOH W 108	19.443	-80.995	307.191	1.00	24.51		O
	ANISOU 3755	O	HOH W 108	3149	2445	3717	881	-1507	-829	O
	HETATM 3756	O	HOH W 109	12.479	-75.580	288.692	1.00	19.60		O
	ANISOU 3756	O	HOH W 109	2872	2323	2250	415	-596	234	O
	HETATM 3757	O	HOH W 110	28.192	-84.072	293.520	1.00	22.87		O
25	ANISOU 3757	O	HOH W 110	3442	3143	2103	361	429	356	O
	HETATM 3758	O	HOH W 111	25.889	-88.611	290.230	1.00	21.55		O
	ANISOU 3758	O	HOH W 111	1427	2502	4258	-171	-278	63	O
	HETATM 3759	O	HOH W 112	18.329	-73.122	277.224	1.00	22.77		O
	ANISOU 3759	O	HOH W 112	2685	2852	3113	657	-170	-475	O
30	HETATM 3760	O	HOH W 113	-17.991	-57.150	281.743	1.00	23.82		O
	ANISOU 3760	O	HOH W 113	2717	2641	3693	9	1452	-193	O
	HETATM 3761	O	HOH W 114	19.484	-73.096	286.620	1.00	27.62		O
	ANISOU 3761	O	HOH W 114	2955	3709	3828	-251	-199	3094	O
	HETATM 3762	O	HOH W 115	-16.760	-58.898	286.314	1.00	19.29		O
35	ANISOU 3762	O	HOH W 115	2163	2383	2783	344	315	-133	O
	HETATM 3763	O	HOH W 116	11.876	-73.216	291.892	1.00	29.51		O

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	ANISOU 3763	O	HOH W 116	3100	3665	4447	1155	-397	-203	O
	HETATM 3764	O	HOH W 117	9.296	-72.962	301.232	1.00	34.06		O
	ANISOU 3764	O	HOH W 117	3608	3538	5794	-1162	-249	494	O
	HETATM 3765	O	HOH W 118	11.943	-65.883	273.132	1.00	20.30		O
5	ANISOU 3765	O	HOH W 118	3957	1708	2048	-114	-186	-153	O
	HETATM 3766	O	HOH W 119	24.953	-72.880	296.659	1.00	26.04		O
	ANISOU 3766	O	HOH W 119	3848	2619	3426	-856	-161	517	O
	HETATM 3767	O	HOH W 120	11.579	-80.371	283.571	1.00	24.08		O
	ANISOU 3767	O	HOH W 120	2784	3832	2532	-64	80	483	O
10	HETATM 3768	O	HOH W 121	-3.743	-57.409	273.255	1.00	20.92		O
	ANISOU 3768	O	HOH W 121	2519	3317	2113	547	-306	656	O
	HETATM 3769	O	HOH W 122	26.739	-82.418	266.832	1.00	26.40		O
	ANISOU 3769	O	HOH W 122	2935	4537	2555	-79	387	-111	O
	HETATM 3770	O	HOH W 123	28.522	-85.620	274.064	1.00	23.58		O
15	ANISOU 3770	O	HOH W 123	2034	3193	3731	207	751	376	O
	HETATM 3771	O	HOH W 124	26.543	-92.983	267.921	1.00	25.22		O
	ANISOU 3771	O	HOH W 124	2197	3429	3953	426	-630	507	O
	HETATM 3772	O	HOH W 125	28.148	-77.839	289.032	1.00	24.04		O
	ANISOU 3772	O	HOH W 125	2770	3232	3130	-526	251	1007	O
20	HETATM 3773	O	HOH W 126	-21.186	-57.428	270.899	1.00	22.16		O
	ANISOU 3773	O	HOH W 126	2744	3023	2652	698	-201	99	O
	HETATM 3774	O	HOH W 127	-19.276	-59.624	280.983	1.00	23.80		O
	ANISOU 3774	O	HOH W 127	2948	1158	4936	-30	1260	-470	O
	HETATM 3775	O	HOH W 128	23.503	-74.623	298.327	1.00	26.34		O
25	ANISOU 3775	O	HOH W 128	4050	2609	3348	79	-1293	2	O
	HETATM 3776	O	HOH W 129	-15.556	-58.983	288.864	1.00	22.62		O
	ANISOU 3776	O	HOH W 129	2555	2707	3332	278	923	433	O
	HETATM 3777	O	HOH W 130	21.013	-72.311	296.964	1.00	28.25		O
	ANISOU 3777	O	HOH W 130	3713	2947	4070	-893	231	-701	O
30	HETATM 3778	O	HOH W 131	12.887	-75.150	303.660	1.00	22.64		O
	ANISOU 3778	O	HOH W 131	2725	3328	2548	-250	-75	-812	O
	HETATM 3779	O	HOH W 132	-2.037	-59.568	270.241	1.00	30.19		O
	ANISOU 3779	O	HOH W 132	4840	2373	4257	-1465	785	-109	O
	HETATM 3780	O	HOH W 133	6.358	-69.270	296.854	1.00	26.37		O
35	ANISOU 3780	O	HOH W 133	3904	3454	2660	-1113	-512	496	O
	HETATM 3781	O	HOH W 134	26.401	-87.278	287.414	1.00	32.34		O

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	ANISOU 3781	O	HOH W 134	3639	3902	4747	-607	489	155	O
	HETATM 3782	O	HOH W 135	12.513	-75.530	284.246	1.00	23.33		O
	ANISOU 3782	O	HOH W 135	2454	2011	4397	-17	630	637	O
	HETATM 3783	O	HOH W 136	10.500	-67.628	279.576	1.00	20.20		O
5	ANISOU 3783	O	HOH W 136	3476	1538	2661	-588	567	-395	O
	HETATM 3784	O	HOH W 137	3.605	-61.343	267.479	1.00	22.44		O
	ANISOU 3784	O	HOH W 137	3130	1652	3741	-40	1015	759	O
	HETATM 3785	O	HOH W 138	22.084	-75.065	284.626	1.00	27.71		O
	ANISOU 3785	O	HOH W 138	3656	3854	3018	-801	-722	481	O
10	HETATM 3786	O	HOH W 139	-13.225	-51.300	288.228	1.00	28.37		O
	ANISOU 3786	O	HOH W 139	4375	3495	2907	42	778	634	O
	HETATM 3787	O	HOH W 140	27.640	-85.211	271.551	1.00	24.82		O
	ANISOU 3787	O	HOH W 140	2485	3292	3653	-95	264	850	O
	HETATM 3788	O	HOH W 141	6.628	-73.104	301.379	1.00	23.72		O
15	ANISOU 3788	O	HOH W 141	2850	2934	3225	844	8	360	O
	HETATM 3789	O	HOH W 142	12.339	-76.010	281.232	1.00	27.30		O
	ANISOU 3789	O	HOH W 142	3169	3237	3966	-305	-576	1454	O
	HETATM 3790	O	HOH W 143	-6.825	-57.680	276.866	1.00	29.45		O
	ANISOU 3790	O	HOH W 143	4225	4683	2280	-1444	378	822	O
20	HETATM 3791	O	HOH W 144	10.123	-73.297	294.010	1.00	21.35		O
	ANISOU 3791	O	HOH W 144	2871	2773	2469	102	-559	935	O
	HETATM 3792	O	HOH W 145	1.747	-88.871	306.593	1.00	26.68		O
	ANISOU 3792	O	HOH W 145	4009	3497	2628	-113	-471	461	O
	HETATM 3793	O	HOH W 146	8.333	-81.302	280.297	1.00	25.57		O
25	ANISOU 3793	O	HOH W 146	4386	2324	3003	308	158	579	O
	HETATM 3794	O	HOH W 147	22.148	-70.736	294.617	1.00	28.62		O
	ANISOU 3794	O	HOH W 147	3864	4010	3001	-677	101	-158	O
	HETATM 3795	O	HOH W 148	-12.007	-54.396	290.739	1.00	24.07		O
	ANISOU 3795	O	HOH W 148	2879	2452	3812	-188	1143	-781	O
30	HETATM 3796	O	HOH W 149	26.065	-75.671	299.339	1.00	31.46		O
	ANISOU 3796	O	HOH W 149	5426	3034	3492	123	-229	858	O
	HETATM 3797	O	HOH W 150	5.528	-62.874	266.872	1.00	22.41		O
	ANISOU 3797	O	HOH W 150	3429	2298	2787	407	-631	-11	O
	HETATM 3798	O	HOH W 151	26.620	-88.414	293.532	1.00	34.63		O
35	ANISOU 3798	O	HOH W 151	3448	5671	4037	-1131	-503	330	O
	HETATM 3799	O	HOH W 152	5.774	-68.238	275.367	1.00	26.04		O

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	ANISOU 3799	O	HOH W 152	2951	3764	3177	1239	654	1079	O
	HETATM 3800	O	HOH W 153	0.000	-60.997	268.671	0.25	19.49		O
	ANISOU 3800	O	HOH W 153	2745	1411	3248	-231	52	4	O
	HETATM 3801	O	HOH W 154	12.576	-88.666	282.613	1.00	21.04		O
5	ANISOU 3801	O	HOH W 154	3401	2367	2222	188	248	524	O
	HETATM 3802	O	HOH W 155	3.499	-66.843	274.690	1.00	29.43		O
	ANISOU 3802	O	HOH W 155	4149	2635	4397	-1452	-1001	56	O
	HETATM 3803	O	HOH W 156	16.806	-71.363	292.702	1.00	31.60		O
	ANISOU 3803	O	HOH W 156	3827	3231	4945	751	-99	1532	O
10	HETATM 3804	O	HOH W 157	25.628	-90.745	304.068	1.00	25.90		O
	ANISOU 3804	O	HOH W 157	2243	2922	4674	13	-158	-365	O
	HETATM 3805	O	HOH W 158	29.155	-89.040	297.099	1.00	31.94		O
	ANISOU 3805	O	HOH W 158	4124	4090	3922	1344	35	1532	O
	HETATM 3806	O	HOH W 159	3.114	-90.246	269.382	1.00	25.59		O
15	ANISOU 3806	O	HOH W 159	3328	3112	3282	836	1206	592	O
	HETATM 3807	O	HOH W 160	7.349	-86.573	308.230	1.00	34.67		O
	ANISOU 3807	O	HOH W 160	5857	2881	4433	62	-1037	-132	O
	HETATM 3808	O	HOH W 161	7.912	-75.673	307.314	1.00	35.49		O
	ANISOU 3808	O	HOH W 161	6346	3624	3513	-645	182	-424	O
20	HETATM 3809	O	HOH W 162	-0.000	-86.421	268.673	0.50	29.11		O
	ANISOU 3809	O	HOH W 162	2806	4268	3987	-11	1030	18	O
	HETATM 3810	O	HOH W 163	6.075	-84.228	283.667	1.00	26.13		O
	ANISOU 3810	O	HOH W 163	3064	3084	3778	-744	395	429	O
	HETATM 3811	O	HOH W 164	17.824	-88.715	304.775	1.00	37.43		O
25	ANISOU 3811	O	HOH W 164	3808	5435	4978	-1095	-1555	648	O
	HETATM 3812	O	HOH W 165	16.281	-72.526	280.550	1.00	26.21		O
	ANISOU 3812	O	HOH W 165	2531	3594	3832	-302	-98	680	O
	HETATM 3813	O	HOH W 166	9.858	-69.859	294.240	1.00	35.89		O
	ANISOU 3813	O	HOH W 166	6357	4645	2632	-62	-2675	-160	O
30	HETATM 3814	O	HOH W 167	20.341	-68.391	288.780	1.00	35.84		O
	ANISOU 3814	O	HOH W 167	5216	2929	5471	-256	-764	893	O
	HETATM 3815	O	HOH W 168	16.222	-74.134	285.979	1.00	37.92		O
	ANISOU 3815	O	HOH W 168	4384	6722	3298	2327	-928	163	O
	HETATM 3816	O	HOH W 169	16.251	-86.727	308.169	1.00	34.40		O
35	ANISOU 3816	O	HOH W 169	3663	4201	5206	-11	-279	-43	O
	HETATM 3817	O	HOH W 170	0.577	-90.914	305.838	1.00	23.77		O

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	ANISOU 3817	O	HOH W 170	3197	3106	2726	-76	440	-392	O
	HETATM 3818	O	HOH W 171	14.435	-66.140	266.798	1.00	12.29		O
	ANISOU 3818	O	HOH W 171	1706	1603	1360	-217	219	143	O
	HETATM 3819	O	HOH W 172	5.848	-67.029	289.979	1.00	11.56		O
5	ANISOU 3819	O	HOH W 172	1534	1640	1216	-247	-52	429	O
	HETATM 3820	O	HOH W 173	14.908	-74.520	274.616	1.00	11.30		O
	ANISOU 3820	O	HOH W 173	1450	644	2199	113	43	41	O
	HETATM 3821	O	HOH W 174	2.750	-86.910	270.806	1.00	12.03		O
	ANISOU 3821	O	HOH W 174	1509	1920	1141	-176	194	239	O
10	HETATM 3822	O	HOH W 175	14.558	-78.701	280.590	1.00	14.16		O
	ANISOU 3822	O	HOH W 175	1721	1764	1893	-89	200	-340	O
	HETATM 3823	O	HOH W 176	4.762	-92.115	268.362	1.00	10.68		O
	ANISOU 3823	O	HOH W 176	1321	1227	1508	-201	250	-22	O
	HETATM 3824	O	HOH W 177	17.578	-78.730	281.009	1.00	13.23		O
15	ANISOU 3824	O	HOH W 177	1824	1977	1224	-360	149	458	O
	HETATM 3825	O	HOH W 178	18.353	-81.329	281.979	1.00	12.43		O
	ANISOU 3825	O	HOH W 178	1557	1800	1364	-105	105	357	O
	HETATM 3826	O	HOH W 179	26.495	-91.214	289.434	1.00	20.24		O
	ANISOU 3826	O	HOH W 179	2156	3026	2507	281	302	568	O
20	HETATM 3827	O	HOH W 180	10.701	-76.200	286.416	1.00	17.94		O
	ANISOU 3827	O	HOH W 180	2304	2412	2099	1162	-426	254	O
	HETATM 3828	O	HOH W 181	6.836	-62.656	264.280	1.00	20.72		O
	ANISOU 3828	O	HOH W 181	2275	3477	2118	-139	-327	-806	O
	HETATM 3829	O	HOH W 182	1.617	-67.088	297.470	1.00	20.01		O
25	ANISOU 3829	O	HOH W 182	2933	2589	2079	-221	-38	-204	O
	HETATM 3830	O	HOH W 183	9.170	-73.925	287.267	1.00	15.15		O
	ANISOU 3830	O	HOH W 183	1963	2062	1731	473	-68	238	O
	HETATM 3831	O	HOH W 184	16.294	-74.279	272.290	1.00	22.44		O
	ANISOU 3831	O	HOH W 184	4198	1893	2432	1287	368	-50	O
30	HETATM 3832	O	HOH W 185	18.626	-73.646	274.567	1.00	24.60		O
	ANISOU 3832	O	HOH W 185	1980	4113	3254	1064	263	-86	O
	HETATM 3833	O	HOH W 186	18.320	-85.361	309.062	1.00	22.13		O
	ANISOU 3833	O	HOH W 186	2681	2494	3231	181	-588	1202	O
	HETATM 3834	O	HOH W 187	18.767	-75.621	278.650	1.00	24.65		O
35	ANISOU 3834	O	HOH W 187	4408	2962	1993	896	596	316	O
	HETATM 3835	O	HOH W 188	18.409	-76.197	281.291	1.00	20.02		O

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	ANISOU 3835	O	HOH W 188	3427	1955	2223	-130	-551	446	O
	HETATM 3836	O	HOH W 189	18.116	-82.607	309.839	1.00	27.70		O
	ANISOU 3836	O	HOH W 189	2951	3181	4390	666	-1395	-32	O
	HETATM 3837	O	HOH W 190	15.893	-75.709	276.943	1.00	34.61		O
5	ANISOU 3837	O	HOH W 190	5251	3502	4396	-1160	-2518	1062	O
	HETATM 3838	O	HOH W 191	3.549	-65.245	298.002	1.00	26.88		O
	ANISOU 3838	O	HOH W 191	3576	2916	3720	-468	-694	580	O
	HETATM 3839	O	HOH W 192	14.654	-75.985	278.770	1.00	35.18		O
	ANISOU 3839	O	HOH W 192	3352	4745	5268	1020	-522	-1161	O
10	HETATM 3840	O	HOH W 193	2.725	-87.359	273.580	1.00	8.07		O
	ANISOU 3840	O	HOH W 193	1226	628	1212	-90	75	193	O
	HETATM 3841	O	HOH W 194	6.912	-90.719	267.648	1.00	11.26		O
	ANISOU 3841	O	HOH W 194	1197	2028	1052	137	-124	187	O
	HETATM 3842	O	HOH W 195	5.648	-64.924	262.836	1.00	13.28		O
15	ANISOU 3842	O	HOH W 195	1302	2007	1736	-155	69	-262	O
	HETATM 3843	O	HOH W 196	-3.597	-80.127	277.780	1.00	10.45		O
	ANISOU 3843	O	HOH W 196	1230	1707	1033	-68	197	-20	O
	HETATM 3844	O	HOH W 197	-3.914	-68.582	290.959	1.00	10.18		O
	ANISOU 3844	O	HOH W 197	1677	1031	1159	-259	-153	262	O
20	HETATM 3845	O	HOH W 198	10.509	-90.903	289.348	1.00	10.27		O
	ANISOU 3845	O	HOH W 198	1308	1308	1284	100	104	495	O
	HETATM 3846	O	HOH W 199	-8.643	-77.061	295.653	1.00	8.83		O
	ANISOU 3846	O	HOH W 199	1169	1557	629	366	186	296	O
	HETATM 3847	O	HOH W 200	-1.077	-61.904	285.345	1.00	8.22		O
25	ANISOU 3847	O	HOH W 200	1000	1134	989	-396	96	335	O
	HETATM 3848	O	HOH W 201	-2.020	-73.349	283.896	1.00	6.59		O
	ANISOU 3848	O	HOH W 201	1114	401	987	-74	183	-24	O
	HETATM 3849	O	HOH W 202	-19.915	-87.766	283.019	1.00	8.47		O
	ANISOU 3849	O	HOH W 202	1078	910	1230	-51	-296	-302	O
30	HETATM 3850	O	HOH W 203	-6.786	-90.052	289.405	1.00	10.49		O
	ANISOU 3850	O	HOH W 203	1566	1235	1184	-104	45	372	O
	HETATM 3851	O	HOH W 204	-1.567	-75.358	285.763	1.00	8.00		O
	ANISOU 3851	O	HOH W 204	986	968	1084	-191	137	34	O
	HETATM 3852	O	HOH W 205	-1.295	-59.330	283.789	1.00	8.64		O
35	ANISOU 3852	O	HOH W 205	1330	679	1271	169	168	-328	O
	HETATM 3853	O	HOH W 206	-4.178	-75.985	291.186	1.00	8.86		O

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	ANISOU 3853	O	HOH W 206	1379	983	1004	132	229	18	O
	HETATM 3854	O	HOH W 207	17.319	-92.436	288.163	1.00	11.51		O
	ANISOU 3854	O	HOH W 207	1328	1609	1437	116	-20	414	O
	HETATM 3855	O	HOH W 208	-10.776	-99.033	291.927	1.00	12.01		O
5	ANISOU 3855	O	HOH W 208	1608	1780	1172	-569	40	248	O
	HETATM 3856	O	HOH W 209	-5.168	-88.303	281.692	1.00	9.80		O
	ANISOU 3856	O	HOH W 209	1171	1697	853	121	103	212	O
	HETATM 3857	O	HOH W 210	-3.141	-89.822	283.149	1.00	9.94		O
	ANISOU 3857	O	HOH W 210	1349	1384	1043	-12	142	143	O
10	HETATM 3858	O	HOH W 211	14.396	-91.210	273.577	1.00	11.08		O
	ANISOU 3858	O	HOH W 211	1592	1396	1218	316	188	319	O
	HETATM 3859	O	HOH W 212	-14.051	-93.714	264.817	1.00	8.97		O
	ANISOU 3859	O	HOH W 212	1317	655	1434	66	35	-237	O
	HETATM 3860	O	HOH W 213	-2.696	-83.234	285.147	1.00	8.73		O
15	ANISOU 3860	O	HOH W 213	1348	1086	883	-79	24	378	O
	HETATM 3861	O	HOH W 214	0.020	-73.776	290.930	1.00	11.09		O
	ANISOU 3861	O	HOH W 214	1343	1892	978	-245	-68	12	O
	HETATM 3862	O	HOH W 215	-14.498	-88.581	288.068	1.00	12.01		O
	ANISOU 3862	O	HOH W 215	1426	1785	1350	-306	277	500	O
20	HETATM 3863	O	HOH W 216	-0.441	-82.000	286.312	1.00	10.57		O
	ANISOU 3863	O	HOH W 216	1346	1620	1047	-102	-66	279	O
	HETATM 3864	O	HOH W 217	-0.603	-90.113	286.136	1.00	11.96		O
	ANISOU 3864	O	HOH W 217	1209	2169	1166	192	216	250	O
	HETATM 3865	O	HOH W 218	-1.527	-75.971	292.164	1.00	9.36		O
25	ANISOU 3865	O	HOH W 218	1256	1193	1106	-67	-70	229	O
	HETATM 3866	O	HOH W 219	6.484	-97.740	290.908	1.00	14.74		O
	ANISOU 3866	O	HOH W 219	1588	2173	1839	311	75	944	O
	HETATM 3867	O	HOH W 220	-3.329	-91.625	286.549	1.00	10.78		O
	ANISOU 3867	O	HOH W 220	1478	1551	1065	-152	285	606	O
30	HETATM 3868	O	HOH W 221	-18.834	-61.164	276.012	1.00	10.54		O
	ANISOU 3868	O	HOH W 221	1288	1295	1418	-170	22	-15	O
	HETATM 3869	O	HOH W 222	-1.181	-76.380	298.894	1.00	12.04		O
	ANISOU 3869	O	HOH W 222	1618	1878	1076	-13	56	294	O
	HETATM 3870	O	HOH W 223	-23.521	-79.191	280.496	1.00	12.08		O
35	ANISOU 3870	O	HOH W 223	1503	1570	1515	275	432	-305	O
	HETATM 3871	O	HOH W 224	-13.555	-71.946	298.152	1.00	13.72		O

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	ANISOU 3871	O	HOH W 224	1635	1739	1839	41	557	45	O
	HETATM 3872	O	HOH W 225	-13.070	-94.068	261.009	1.00	11.46		O
	ANISOU 3872	O	HOH W 225	1390	1338	1623	-135	294	-309	O
	HETATM 3873	O	HOH W 226	-18.055	-77.963	290.613	1.00	14.13		O
5	ANISOU 3873	O	HOH W 226	1506	2137	1726	195	480	170	O
	HETATM 3874	O	HOH W 227	-24.897	-70.696	264.445	1.00	14.39		O
	ANISOU 3874	O	HOH W 227	2516	910	2042	-91	-661	-139	O
	HETATM 3875	O	HOH W 228	-18.568	-70.741	283.443	1.00	12.24		O
	ANISOU 3875	O	HOH W 228	1698	1426	1523	-23	512	-90	O
10	HETATM 3876	O	HOH W 229	-0.370	-100.687	295.627	1.00	13.59		O
	ANISOU 3876	O	HOH W 229	1466	2055	1640	-29	278	833	O
	HETATM 3877	O	HOH W 230	-10.062	-99.027	289.287	1.00	13.57		O
	ANISOU 3877	O	HOH W 230	2235	1381	1538	-655	175	337	O
	HETATM 3878	O	HOH W 231	-0.205	-93.193	285.688	1.00	13.09		O
15	ANISOU 3878	O	HOH W 231	1768	1949	1256	-370	-58	282	O
	HETATM 3879	O	HOH W 232	11.591	-90.667	273.668	1.00	11.09		O
	ANISOU 3879	O	HOH W 232	1502	1257	1454	164	45	407	O
	HETATM 3880	O	HOH W 233	-18.705	-62.254	280.435	1.00	12.95		O
	ANISOU 3880	O	HOH W 233	1745	1721	1454	-321	398	-386	O
20	HETATM 3881	O	HOH W 234	-7.810	-92.025	263.449	1.00	12.04		O
	ANISOU 3881	O	HOH W 234	1963	1190	1421	-502	429	-285	O
	HETATM 3882	O	HOH W 235	-11.655	-93.372	263.319	1.00	11.73		O
	ANISOU 3882	O	HOH W 235	1625	1412	1417	-217	164	-88	O
	HETATM 3883	O	HOH W 236	-11.487	-76.208	296.214	1.00	13.04		O
25	ANISOU 3883	O	HOH W 236	1943	1562	1449	-48	167	330	O
	HETATM 3884	O	HOH W 237	-7.171	-72.224	301.841	1.00	14.10		O
	ANISOU 3884	O	HOH W 237	2233	1880	1242	-36	89	354	O
	HETATM 3885	O	HOH W 238	-9.129	-94.189	262.322	1.00	11.35		O
	ANISOU 3885	O	HOH W 238	1438	1337	1537	-367	19	4	O
30	HETATM 3886	O	HOH W 239	-20.924	-69.164	283.632	1.00	14.43		O
	ANISOU 3886	O	HOH W 239	1655	1582	2243	343	-9	46	O
	HETATM 3887	O	HOH W 240	22.241	-98.314	279.054	1.00	16.72		O
	ANISOU 3887	O	HOH W 240	2107	2272	1974	614	-76	350	O
	HETATM 3888	O	HOH W 241	6.556	-101.993	293.561	1.00	13.47		O
35	ANISOU 3888	O	HOH W 241	1810	1246	2061	-52	208	954	O
	HETATM 3889	O	HOH W 242	-20.165	-75.998	280.265	1.00	15.22		O

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	ANISOU 3889	O	HOH W 242	1526	2118	2138	422	-77	-734	O
	HETATM 3890	O	HOH W 243	-25.853	-73.200	268.997	1.00	15.31		O
	ANISOU 3890	O	HOH W 243	1329	2218	2267	98	-150	-426	O
	HETATM 3891	O	HOH W 244	6.308	-105.503	289.343	1.00	15.25		O
5	ANISOU 3891	O	HOH W 244	2048	1746	2000	-42	31	817	O
	HETATM 3892	O	HOH W 245	-6.929	-78.672	297.845	1.00	15.30		O
	ANISOU 3892	O	HOH W 245	2107	1998	1708	50	-73	33	O
	HETATM 3893	O	HOH W 246	-19.909	-73.130	283.115	1.00	15.82		O
	ANISOU 3893	O	HOH W 246	1336	2386	2289	344	124	-511	O
10	HETATM 3894	O	HOH W 247	-21.030	-63.143	279.176	1.00	15.85		O
	ANISOU 3894	O	HOH W 247	1669	2600	1751	211	4	55	O
	HETATM 3895	O	HOH W 248	-21.040	-80.791	284.208	1.00	19.50		O
	ANISOU 3895	O	HOH W 248	1886	2095	3428	-561	-500	-266	O
	HETATM 3896	O	HOH W 249	-2.230	-100.229	297.639	1.00	14.23		O
15	ANISOU 3896	O	HOH W 249	1805	1635	1966	293	499	893	O
	HETATM 3897	O	HOH W 250	-16.067	-82.982	290.244	1.00	15.53		O
	ANISOU 3897	O	HOH W 250	1654	1746	2501	-220	-147	-99	O
	HETATM 3898	O	HOH W 251	-16.355	-96.661	282.513	1.00	19.22		O
	ANISOU 3898	O	HOH W 251	2984	2003	2317	-138	349	254	O
20	HETATM 3899	O	HOH W 252	-4.370	-83.198	298.714	1.00	16.92		O
	ANISOU 3899	O	HOH W 252	2478	1508	2439	-698	-245	-298	O
	HETATM 3900	O	HOH W 253	-20.455	-68.010	291.218	1.00	16.29		O
	ANISOU 3900	O	HOH W 253	1772	2137	2280	-108	620	468	O
	HETATM 3901	O	HOH W 254	-3.646	-91.810	295.256	1.00	14.19		O
25	ANISOU 3901	O	HOH W 254	1854	1964	1574	-549	209	440	O
	HETATM 3902	O	HOH W 255	-8.405	-105.461	279.854	1.00	16.03		O
	ANISOU 3902	O	HOH W 255	2740	1140	2210	-445	593	245	O
	HETATM 3903	O	HOH W 256	9.266	-107.615	279.015	1.00	17.97		O
	ANISOU 3903	O	HOH W 256	2922	1458	2447	47	528	312	O
30	HETATM 3904	O	HOH W 257	26.901	-84.247	281.706	1.00	17.71		O
	ANISOU 3904	O	HOH W 257	2005	2057	2666	-173	-190	1078	O
	HETATM 3905	O	HOH W 258	3.440	-102.741	288.433	1.00	18.11		O
	ANISOU 3905	O	HOH W 258	2163	2489	2228	-97	513	348	O
	HETATM 3906	O	HOH W 259	-19.929	-77.070	288.737	1.00	19.22		O
35	ANISOU 3906	O	HOH W 259	2286	1820	3195	-97	61	741	O
	HETATM 3907	O	HOH W 260	5.341	-104.477	300.589	1.00	17.50		O

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	ANISOU 3907	O	HOH W 260	2787	1353	2507	-86	100	624	O
	HETATM 3908	O	HOH W 261	-1.579	-69.018	303.325	1.00	20.62		O
	ANISOU 3908	O	HOH W 261	2753	3181	1901	-211	-215	-313	O
	HETATM 3909	O	HOH W 262	22.308	-89.393	261.078	1.00	19.77		O
5	ANISOU 3909	O	HOH W 262	2636	2350	2524	1101	1194	1326	O
	HETATM 3910	O	HOH W 263	-8.778	-70.005	301.559	1.00	18.58		O
	ANISOU 3910	O	HOH W 263	3053	2681	1325	290	159	457	O
	HETATM 3911	O	HOH W 264	-16.181	-85.291	294.272	1.00	19.41		O
	ANISOU 3911	O	HOH W 264	2432	2458	2484	182	645	690	O
10	HETATM 3912	O	HOH W 265	-9.833	-103.659	273.812	1.00	16.27		O
	ANISOU 3912	O	HOH W 265	1959	1840	2382	-417	382	-452	O
	HETATM 3913	O	HOH W 266	-6.116	-62.090	295.578	1.00	17.96		O
	ANISOU 3913	O	HOH W 266	3022	1442	2359	-354	467	-173	O
	HETATM 3914	O	HOH W 267	-11.684	-97.953	284.638	1.00	18.48		O
15	ANISOU 3914	O	HOH W 267	2696	2063	2262	475	464	232	O
	HETATM 3915	O	HOH W 268	-12.283	-103.205	264.128	1.00	17.99		O
	ANISOU 3915	O	HOH W 268	2270	2495	2070	-302	-243	782	O
	HETATM 3916	O	HOH W 269	-18.235	-90.963	251.659	1.00	20.24		O
	ANISOU 3916	O	HOH W 269	2941	2956	1791	-317	-209	-278	O
20	HETATM 3917	O	HOH W 270	17.463	-98.974	299.388	1.00	19.50		O
	ANISOU 3917	O	HOH W 270	2116	2312	2979	223	-323	1214	O
	HETATM 3918	O	HOH W 271	-19.043	-79.516	283.041	1.00	19.54		O
	ANISOU 3918	O	HOH W 271	2413	2627	2384	-298	-506	811	O
	HETATM 3919	O	HOH W 272	-13.669	-63.944	298.177	1.00	21.49		O
25	ANISOU 3919	O	HOH W 272	2583	3251	2329	404	917	-456	O
	HETATM 3920	O	HOH W 273	-1.276	-100.619	300.194	1.00	18.79		O
	ANISOU 3920	O	HOH W 273	2691	2273	2172	119	-235	564	O
	HETATM 3921	O	HOH W 274	-7.275	-67.266	301.277	1.00	21.14		O
	ANISOU 3921	O	HOH W 274	3425	3099	1507	326	-577	-67	O
30	HETATM 3922	O	HOH W 275	4.049	-65.420	265.863	1.00	42.80		O
	ANISOU 3922	O	HOH W 275	5878	6252	4131	-1323	-1827	1201	O
	HETATM 3923	O	HOH W 276	29.355	-83.698	298.929	1.00	28.08		O
	ANISOU 3923	O	HOH W 276	3355	3967	3346	658	55	1704	O
	HETATM 3924	O	HOH W 277	19.420	-71.010	278.068	1.00	28.04		O
35	ANISOU 3924	O	HOH W 277	2671	2771	5212	550	174	-1047	O
	HETATM 3925	O	HOH W 278	10.637	-81.738	280.744	1.00	28.24		O

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	ANISOU 3925	O	HOH W 278	4417	2790	3522	-172	737	1376	O
	HETATM 3926	O	HOH W 279	26.875	-75.740	288.092	1.00	26.80		O
	ANISOU 3926	O	HOH W 279	2475	3955	3751	-72	-51	-237	O
	HETATM 3927	O	HOH W 280	29.790	-82.700	290.225	1.00	27.27		O
5	ANISOU 3927	O	HOH W 280	2756	3828	3777	-409	-726	848	O
	HETATM 3928	O	HOH W 281	-5.644	-55.672	294.499	1.00	27.99		O
	ANISOU 3928	O	HOH W 281	3452	3473	3710	277	-2	581	O
	HETATM 3929	O	HOH W 282	9.370	-70.098	302.236	1.00	34.53		O
	ANISOU 3929	O	HOH W 282	3694	4982	4443	119	298	100	O
10	HETATM 3930	O	HOH W 283	-5.831	-55.724	297.047	1.00	32.46		O
	ANISOU 3930	O	HOH W 283	4053	4366	3915	-452	860	-229	O
	HETATM 3931	O	HOH W 284	21.373	-94.417	296.452	1.00	18.83		O
	ANISOU 3931	O	HOH W 284	1511	2588	3055	332	209	13	O
	HETATM 3932	O	HOH W 285	12.207	-99.929	294.920	1.00	18.04		O
15	ANISOU 3932	O	HOH W 285	2036	2779	2036	28	-35	761	O
	HETATM 3933	O	HOH W 286	-24.875	-85.296	279.450	1.00	20.95		O
	ANISOU 3933	O	HOH W 286	2960	2813	2186	-210	949	500	O
	HETATM 3934	O	HOH W 287	-12.109	-96.865	292.737	1.00	18.74		O
	ANISOU 3934	O	HOH W 287	2458	2074	2585	180	298	176	O
20	HETATM 3935	O	HOH W 288	-17.108	-76.251	292.845	1.00	21.66		O
	ANISOU 3935	O	HOH W 288	2451	3017	2759	-249	419	-37	O
	HETATM 3936	O	HOH W 289	-13.419	-92.544	291.644	1.00	20.02		O
	ANISOU 3936	O	HOH W 289	2216	2566	2824	-610	990	371	O
	HETATM 3937	O	HOH W 290	-9.316	-106.700	282.127	1.00	22.62		O
25	ANISOU 3937	O	HOH W 290	3597	2510	2487	-468	559	575	O
	HETATM 3938	O	HOH W 291	-5.345	-90.682	297.270	1.00	19.21		O
	ANISOU 3938	O	HOH W 291	2959	2072	2266	450	44	-306	O
	HETATM 3939	O	HOH W 292	-12.045	-98.149	287.379	1.00	19.46		O
	ANISOU 3939	O	HOH W 292	3068	2398	1928	447	139	492	O
30	HETATM 3940	O	HOH W 293	-1.598	-76.361	306.021	1.00	20.73		O
	ANISOU 3940	O	HOH W 293	2346	3712	1817	-351	-232	457	O
	HETATM 3941	O	HOH W 294	-4.383	-65.723	271.566	1.00	42.10		O
	ANISOU 3941	O	HOH W 294	5657	6358	3980	1754	-1772	-822	O
	HETATM 3942	O	HOH W 295	21.858	-98.152	281.832	1.00	20.99		O
35	ANISOU 3942	O	HOH W 295	3411	1946	2617	-173	411	391	O
	HETATM 3943	O	HOH W 296	-0.125	-108.762	282.515	1.00	20.89		O

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	ANISOU 3943	O	HOH W 296	3782	2066	2087	2	-125	-307	O
	HETATM 3944	O	HOH W 297	16.577-101.683	292.477	1.00	21.46			O
	ANISOU 3944	O	HOH W 297	3014	2323	2813	-331	-160	1054	O
	HETATM 3945	O	HOH W 298	-26.314	-72.128	271.558	1.00	20.84		O
5	ANISOU 3945	O	HOH W 298	2009	3472	2435	712	-515	-586	O
	HETATM 3946	O	HOH W 299	-20.433	-73.965	285.653	1.00	22.33		O
	ANISOU 3946	O	HOH W 299	2725	3479	2281	-646	360	-644	O
	HETATM 3947	O	HOH W 300	-17.032	-61.405	289.799	1.00	20.35		O
	ANISOU 3947	O	HOH W 300	2448	3005	2278	303	284	-509	O
10	HETATM 3948	O	HOH W 301	-3.734-101.621	301.334	1.00	21.56			O
	ANISOU 3948	O	HOH W 301	3276	2252	2661	-351	781	958	O
	HETATM 3949	O	HOH W 302	0.349	-99.027	301.802	1.00	24.13		O
	ANISOU 3949	O	HOH W 302	3503	2879	2784	109	437	168	O
	HETATM 3950	O	HOH W 303	-22.379	-77.004	281.857	1.00	21.80		O
15	ANISOU 3950	O	HOH W 303	2520	3021	2741	425	253	-731	O
	HETATM 3951	O	HOH W 304	-17.268	-84.860	291.784	1.00	23.07		O
	ANISOU 3951	O	HOH W 304	2702	3493	2570	-822	581	1360	O
	HETATM 3952	O	HOH W 305	-15.185	-69.906	297.814	1.00	22.26		O
	ANISOU 3952	O	HOH W 305	2490	3429	2539	-191	268	953	O
20	HETATM 3953	O	HOH W 306	-22.184	-70.870	263.659	1.00	23.82		O
	ANISOU 3953	O	HOH W 306	3476	2013	3560	103	-40	641	O
	HETATM 3954	O	HOH W 307	-26.343	-71.271	267.221	1.00	22.18		O
	ANISOU 3954	O	HOH W 307	2783	2743	2901	536	-232	-504	O
	HETATM 3955	O	HOH W 308	-20.522	-82.011	288.933	1.00	25.15		O
25	ANISOU 3955	O	HOH W 308	2180	4150	3225	-372	553	1106	O
	HETATM 3956	O	HOH W 309	11.926	-94.938	303.200	1.00	22.28		O
	ANISOU 3956	O	HOH W 309	2852	2894	2718	231	-35	427	O
	HETATM 3957	O	HOH W 310	-8.874-106.254	270.189	1.00	22.16			O
	ANISOU 3957	O	HOH W 310	2699	2859	2860	-317	-40	493	O
30	HETATM 3958	O	HOH W 311	-0.670	-96.727	302.728	1.00	22.40		O
	ANISOU 3958	O	HOH W 311	2661	2896	2954	-277	-565	487	O
	HETATM 3959	O	HOH W 312	-23.246	-65.635	278.337	1.00	21.81		O
	ANISOU 3959	O	HOH W 312	3142	2598	2546	130	948	646	O
	HETATM 3960	O	HOH W 313	-23.111	-88.146	282.582	1.00	25.08		O
35	ANISOU 3960	O	HOH W 313	3348	3337	2844	-670	209	-627	O
	HETATM 3961	O	HOH W 314	19.786-106.393	288.125	1.00	23.90			O

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	ANISOU 3961	O	HOH W 314	3263	2921	2894	993	-16	1066	O
	HETATM 3962	O	HOH W 315	5.285-103.561	291.922	1.00	23.86			O
	ANISOU 3962	O	HOH W 315	3597	3300	2167	-597	214	12	O
	HETATM 3963	O	HOH W 316	-21.505	-90.313	283.945	1.00	26.10		O
5	ANISOU 3963	O	HOH W 316	3229	3880	2807	297	956	489	O
	HETATM 3964	O	HOH W 317	0.815-102.240	279.020	1.00	23.07			O
	ANISOU 3964	O	HOH W 317	2345	3682	2737	224	649	489	O
	HETATM 3965	O	HOH W 318	10.445-102.052	304.303	1.00	27.26			O
	ANISOU 3965	O	HOH W 318	3410	3435	3511	-151	238	1408	O
10	HETATM 3966	O	HOH W 319	-4.240-102.113	297.936	1.00	23.20			O
	ANISOU 3966	O	HOH W 319	3301	1620	3892	-473	683	959	O
	HETATM 3967	O	HOH W 320	8.400-105.567	292.820	1.00	21.64			O
	ANISOU 3967	O	HOH W 320	3609	2050	2561	-453	561	203	O
	HETATM 3968	O	HOH W 321	-2.258-105.264	289.356	1.00	24.22			O
15	ANISOU 3968	O	HOH W 321	3112	2315	3773	-1177	-348	713	O
	HETATM 3969	O	HOH W 322	-8.640	-62.167	298.534	1.00	25.16		O
	ANISOU 3969	O	HOH W 322	2601	3274	3683	40	-508	-2032	O
	HETATM 3970	O	HOH W 323	11.734	-92.438	304.210	1.00	23.32		O
	ANISOU 3970	O	HOH W 323	2857	3396	2604	378	-572	994	O
20	HETATM 3971	O	HOH W 324	-11.411	-89.574	256.081	1.00	29.50		O
	ANISOU 3971	O	HOH W 324	3089	4468	3651	171	-689	-467	O
	HETATM 3972	O	HOH W 325	-12.023	-63.191	267.221	1.00	21.34		O
	ANISOU 3972	O	HOH W 325	2653	3103	2349	-560	-318	-244	O
	HETATM 3973	O	HOH W 326	-10.905	-95.221	294.695	1.00	21.98		O
25	ANISOU 3973	O	HOH W 326	2485	3073	2790	-245	253	921	O
	HETATM 3974	O	HOH W 327	-22.030	-90.718	280.955	1.00	22.50		O
	ANISOU 3974	O	HOH W 327	2932	2701	2913	-545	87	-585	O
	HETATM 3975	O	HOH W 328	1.027-103.927	276.912	1.00	21.61			O
	ANISOU 3975	O	HOH W 328	2497	3301	2412	-927	-82	963	O
30	HETATM 3976	O	HOH W 329	-28.971	-79.545	255.855	1.00	25.26		O
	ANISOU 3976	O	HOH W 329	2330	3779	3485	57	-851	-535	O
	HETATM 3977	O	HOH W 330	-6.702	-68.807	304.135	1.00	25.62		O
	ANISOU 3977	O	HOH W 330	2953	3474	3308	1295	-61	-297	O
	HETATM 3978	O	HOH W 331	10.038	-95.820	304.481	1.00	23.47		O
35	ANISOU 3978	O	HOH W 331	3695	2622	2600	254	-520	22	O
	HETATM 3979	O	HOH W 332	-18.670	-98.498	276.186	1.00	21.71		O

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	ANISOU 3979	O	HOH W 332	2859	2474	2914	-604	504	537	O
	HETATM 3980	O	HOH W 333	-21.460	-68.643	264.815	1.00	24.41		O
	ANISOU 3980	O	HOH W 333	3790	2437	3048	647	95	-330	O
	HETATM 3981	O	HOH W 334	20.918	-98.427	263.254	1.00	25.89		O
5	ANISOU 3981	O	HOH W 334	3032	3011	3793	744	196	-484	O
	HETATM 3982	O	HOH W 335	16.731	-99.845	302.015	1.00	24.26		O
	ANISOU 3982	O	HOH W 335	3690	3000	2526	-150	-297	819	O
	HETATM 3983	O	HOH W 336	-23.913	-74.812	281.741	1.00	25.71		O
	ANISOU 3983	O	HOH W 336	4210	2439	3117	6	587	-672	O
10	HETATM 3984	O	HOH W 337	-19.728	-65.238	261.628	1.00	25.89		O
	ANISOU 3984	O	HOH W 337	3781	2709	3347	-1296	994	-103	O
	HETATM 3985	O	HOH W 338	-0.069	-102.966	299.877	1.00	25.98		O
	ANISOU 3985	O	HOH W 338	2948	2876	4045	-53	132	626	O
	HETATM 3986	O	HOH W 339	-19.528	-76.782	286.107	1.00	26.99		O
15	ANISOU 3986	O	HOH W 339	3061	3180	4012	-579	424	222	O
	HETATM 3987	O	HOH W 340	-24.639	-65.175	274.228	1.00	22.80		O
	ANISOU 3987	O	HOH W 340	2263	3575	2825	0	-453	-905	O
	HETATM 3988	O	HOH W 341	-2.230	-85.548	303.115	1.00	26.46		O
	ANISOU 3988	O	HOH W 341	2497	3907	3648	242	323	142	O
20	HETATM 3989	O	HOH W 342	19.278	-106.594	278.452	1.00	24.32		O
	ANISOU 3989	O	HOH W 342	3912	1901	3424	838	-259	-308	O
	HETATM 3990	O	HOH W 343	8.168	-94.795	306.129	1.00	27.58		O
	ANISOU 3990	O	HOH W 343	3791	3687	2998	223	276	425	O
	HETATM 3991	O	HOH W 344	-8.002	-90.527	296.820	1.00	24.08		O
25	ANISOU 3991	O	HOH W 344	3467	3248	2433	587	123	148	O
	HETATM 3992	O	HOH W 345	14.222	-106.792	274.778	1.00	25.80		O
	ANISOU 3992	O	HOH W 345	3090	2943	3768	619	113	-265	O
	HETATM 3993	O	HOH W 346	-1.698	-73.396	305.363	1.00	26.31		O
	ANISOU 3993	O	HOH W 346	3477	3189	3329	-125	48	-329	O
30	HETATM 3994	O	HOH W 347	-22.666	-91.176	278.271	1.00	24.89		O
	ANISOU 3994	O	HOH W 347	2891	3147	3415	-700	-205	488	O
	HETATM 3995	O	HOH W 348	24.014	-93.622	296.791	1.00	25.86		O
	ANISOU 3995	O	HOH W 348	2783	2301	4740	314	548	-175	O
	HETATM 3996	O	HOH W 349	-7.476	-108.098	276.196	1.00	25.90		O
35	ANISOU 3996	O	HOH W 349	2704	3466	3668	-999	259	145	O
	HETATM 3997	O	HOH W 350	-24.027	-67.935	266.089	1.00	28.70		O

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	ANISOU 3997	O	HOH W 350	3632	4187	3083	161	-125	323	O
	HETATM 3998	O	HOH W 351	-16.529	-77.519	295.415	1.00	26.91		O
	ANISOU 3998	O	HOH W 351	3650	2264	4308	245	519	-709	O
	HETATM 3999	O	HOH W 352	-22.571	-67.151	289.490	1.00	26.88		O
5	ANISOU 3999	O	HOH W 352	2631	3359	4223	-319	861	651	O
	HETATM 4000	O	HOH W 353	10.999	-107.458	281.344	1.00	25.15		O
	ANISOU 4000	O	HOH W 353	3362	3014	3178	60	336	144	O
	HETATM 4001	O	HOH W 354	-7.101	-81.416	298.733	1.00	25.42		O
	ANISOU 4001	O	HOH W 354	2728	3704	3224	-780	-64	363	O
10	HETATM 4002	O	HOH W 355	11.043	-106.380	284.023	1.00	23.97		O
	ANISOU 4002	O	HOH W 355	2916	2443	3748	149	-147	-142	O
	HETATM 4003	O	HOH W 356	-20.508	-63.022	261.074	1.00	27.52		O
	ANISOU 4003	O	HOH W 356	2332	4317	3806	-1187	187	-800	O
	HETATM 4004	O	HOH W 357	-20.638	-74.586	289.641	1.00	28.10		O
15	ANISOU 4004	O	HOH W 357	3276	2600	4800	243	1178	-168	O
	HETATM 4005	O	HOH W 358	-10.361	-105.524	275.449	1.00	28.62		O
	ANISOU 4005	O	HOH W 358	3981	1987	4904	-1314	-276	909	O
	HETATM 4006	O	HOH W 359	19.803	-97.526	299.982	1.00	30.78		O
	ANISOU 4006	O	HOH W 359	3037	3863	4793	-88	-1061	2135	O
20	HETATM 4007	O	HOH W 360	-15.665	-89.973	295.011	1.00	26.25		O
	ANISOU 4007	O	HOH W 360	3724	3639	2609	288	1187	711	O
	HETATM 4008	O	HOH W 361	-13.205	-104.835	283.708	1.00	29.59		O
	ANISOU 4008	O	HOH W 361	2983	4310	3947	-887	-126	227	O
	HETATM 4009	O	HOH W 362	-17.238	-88.502	288.922	1.00	29.57		O
25	ANISOU 4009	O	HOH W 362	3518	3599	4115	834	560	-281	O
	HETATM 4010	O	HOH W 363	-13.935	-78.402	296.691	1.00	28.81		O
	ANISOU 4010	O	HOH W 363	4683	3227	3034	1812	283	579	O
	HETATM 4011	O	HOH W 364	7.082	-108.830	279.809	1.00	26.90		O
	ANISOU 4011	O	HOH W 364	3121	3461	3637	10	25	-79	O
30	HETATM 4012	O	HOH W 365	17.423	-104.734	272.144	1.00	28.95		O
	ANISOU 4012	O	HOH W 365	3806	3617	3575	468	143	-213	O
	HETATM 4013	O	HOH W 366	3.294	-105.307	288.979	1.00	26.66		O
	ANISOU 4013	O	HOH W 366	3745	2394	3990	101	314	463	O
	HETATM 4014	O	HOH W 367	-19.683	-72.032	291.432	1.00	29.67		O
35	ANISOU 4014	O	HOH W 367	3931	3297	4042	-1193	405	-257	O
	HETATM 4015	O	HOH W 368	-24.431	-82.217	286.484	1.00	29.92		O

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	ANISOU 4015	O	HOH W 368	3723	4411	3234	-50	399	92	O
	HETATM 4016	O	HOH W 369	-10.647-105.567	278.004	1.00	30.93			O
	ANISOU 4016	O	HOH W 369	4329	3589	3833	-1544	329	579	O
	HETATM 4017	O	HOH W 370	-7.974-109.217	273.594	1.00	30.67			O
5	ANISOU 4017	O	HOH W 370	4012	3250	4388	-1716	-695	-203	O
	HETATM 4018	O	HOH W 371	3.088-107.029	285.547	1.00	33.69			O
	ANISOU 4018	O	HOH W 371	3860	4221	4720	-799	361	80	O
	HETATM 4019	O	HOH W 372	-5.959-109.180	285.157	1.00	28.74			O
	ANISOU 4019	O	HOH W 372	4325	2611	3983	-837	-188	-501	O
10	HETATM 4020	O	HOH W 373	3.223-105.015	292.473	1.00	29.29			O
	ANISOU 4020	O	HOH W 373	4042	2352	4732	-285	459	-118	O
	HETATM 4021	O	HOH W 374	9.538-107.493	286.055	1.00	30.10			O
	ANISOU 4021	O	HOH W 374	3954	3893	3586	-364	-1023	2	O
	HETATM 4022	O	HOH W 375	13.184-102.359	295.641	1.00	30.73			O
15	ANISOU 4022	O	HOH W 375	4374	3468	3834	148	-459	612	O
	HETATM 4023	O	HOH W 376	1.188-100.265	278.953	1.00	28.59			O
	ANISOU 4023	O	HOH W 376	3661	3406	3795	-25	-337	111	O
	HETATM 4024	O	HOH W 377	-12.130-106.936	282.234	1.00	30.12			O
	ANISOU 4024	O	HOH W 377	4001	3652	3792	-67	254	192	O
20	HETATM 4025	O	HOH W 378	6.552-101.280	304.065	1.00	30.88			O
	ANISOU 4025	O	HOH W 378	3561	4208	3963	-532	120	810	O
	HETATM 4026	O	HOH W 379	24.085 -92.785	285.664	1.00	30.39			O
	ANISOU 4026	O	HOH W 379	3756	3750	4039	473	436	224	O
	HETATM 4027	O	HOH W 380	-12.425 -65.533	268.723	1.00	26.93			O
25	ANISOU 4027	O	HOH W 380	3978	3060	3191	-101	166	-157	O
	HETATM 4028	O	HOH W 381	-18.403 -86.871	290.619	1.00	31.90			O
	ANISOU 4028	O	HOH W 381	4142	3749	4226	-334	217	722	O
	HETATM 4029	O	HOH W 382	-13.561 -95.801	288.291	1.00	29.53			O
	ANISOU 4029	O	HOH W 382	3727	3589	3905	541	417	15	O
30	HETATM 4030	O	HOH W 383	-12.682-101.686	290.457	1.00	30.05			O
	ANISOU 4030	O	HOH W 383	4035	3901	3480	-88	292	180	O
	HETATM 4031	O	HOH W 384	-20.653 -85.971	289.239	1.00	30.28			O
	ANISOU 4031	O	HOH W 384	3913	4655	2937	59	556	306	O
	HETATM 4032	O	HOH W 385	-11.375-103.110	271.748	1.00	30.45			O
35	ANISOU 4032	O	HOH W 385	4101	3746	3721	-358	9	158	O
	HETATM 4033	O	HOH W 386	-13.970 -61.741	296.195	1.00	29.60			O

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	ANISOU 4033	O	HOH W 386	4236	3697	3313	230	-427	195	O
	HETATM 4034	O	HOH W 387	-0.979	-64.346	294.586	1.00	31.25		O
	ANISOU 4034	O	HOH W 387	3772	4392	3709	467	-621	402	O
	HETATM 4035	O	HOH W 388	-4.690	-82.640	301.408	1.00	29.54		O
5	ANISOU 4035	O	HOH W 388	3392	4008	3823	-718	-425	600	O
	HETATM 4036	O	HOH W 389	-27.663	-74.950	272.414	1.00	31.44		O
	ANISOU 4036	O	HOH W 389	3982	4416	3546	-303	13	-695	O
	HETATM 4037	O	HOH W 390	1.677	-100.336	304.049	1.00	33.25		O
	ANISOU 4037	O	HOH W 390	4179	4680	3773	363	900	290	O
10	HETATM 4038	O	HOH W 391	24.513	-79.284	303.639	1.00	31.67		O
	ANISOU 4038	O	HOH W 391	4241	2764	5025	91	-413	312	O
	HETATM 4039	O	HOH W 392	-20.402	-62.303	283.133	1.00	33.59		O
	ANISOU 4039	O	HOH W 392	4547	4749	3465	1244	-600	-66	O
	HETATM 4040	O	HOH W 393	21.374	-96.948	297.624	1.00	30.72		O
15	ANISOU 4040	O	HOH W 393	3331	3179	5159	611	14	487	O
	HETATM 4041	O	HOH W 394	-16.718	-53.327	285.745	1.00	33.31		O
	ANISOU 4041	O	HOH W 394	3547	4613	4495	548	45	207	O
	HETATM 4042	O	HOH W 395	24.373	-98.467	275.938	1.00	30.64		O
	ANISOU 4042	O	HOH W 395	3841	3389	4409	184	133	273	O
20	HETATM 4043	O	HOH W 396	-0.000	-60.998	294.192	0.50	28.89		O
	ANISOU 4043	O	HOH W 396	3551	3743	3683	88	0	0	O
	HETATM 4044	O	HOH W 397	25.396	-99.935	287.995	1.00	32.75		O
	ANISOU 4044	O	HOH W 397	3569	4503	4369	466	-33	-70	O
	HETATM 4045	O	HOH W 398	1.774	-105.797	286.946	1.00	32.90		O
25	ANISOU 4045	O	HOH W 398	3705	4610	4182	321	621	148	O
	HETATM 4046	O	HOH W 399	14.806	-74.963	287.082	1.00	32.28		O
	ANISOU 4046	O	HOH W 399	4073	3832	4360	51	-730	1111	O
	HETATM 4047	O	HOH W 400	18.761	-93.318	303.529	1.00	32.52		O
	ANISOU 4047	O	HOH W 400	4765	3627	3963	-266	199	369	O
30	HETATM 4048	O	HOH W 401	-23.174	-65.769	285.343	1.00	33.73		O
	ANISOU 4048	O	HOH W 401	4403	3904	4507	426	-146	92	O
	HETATM 4049	O	HOH W 402	-1.770	-79.657	305.331	1.00	33.02		O
	ANISOU 4049	O	HOH W 402	3905	4837	3800	-602	770	690	O
	HETATM 4050	O	HOH W 403	-9.563	-82.973	298.166	1.00	33.65		O
35	ANISOU 4050	O	HOH W 403	4248	4989	3546	-453	-814	223	O
	HETATM 4051	O	HOH W 404	2.710	-96.917	306.471	1.00	34.22		O

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ANISOU	4051	O	HOH W 404	4888	4921	3191	177	475	900	O
HETATM	4052	O	HOH W 405	17.785-101.433	297.844	1.00	31.64			O
ANISOU	4052	O	HOH W 405	4138	3881	4003	849	-207	78	O

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CLAIMS

1. A substantially purified and/or recombinant polypeptide comprising:
 i) an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6
5 to 12,
 ii) an amino acid sequence which is at least 40% identical to any one or more
of SEQ ID NOs:1, 2 or 6 to 12, or
 iii) a biologically active fragment of i) or ii),
wherein the polypeptide has amino transferase activity.
- 10 2. The polypeptide of claim 1, wherein the polypeptide catalyses the transfer of an
amino group from an amino donor to an amino acceptor.
3. The polypeptide of claim 2, wherein the polypeptide catalyses the reversible
15 transfer of an amino group from an amino donor to an amino acceptor.
4. The polypeptide of any one of claims 1 to 3, wherein the amino donor or amino
acceptor comprises 3 to 12 carbons.
- 20 5. The polypeptide of any one of claims 1 to 3, wherein the amino donor or amino
acceptor comprises 4 to 12 carbons.
6. The polypeptide of any one of claims 1 to 3, wherein the amino donor or amino
acceptor comprises 9 to 12 carbons.
- 25 7. The polypeptide of any one of claims 2 to 6, wherein the amino donor is an
amino acid or an amine compound.
8. The polypeptide of claim 7, wherein the amino acid is an α -amino acid or an ω -
30 amino acid.

9. The polypeptide of claim 8, wherein the ω -amino acid is selected from the group consisting of: 3-aminopropanoic acid, 4-aminobutyric acid, 5-aminopentanoic acid, 6-aminohexanoic acid, 7-aminoheptanoic acid, 8-aminooctanoic acid, 11-aminoundecanoic acid, 12-aminododecanoic acid, 3-aminoheptanoic acid, 3-aminoisobutyric acid, and derivatives thereof.
10. The polypeptide of claim 7, wherein the amine compound is a diamine.
11. The polypeptide of claim 7, wherein the amine compound is selected from the group consisting of: 1,4-diaminobutane, 1,5-diaminopentane, 1,6-diaminohexane, 6-aminohexan-1-ol, Taurine, Tyramine, Cyclohexylamine, Isopropylamine, 2-aminoindan, and derivatives thereof.
12. The polypeptide of any one of claims 1 to 11, wherein the amino acceptor is a keto acid, a ketone or an aldehyde.
13. The polypeptide of claim 12, wherein the aldehyde is glyceraldehyde or gluteraldehyde.
14. An isolated and/or exogenous polynucleotide comprising one or more of:
- i) a sequence of nucleotides as provided in any one or more of SEQ ID NOs:3 to 5, or 14 to 20,
 - ii) a sequence of nucleotides encoding a polypeptide of any one of claims 1 to 13,
 - iii) a sequence of nucleotides which is at least 45% identical to i),
 - iv) a sequence of nucleotides which hybridizes to i) under stringent conditions, or
 - v) a sequence of nucleotides complementary to any one of i) to iv).
15. The polynucleotide of claim 14 which encodes a polypeptide that has amino transferase activity.

16. A vector comprising a polynucleotide of claim 14 or claim 15.
17. A host cell comprising a polynucleotide of claim 14 or claim 15, or a vector of
5 claim 16.
18. A method of producing a polypeptide of any one of claims 1 to 13, the method comprising cultivating a host cell of claim 17 encoding said polypeptide, or a vector of claim 16 in a cell free expression system encoding said polypeptide, under conditions
10 which allow expression of the polynucleotide encoding the polypeptide, and recovering the expressed polypeptide.
19. A polypeptide produced by the method of claim 18.
- 15 20. An isolated or substantially purified antibody which specifically binds to a polypeptide of any one of claims 1 to 13.
21. A transgenic non-human organism comprising an exogenous polynucleotide encoding a polypeptide of any one of claims 1 to 13.
20
22. An extract of a host cell of claim 17 or a transgenic non-human organism of claim 21, wherein the extract comprises a polypeptide of any one of claims 1 to 13.
23. A composition comprising one or more or all of:
25 i) a polypeptide of any one of claims 1 to 13 or claim 19,
ii) a polynucleotide of claim 14 or claim 15,
iii) a vector of claim 16,
iv) a host cell of claim 17,
v) an antibody of claim 20,
30 vi) a transgenic non-human organism of claim 21, or
vii) an extract of claim 22.

24. A composition for catalysing transfer of an amino group from an amino donor to an amino acceptor, the composition comprising one or more or all of:

- i) a polypeptide of any one of claims 1 to 13 or claim 19,
- 5 ii) a host cell of claim 17,
- iii) a transgenic non-human organism of claim 21, or
- iv) an extract of claim 22.

25. A method for catalysing transfer of an amino group from an amino donor to an amino acceptor, the method comprising contacting the amino donor and amino acceptor with a polypeptide of any one of claims 1 to 13 or a composition of claim 24.

26. The method of claim 25, wherein the polypeptide is produced by a host cell of claim 17.

27. A method for catalysing transfer of an amino group from an amino donor to an amino acceptor with a substantially purified and/or recombinant polypeptide which has amino transferase activity, wherein the amino donor or amino acceptor comprises at least 9 carbons.

28. The method of claim 27, wherein both the amino donor and amino acceptor have at least 9 carbons.

29. The method of any one of claims 25 to 28, wherein the method produces an industrial product.

30. The method of claim 29, wherein the method further comprises one or more reactions to produce an industrial product.

31. The process of claim 29 or claim 30, wherein the industrial product is an amino acid, diacid, amine, diamine, keto acid, diketo acid, ketone, diketo acid, aldehyde,

dialdehyde, semialdehyde, aminoaldehyde, polypeptide, polyamine, polyamide, polyketone, polyaldehyde, lactam, lactone, or fatty acid.

32. A method of producing a polypeptide with enhanced ability to catalyse the transfer of an amino group from an amino donor to an amino acceptor, or having altered substrate specificity, the method comprising:

- i) altering one or more amino acids of a polypeptide of any one of claims 1 to 13,
- ii) determining the ability of the altered polypeptide obtained from step i) to catalyse the transfer of an amino group from the amino donor to the amino acceptor,
- 10 and
- iii) selecting an altered polypeptide with enhanced ability to catalyse the transfer of an amino group from the amino donor, or having altered substrate specificity, when compared to the polypeptide used in step i).

15 33. A polypeptide produced by the method of claim 32.

34. A method for screening for a microorganism capable of catalysing the transfer of an amino group from an amino donor which comprises at least 9 carbons, the method comprising:

- 20 i) culturing a candidate microorganism in the presence of an amino donor which comprises at least 9 carbons, as a sole nitrogen source, and
- ii) determining whether the microorganism is capable of growth and/or division.

35. A kit comprising one or more or all of:

- 25 i) a polypeptide of any one of claims 1 to 13 or claim 19,
- ii) a polynucleotide of claim 14 or claim 15,
- iii) a vector of claim 16,
- iv) a host cell of claim 17,
- v) an antibody of claim 20,
- 30 vi) a transgenic non-human organism of claim 21, or
- vii) an extract of claim 22.

36. A crystal structure of a polypeptide comprising:
- i) an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6 to 12,
 - 5 ii) an amino acid sequence which is at least 40% identical to any one or more of SEQ ID NOs:1, 2 or 6 to 12, or
 - iii) a biologically active fragment of i) or ii),
- wherein the polypeptide has amino transferase activity.
- 10 37. A set of atomic coordinates, or subset thereof, of a crystal structure of claim 36.
38. A set of atomic coordinates, or subset thereof, provided in Appendix I.
39. A computer-readable medium having recorded thereon data representing the
- 15 atomic coordinates, or subset thereof, of a crystal structure of claim 36; or the atomic coordinates, or subset thereof, provided in Appendix I; and/or a model produced using the atomic coordinates.
40. A computer-assisted method of identifying a compound that binds to an amino
- 20 transferase, the method comprising the steps of:
- i) docking the structure of a candidate compound to a structure defined by the atomic coordinates, or subset thereof, of a crystal structure of claim 36; or the atomic coordinates, or subset thereof, provided in Appendix I, and
 - ii) identifying a candidate compound which may bind to the amino
- 25 transferase,
- wherein the amino transferase comprises:
- a) an amino acid sequence as provided in any one of SEQ ID NOs:1, 2 or 6 to 12,
 - b) an amino acid sequence which is at least 40% identical to any one or more
- 30 of SEQ ID NOs:1, 2 or 6 to 12, or
- c) a biologically active fragment of a) or b).

41. The method of claim 40 which further comprises synthesising or obtaining an identified candidate compound and determining if the compound binds to the amino transferase.

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42. A computer-assisted method for identifying a polypeptide which has amino transferase activity, the method comprising the steps of:

- i) comparing a structure defined by the atomic coordinates, or subset thereof, of a crystal structure of claim 36; or the atomic coordinates, or subset thereof, provided
10 in Appendix I, to a model of the tertiary structure of a candidate polypeptide, and
- ii) identifying a candidate compound which may have amino transferase activity.

43. The method of claim 42 which further comprises synthesising or obtaining an
15 identified polypeptide and determining if the polypeptide catalyses the transfer of an amino group from an amino donor to an amino acceptor.