

3 1710204PCT.Sequence table
Sequence Table

<110> Sun Lan

<120> Microbial Fermentation Method for Production of N-Acetyl-D-Glucosamine and/or D-Glucosamine Salt

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3 1710204PCT.Sequence table

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3 1710204PCT.Sequence table

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<210> 16
<211> 876
<212> DNA
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3 1710204PCT.Sequence table

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3 1710204PCT.Sequence table

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<212> DNA

<213> Escherichia coli

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cgcggcattg cagcggcagc gcagggggag ttggctggcg cgcatgcgaa aactattttc
600
acgcgcgccc ggcaggggtga cgagcagggc cagcagctga ttcaccgctc cgcacgtacg
660
cttgcaagcc tgatcgctga tattaaagcc acaactgatt gccagtgcgt ggtggctcgtt
720
ggcagcgttg gtctggcaga agggatatctg gcgctggtgg aaacgtatct ggcgcaggag
780
ccggcgccat ttcattgtga tttactggcg gcgcattacc gccatgatgc aggtttactt
840
ggggctgcgc tgttggccca gggagaaaaa ttatga
876

<210> 27

<211> 291

<212> Amino Acid

<213> Escherichia coli

<400> 27

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IASTGIIRDGSLALNPHNLGGLLHFPLVKTLEQLTNLPTIAMNDAQAAWAEFQALDGD
120
ITDMVFITVSTGVGGGVVSGCKLLTGPGLAGHIGHTLADPHGPVCGCGRTGCVEIASG
180
RGIAAAQAGELAGADAKTIFTRAGQGDEQAQQLIHRSAITLASLIADIKATTDCCVVG
240
GSVGLAEGYLALVETYLAEPAAFHVDLLAAHYRHDAGLLGAALLAQGEKL
291

<210> 28

<211> 690

<212> DNA

<213> Escherichia coli

<400> 28

atgtcgttac ttgcacaact ggatcaaaaa atcgtgcta acggtggcct gattgtctcc
60
tgccagccgg ttccggacag cccgctcgat aaaccgaaa tcgtcgccgc catggcatta

3 1710204PCT.Sequence table

120
 gcggcagaac aggcgggcg c ggttgccatt cgcattgaag gtgtggcaaa tctgcaagcc
 180
 acgcgtgcgg tgggtgagcgt gccgattatt ggaattgtga aacgcgatct ggaggattct
 240
 ccggtacgca tcacggccta tattgaagat gttgatgcgc tggcgcaggc gggcgcggac
 300
 attatcgcca ttgacggcac cgaccgccc cgtccggtgc ctggtgaaac gctgctggca
 360
 cgtattcacc atcacggttt actggcgatg accgactgct caacgccgga agacggcctg
 420
 gcatgcaaaa agctgggagc cgaaattatt ggcactacgc tttctggcta taccacgcct
 480
 gaaacgccag aagagccgga tctggcgctg gtgaaaacgt tgagcgacgc cggatgtcgg
 540
 gtgattgccg aagggcgcta caacacgcct gctcaggcgg cggatgcgat gcgccacggc
 600
 gcgtgggagg tgacggtcgg ttctgcaatc acgcgtcttg agcacatttg tcagtggtag
 660
 aacacagcga tgaaaaaggc ggtgctatga
 690

<210> 29
 <211> 229
 <212> Amino Acid
 <213> Escherichia coli
 <400> 29
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 60
 TRAVVSVPIIGIVKRDLEDSPVRITAYIEDVDALAQAGADIIAIDGTRPRPVPVETLLA
 120
 RIHHHGLLAMTDCSTPEDGLACQKLGA EIIGTTLSGYTTPETPEEPLALVKTLSDAGCR
 180
 VIAEGRYNTPAQAADAMRHGAWAVTVGSAITRLEHICQWYNTAMKKAVL
 229

<210> 30
 <211> 29
 <212> DNA
 <213> Artificial Sequence
 <400> 30
 catgccatgg cttcgttact tgcacaact
 29

<210> 31
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <400> 31
 cccaagctta tcatagcacc gcctttttca tcgc
 34

<210> 32
 <211> 166
 <212> DNA
 <213> Artificial Sequence
 <400> 32
 ttcgtgtcgc tcaaggcgca ctcccgttct ggataatgtt ttttgcgccg acatcataac
 60
 ggttctggca aatattctga aatgagctgt tgacaattaa tcatccggct cgtataatgt
 120
 gtggaattgt gagcggataa caatttcaca caggaaacag accatg
 166

<210> 33
 <211> 41
 <212> DNA
 <213> Artificial Sequence

3 1710204PCT.Sequence table

<400> 33
catggtcata gctgtttcct tcgtgtcgct caaggcgac t
41

<210> 34
<211> 19
<212> DNA
<213> Artificial Sequence
<400> 34
catggtctgt ttcctgtgt
19

<210> 35
<211> 41
<212> DNA
<213> Artificial Sequence
<400> 35
agtgcgcctt gagcgacacg aaggaaacag ctatgaccat g
41

<210> 36
<211> 18
<212> DNA
<213> Artificial Sequence
<400> 36
gtaaaacgac ggccagt
18

<210> 37
<211> 47
<212> DNA
<213> Escherichia coli
<400> 37
acatcttccc ttagcgaaag gcccgtaca tagaccgggc aacagga
47

<210> 38
<211> 68
<212> DNA
<213> Artificial Sequence
<400> 38
ccgtgccgtt tggcagcgcc aaaaacgatt tagtcaaac caaaagttaa gtaaaacgac
60
ggccagt
68

<210> 39
<211> 69
<212> DNA
<213> Artificial Sequence
<400> 39
atcaggccac cgtagcagc gattttttga tccagttgtg caagtaacga catggtctgt
60
ttcctgtgt
69

<210> 40
<211> 69
<212> DNA
<213> Artificial Sequence
<400> 40
cttattcccc ctacgagaac cctatttggc tcgtttcaag ccgtattttt agtaaaacga
60
cggccagt
69

<210> 41
<211> 67

3 1710204PCT.Sequence table

<212> DNA
 <213> Artificial Sequence
 <400> 41
 agcagcccat ttgccgacct gttcagcggg agtcaggggg atcagttctca tgggtctgttt
 60
 cctgtgt
 67

<210> 42
 <211> 190
 <212> DNA
 <213> Escherichia coli
 <400> 42
 tgaggagata acataatctc cctcccacaa gcagtaacta taaaaataac ccactctctt
 60
 acaaggctcg gggcgcccg aaaaacgggc atacaggttg accgacaacg atataaatcg
 120
 gaatcaaaaa ctatgtgtgg aattgttggc gcgatcgcg aacgtgatgt agcagaaatc
 180
 cttcttgaag
 190

<210> 43
 <211> 71
 <212> DNA
 <213> Artificial Sequence
 <400> 43
 tgaggagata acataatctc cctcccacaa gcagtaacta taaaaataac cccgtaaaac
 60
 gacggccagt g
 71

<210> 44
 <211> 75
 <212> DNA
 <213> Artificial Sequence
 <400> 44
 cttcaagaag gatttctgct acatcacgtt gcgcatcgcg gccacaatt ccacacggaa
 60
 acagctatga ccatg
 75

<210> 45
 <211> 68
 <212> DNA
 <213> Artificial Sequence
 <400> 45
 tgaggagata acataatctc cctcccacaa gcagtaacta taaaaataac gtaaaacgac
 60
 ggccagtg
 68

<210> 46
 <211> 74
 <212> DNA
 <213> Artificial Sequence
 <400> 46
 cttcaagaag gatttctgct acatcacgtt gcgcatcgcg gccacaatt ccacacatgg
 60
 tctgtttcct gtgt
 74

<210> 47
 <211> 69
 <212> DNA
 <213> Artificial Sequence
 <400> 47
 cttattcccc ctacgagaac cctatttggc tcgtttcaag ccgtattttt agtaaaacga

3 1710204PCT.Sequence table

60
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69
<210> 48
<211> 70
<212> DNA
<213> Artificial Sequence
<400> 48
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60
tatgaccatg
70

<210> 49
<211> 1131
<212> DNA
<213> Escherichia coli
<400> 49
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catgcggttg caaaagatcc tttttttgag gctaaagttt gcgtcactgc gcagcatcgg
120
gagatgctcg atcaggtgct gaaactcttt tccattgtac ctgactacga tctcaacata
180
atgcagccag gacagggcct gacagagata acctgtcggg ttctggaagg gctaaaacct
240
attcttgccg agttcaaacc agacgtcgtg ctgggttcacg gcgatacgac gacgacgctg
300
gcaaccagcc tggcggcggt ttatcagcgt attcctgttg gtcacgttga ggctgggtctg
360
cgcacgggag atctctattc gccgtggccg gaagaggcta accgtacatt gaccgggcat
420
ctggcgatgt atcacttctc tccaaccgaa acttcccggc aaaacttgct gcgtgaaaac
480
gttgcgata gccgaatctt cattaccggg aatacagtca ttgatgcact gttatgggtg
540
cgtgaccagg tgatgagcag cgacaagctg cgttcagaac tggcggcaaa ttaccggttt
600
atcgaccccg ataaaaagat gattctggtg accggtcaca ggcgtgagag tttcggtcgt
660
ggctttgaag aaatctgcca cgcgctggca gacatcgcca ccacgcacca ggacatccag
720
attgtctatc cgggtcatct caaccggaac gtcagagaac cgggtcaatcg cattctgggg
780
catgtgaaaa atgtcattct gatcgatccc caggagtatt taccgtttgt ctggctgatg
840
aaccacgcct ggctgatttt gaccgactca ggcggcattc aggaagaagc gccttcgctg
900
gggaaacctg tgctggtgat gcgcgatacc actgagcgtc cggaagcggg gacggcgggt
960
acggtgcgtc tggtaggcac ggataagcag cgaattgtcg aggaagtgc gcgtctttta
1020
aaagacgaaa acgaatatca agctatgagc cgcgccata acccgatatg tgatgggtcag
1080
gcatgctctc gcattctgga agcggttaaaa aataatcgga tactactatg a
1131

<210> 50
<211> 376
<212> Amino Acid
<213> Escherichia coli
<400> 50
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60
MQPGQGLTEITCRILEGLKPILAEFKPDVVLVHGDTTTLATSLAAFYQRIPVGHVEAGL
120
RTGDLYSPWP E EANRTL TGH LAMYHFSPTETSRQNLLRENVADSRIFITGNTVIDALLWV

3 1710204PCT.Sequence table

180
RDQVMSSDKLRSELAANYPFIDPDKKMILVTGHRRESFGRGFEEICHALADIATTHQDIQ
240
IVYPVHLNPNVREPVNRI LGHVKNVILIDPQEYLPFVWLMNHAWLILTDSGGIQEEAPSL
300
GKPVLVMRD TTERPEAVTAGTVRLVGTDKQRIVEEVTRLLKDENEYQAMSRAHNPYGDGQ
360
ACSRILEALKNNRISL
376

<210> 51
<211> 30
<212> DNA
<213> Artificial Sequence
<400> 51
catgccatgg tgaaagtact gactgtattt
30

<210> 52
<211> 31
<212> DNA
<213> Artificial Sequence
<400> 52
cccaagctta ttatagtgat atccgattat t
31

<210> 53
<211> 110
<212> DNA
<213> Escherichia coli
<400> 53
tgtcgggggg ctgatcgggg ctggtgtcgc attaaccgcg cggtgctcga aatagcaaca
60
ctgctgcggt gagcgcaaag gcgctcgccg cttattcgaa gagaatcgat
110

<210> 54
<211> 73
<212> DNA
<213> Artificial Sequence
<400> 54
tgtcgggggg ctgatcgggg ctggtgtcgc attaaccgcg cggtgctcga aataggtaaa
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acgacggcca gtg
73

<210> 55
<211> 69
<212> DNA
<213> Artificial Sequence
<400> 55
atcgattctc ttcgaataag cggcgagcgc ctttgcgctc accgcagcag catggtctgt
60
ttcctgtgt
69

<210> 56
<211> 690
<212> DNA
<213> Escherichia coli
<400> 56
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tgccagccgg ttccggacag cccgctcgat aaaccgaaa tcgtcgccgc catggcatta
120
gcggcagaac aggcggggcg ggttgccatt cgcattgaag gtgtggcaaa tctgcaagcc
180
acgcgtgcgg tggtagtgtt gccgattatt ggaattgtga aacgcgatct ggaggattct

3 1710204PCT.Sequence table

240
 ccggtacgca tcacggccta tattgaagat gttgatgcgc tggcgcaggc gggcgcggac
 300
 attatcgcca ttgacggcac cgaccgcccg cgtccggtgc ctgttgaaac gctgctggca
 360
 cgtattcacc atcacggttt actggcgcgat accgaccgct caacgccgga agacggcctg
 420
 gcatgccaaa agctgggagc cgaaattatt ggcactacgc tttctggcta taccacgcct
 480
 gaaacgccag aagagccgga tctggcgcgtg gtgaaaacgt tgagcgacgc cggatgtcgg
 540
 gtgattgccg aagggcgctca caacacgcct gctcaggcgg cggatgcgat gcgccacggc
 600
 gcgtgggcgg tgacggtcgg ttctgcaatc acgcgtcttg agcacatttg tcagtggtag
 660
 aacacagcga tgaaaaaggc ggtgctatga
 690

<210> 57
 <211> 229
 <212> Amino Acid
 <213> Escherichia coli
 <400> 57
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 60
 TRAVVSVPIIGIVKRDLEDSPVRITAYIEDVDALAQAGADIIAIDGTDRPRPVPVETLLA
 120
 RIHHHGLLAMTDRSTPEDGLACQKLGAEIIGTTLSGYTTPETPEEPDLALVKTLSDAGCR
 180
 VIAEGRHNTPAQAADAMRHGAWAVTVGSAITRLEHICQWYNTAMKKAVL
 229

<210> 58
 <211> 1131
 <212> DNA
 <213> Escherichia coli
 <400> 58
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 60
 catgcgttgg caaaagatcc tttttttgag gctaaagttt ccgtcactgc gcagcatcgg
 120
 gagatgctcg atcaggtgct gaaactcttt tccattgtac ctgactacga tctcaacata
 180
 atgcagccag gacagggcct gacagagata acctgtcggg ttctggaagg gctaaaacct
 240
 attcttgccg agttcaaacc agacgtcgtg ctggttcacg gcgatacgac gacgacgctg
 300
 gcaaccagcc tggcggcggt ttatcagcgt attcctgttg gtcacgttga ggctggctctg
 360
 cgcacgggag atctctattc gccgtggccg gaagaggcta accgtacatt gaccgggcat
 420
 ctggcgcgat atgacttctc tccaaccgaa acttcccggc aaaacttgct gcgtgaaaac
 480
 gttgcggata gccgaatctt cattaccggt aatacagtca ttgatgcact gttatgggtg
 540
 cgtgaccagg tgatgagcag cgacaagctg cgttcagaac tggcggcaaa ttaccggttt
 600
 atcgaccccg ataaaaagat gattctggtg accggtcaca ggcgtgagag tttcggtcgt
 660
 ggctttgaag aaatcttcca cgcgctggca gacatcgcca ccacgcacca ggacatccag
 720
 attgtctatc cggggcatct caaccgaac gtcagagaac cgggtcaatcg cattctgggg
 780
 catgtgaaaa atgtcattct gatcgatccc caggagtatt taccgtttgt ctggctgatg
 840
 aaccacgcct ggctgatttt gaccgactca ggcggcattc aggaagaagc gccttcgctg
 900
 gggaaacctg tgctggtgat gcgcgatacc actgagcgtc cggaagcggg gacggcgggt

3 1710204PCT.Sequence table

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1020
aaagacgaaa acgaatacca agctatgagc cgcgcccata acccgatgag tgatgggtcag
1080
gcatgctctc gcattctgga agcgttaaaa aataatcgga taccactatg a
1131

<210> 59
<211> 376
<212> Amino Acid
<213> Escherichia coli
<400> 59
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60
MQPGQGLTEITCRILEGLKPILAEFKPDVVLVHGDTTTTLATSLAAFYQRIPVGHVEAGL
120
RTGDL YSPWPEE ANRTL TGH LAMYDFSPTETSRQNLLRENVADSRI FITGNTVIDALLWV
180
RDQVMSSDKLRSELAANYPFIDPKKMILVTGHRRESFGRGFEEIFHALADIATTHQDIQ
240
IVYPGHLNPNVREP VNRILGHVKNVILIDPQEYLPFVWLMNHAWLIL TDSGGIQEEAPSL
300
GKPVLMRDTTERPEAVTAGTVRLVGTDKQRIVEEVTRLLKDENEYQAMSRANPYGDGQ
360
ACSRILEALKNNRISL
376

<210> 60
<211> 441
<212> DNA
<213> Escherichia coli
<400> 60
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60
ggcgtcacca tcaccaccac cttctacaag aacctgttcg ccaagcaccg ggaggtccgc
120
cccctgttcg acatgggccc gcaggagtcc ctcgagcagc cgaaggccct ggcgatgacc
180
gtgctcgccg cggcccagaa catcgagaac ctgccggcca tcctccccgc ggtcaagaag
240
atcgccgtga agcactgcca ggccggcgtc gcggccgcgc actaccccat cgtgggcccag
300
gagctgctcg gcgccatcaa ggaggtcctg ggcgacgccg cgaccgacga catcctcgac
360
gcctggggca aggcgtacgg cgtgatcgcg gacgtgttca tccaggtgga ggcggacctc
420
tacgcgagg cggtggagta a
441

<210> 61
<211> 146
<212> Amino Acid
<213> Escherichia coli
<400> 61
MLDQQTINI I KATVPVLKEHGV TITTTFYKNLFAKHPEVRPLFDMGRQESLEQPKALAMT
60
VLAAAQNIENLPAILPAVKKIAVKHCQAGVAAAHYPIVGQELLGAIKEVLGDAATDDILD
120
AWGKAYGVIADVFIQVEADLYAQAVE
146

<210> 62
<211> 29
<212> DNA
<213> Artificial Sequence
<400> 62
catgccatgg acctcgacca gcagaccat

29

<210> 63
 <211> 31
 <212> DNA
 <213> Artificial Sequence
 <400> 63
 cccaagctta ttactccacc gcctgcgcgta g
 31

<210> 64
 <211> 441
 <212> DNA
 <213> Escherichia coli
 <400> 64
 atgctcgacc agcagacat caacatcatc aaggcgaccg tccccgtcct caaggagcac
 60
 ggcgtcacca tcaccaccac cttctacaag aacctgttcg ccaagcaccg ggaggtccgc
 120
 cccctgttcg acctggggccg gcaggagtcc ctcgagcagc cgaaggccct ggcgatgacc
 180
 gtgctcgccg cggcccagaa catcgagaac ctgccggcca tcctccccgc ggtcaagaag
 240
 atcgccgtga agcacggcca ggccggcgtc gcggccgcgc actcccccat cgtgggcccag
 300
 gagctgctcg gcgccatcaa ggaggtcctg ggcgacgccg cgaccgacga catcctcgac
 360
 gcctggggca aggcgtacgg cgtgatcgcg gacgtgttca tccaggtgga ggcggacctc
 420
 tacgcgagg cggtggagta a
 441

<210> 65
 <211> 146
 <212> Amino Acid
 <213> Escherichia coli
 <400> 65
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 60
 VLAAQNIENLPAILPAVKKIIVKHGQAGVAAAHSPIVGQELLGAIKEVLGDAATDDILD
 120
 AWGKAYGVIADVFIQVEADLYAQAVE
 146