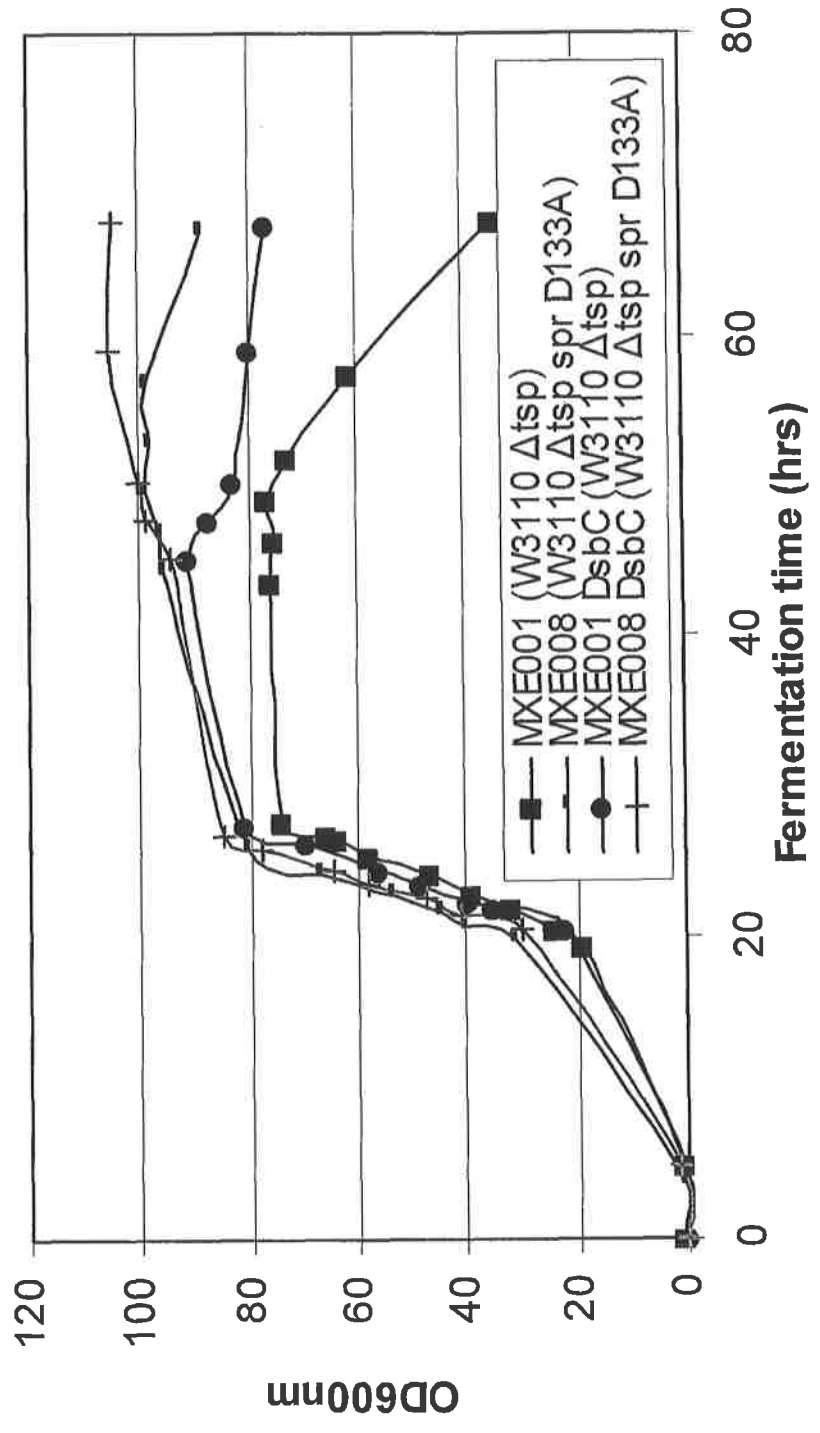

OD600nm
120
100
80
60
40
20
0
0
20
40
60
80
Fermentation time (hrs)
MXE001 (W3110 Δtsp)
MXE008 (W3110 Δtsp spr D133A)
MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)

Figure 1

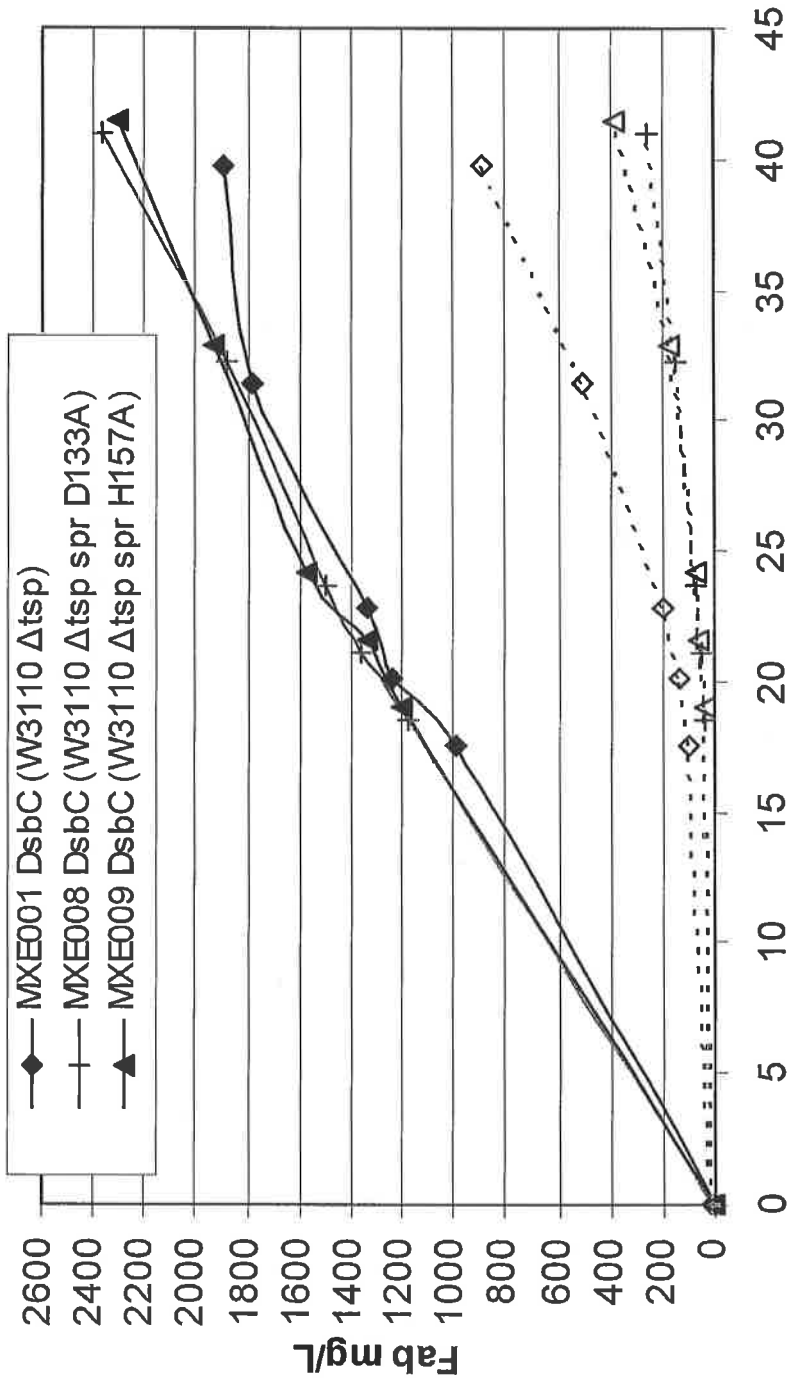

MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)
MXE009 DsbC (W3110 Δtsp spr H157A)
Fab mg/L
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
0
5
10
15
20
25
30
35
40
45
Time post-induction (hrs)

Figure 2

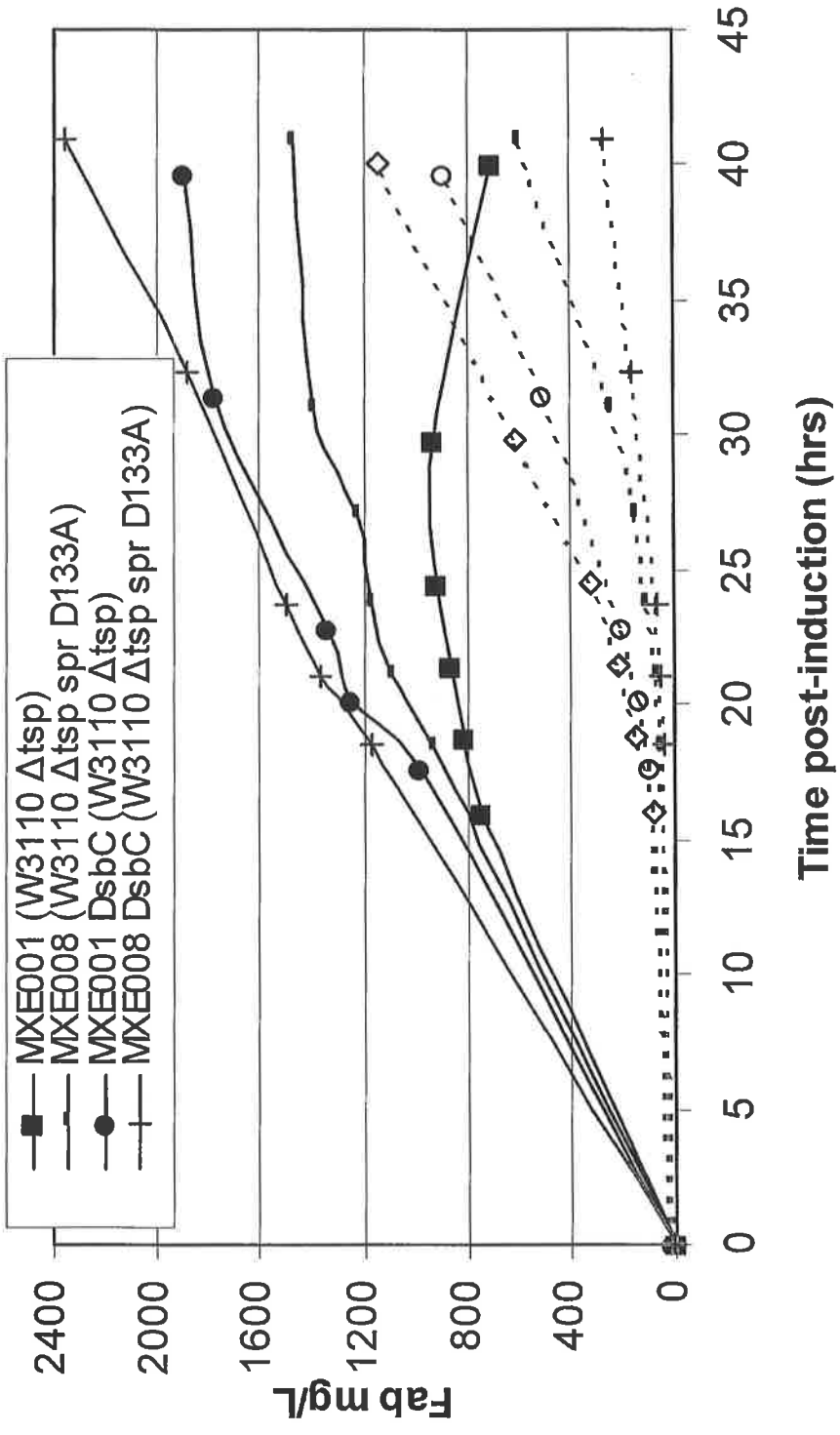

MXE001 (W3110 Δtsp)
MXE008 (W3110 Δtsp spr D133A)
MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)
Fab mg/L
0
400
800
1200
1600
2000
2400
0
5
10
15
20
25
30
35
40
45
Time post-induction (hrs)

Figure 3

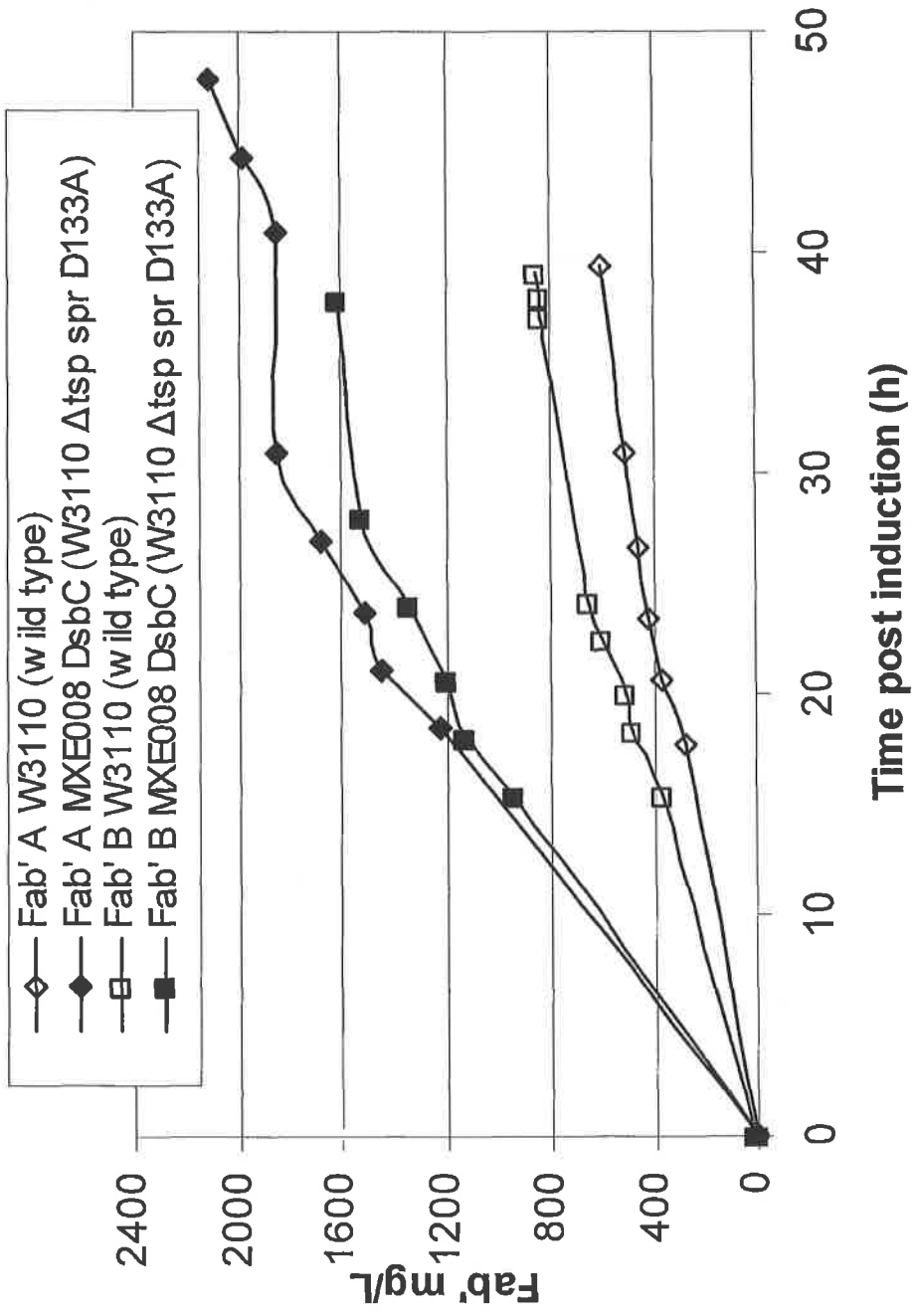

Fab' A W3110 (w ild type)
Fab' A MXE008 DsbC (W3110 Δtsp spr D133A)
Fab' B W3110 (w ild type)
Fab' B MXE008 DsbC (W3110 Δtsp spr D133A)
Fab' mg/L
0
400
800
1200
1600
2000
2400
0
10
20
30
40
50
Time post induction (h)

Figure 4

Figure 5a

Wild type ptr (protease III) 5'.

```
  *   M   P   R   S   T   W   F   K   A   L   L   L   L   V
TGA ATG CCC CGC AGC ACC TGG TTC AAA GCA TTA TTG TTG TTA GTT

  A   L   W   A   P   L   S
GCC CTT TGG GCA CCC TTA AGT
```

Mutated Δ ptr (protease III) 5'.

```
     EcoR I
    ~~~~~~~~
  *   I   P   R   S   T   W   F   K   A   L   L   L   L   V
TGA ATT CCC CGC AGC ACC TGG TTC AAA GCA TTA TTG TTG TTA GTT

                        Ase I
                       ~~~~~~~~
  A   L   W   A   H   *   C
GCC CTT TGG GCA CAT TAA TGT
```

Figure 5b

Wild type Tsp 5'.

```
  M   N   M   F   F   R   L   T   A   L   A   G   L   L   A
ATG AAC ATG TTT TTT AGG CTT ACC GCG TTA GCT GGC CTG CTT GCA

  I   A   G   Q   T   F   A
ATA GCA GGC CAG ACC TTC GCT
```

Mutated Δ Tsp 5'.

```
     EcoR I
    ~~~~~~~~~
  M   N   S   F   L   G   L   P   R   *   L   A   C   L   Q
ATG AAT TCG TTT TTA GGC TTA CCG CGT TAG CTG GCC TGC TTG CAA

                        Ase I
                       ~~~~~~~~
  *   Q   A   R   H   *   L
TAG CAG GCC AGA CAT TAA TTG
```

Figure 5c

Wild type DegP

202	D	A	A	I	N	R	G	N	**S**	G	G
949	GAT	GCA	GCG	ATC	AAC	CGT	GGT	AAC	***TCC***	GGT	GGT

Mutated DegP S210A

Ase I

202	D	A	A	I	N	R	G	N	**A**	G	G
949	GAT	GCA	GCG	***ATT***	***AAT***	CGT	GGT	AAC	***GCC***	GGT	GGT

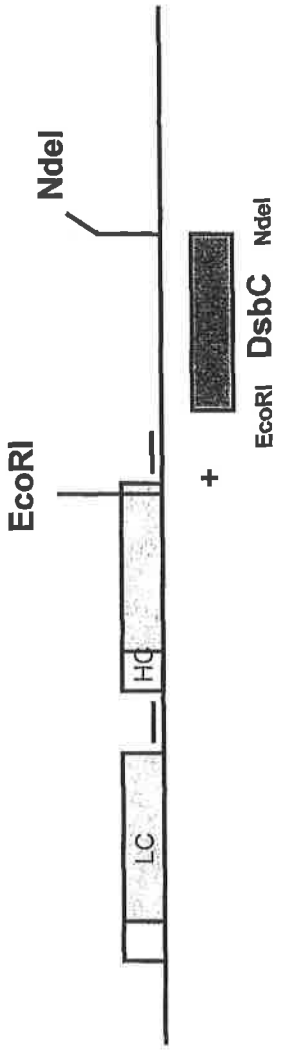


Figure 6

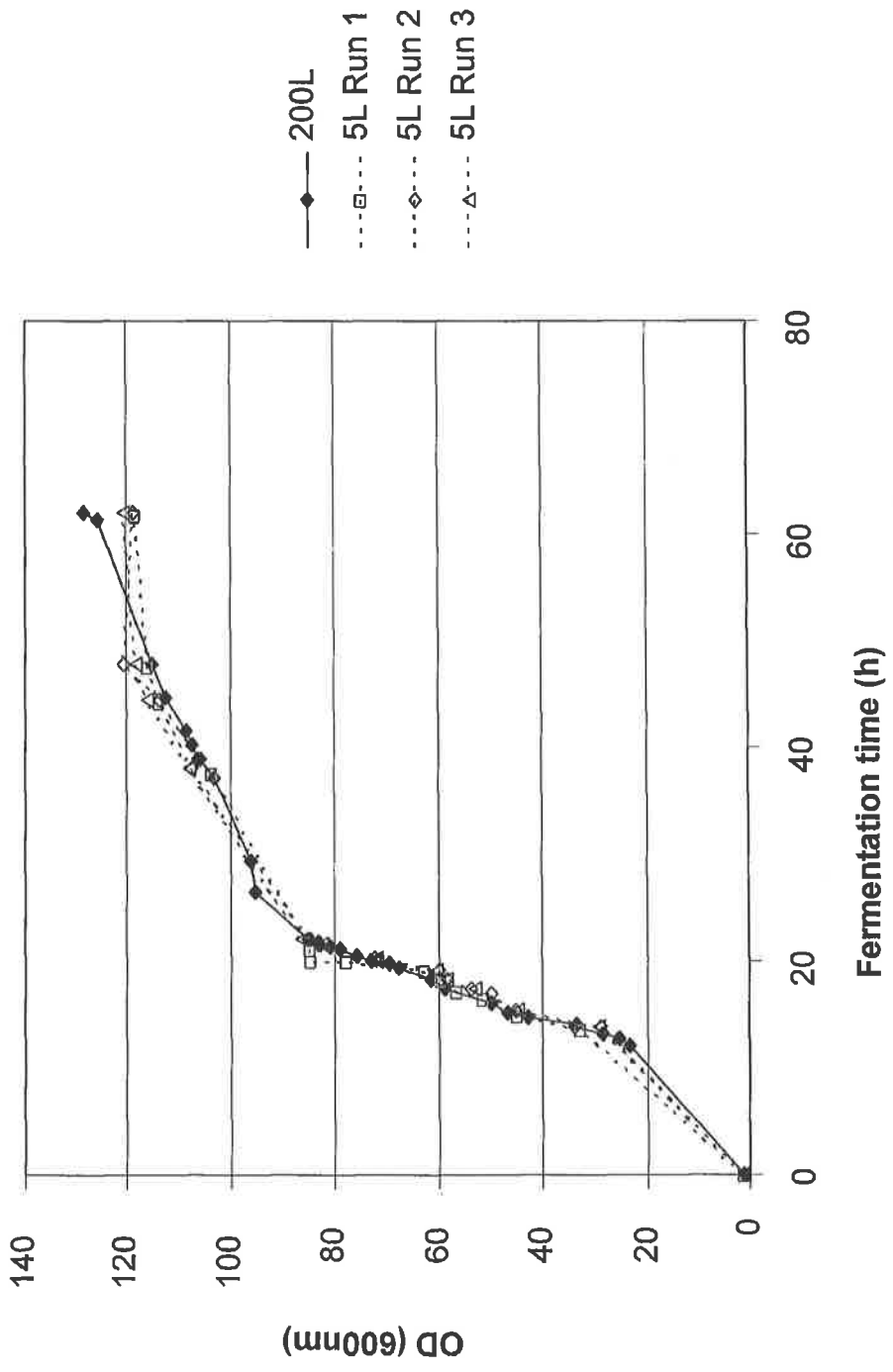

200L
5L Run 1
5L Run 2
5L Run 3
OD (600nm)
0
20
40
60
80
100
120
140
Fermentation time (h)
0
20
40
60
80

Figure 7

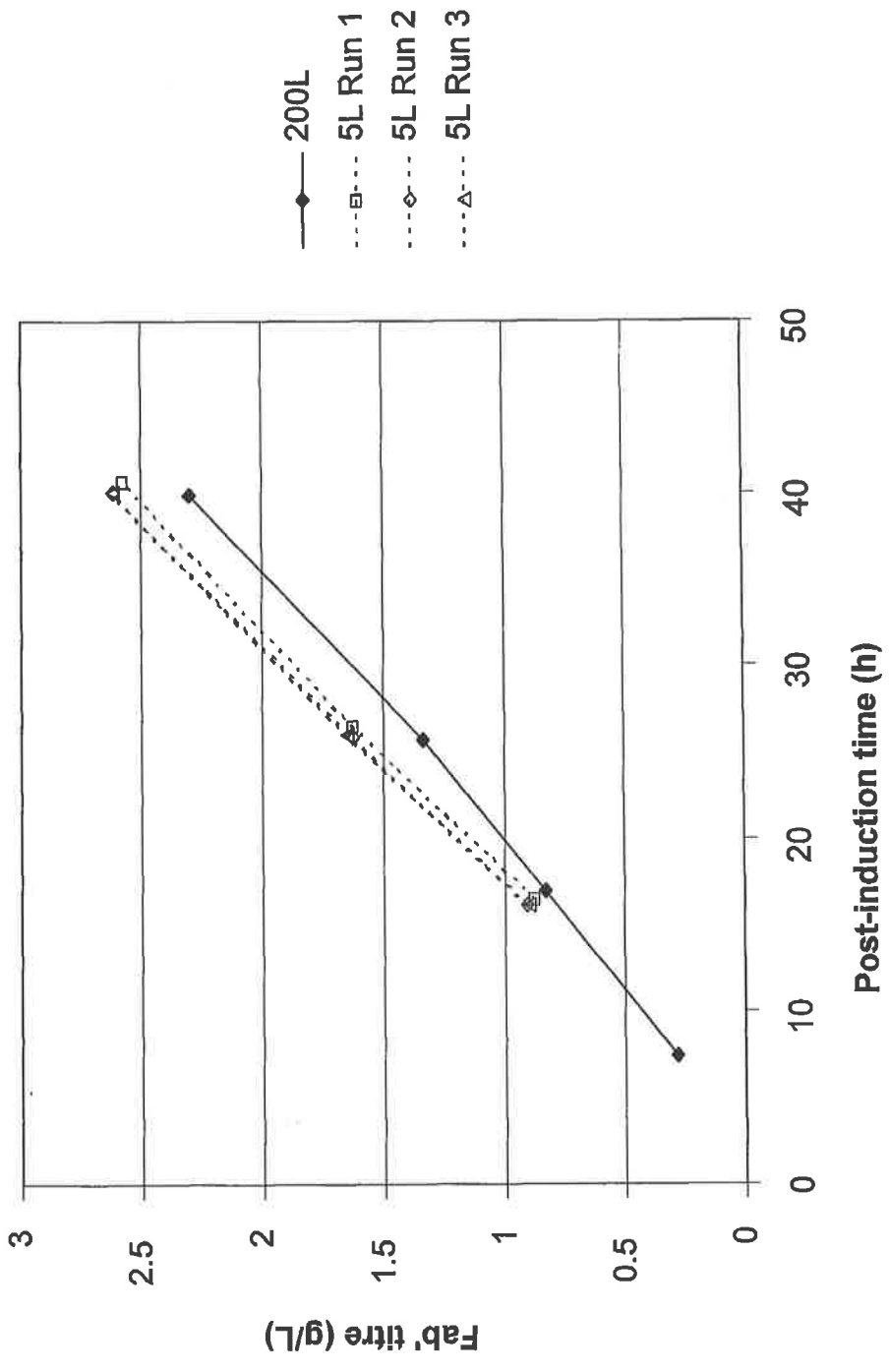

200L
5L Run 1
5L Run 2
5L Run 3
Fab' titre (g/L)
0
0.5
1
1.5
2
2.5
3
0
10
20
30
40
50
Post-induction time (h)

Figure 8

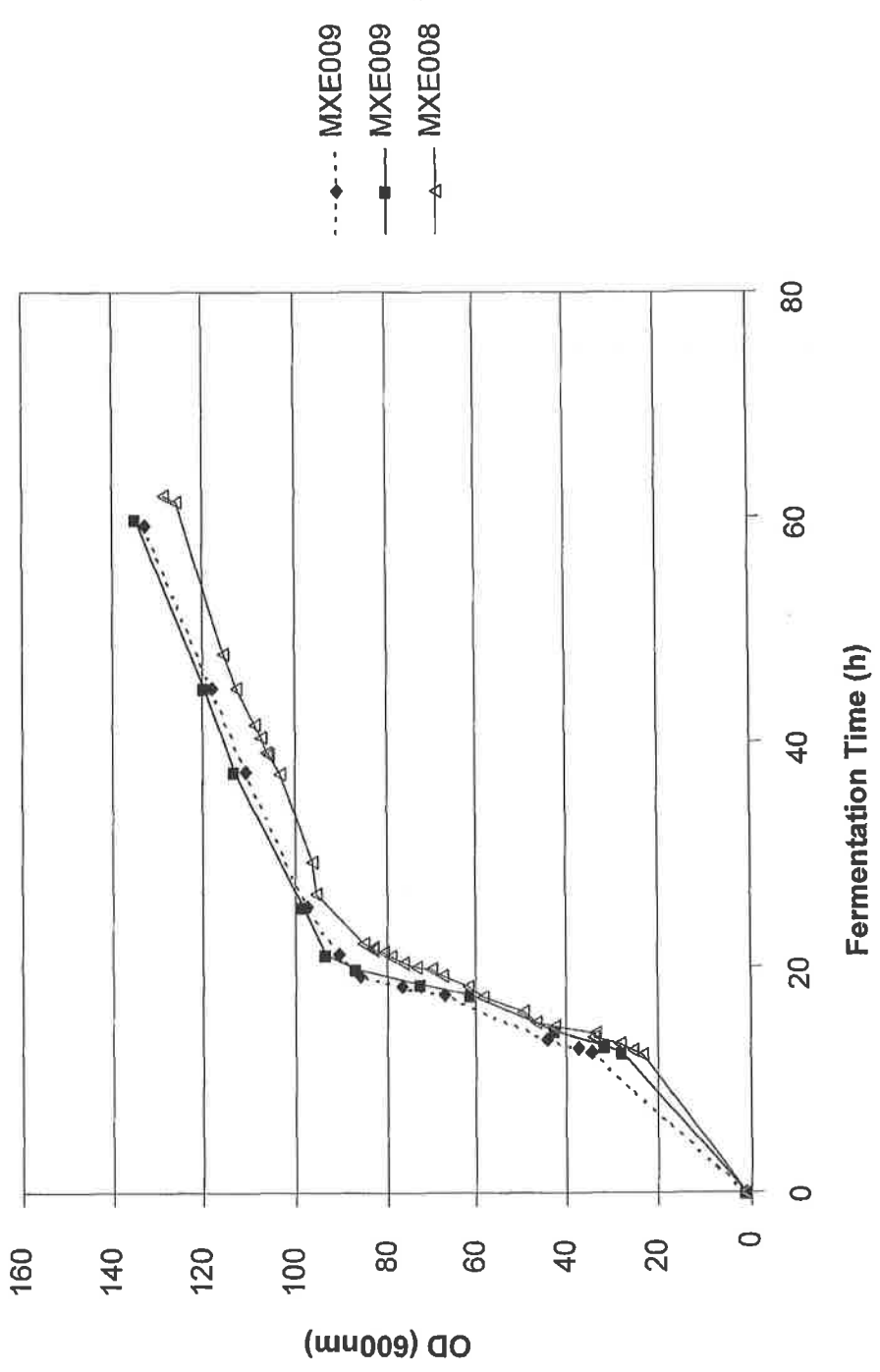

MXE009
MXE009
MXE008
OD (600nm)
0
20
40
60
80
100
120
140
160
0
20
40
60
80
Fermentation Time (h)

Figure 9

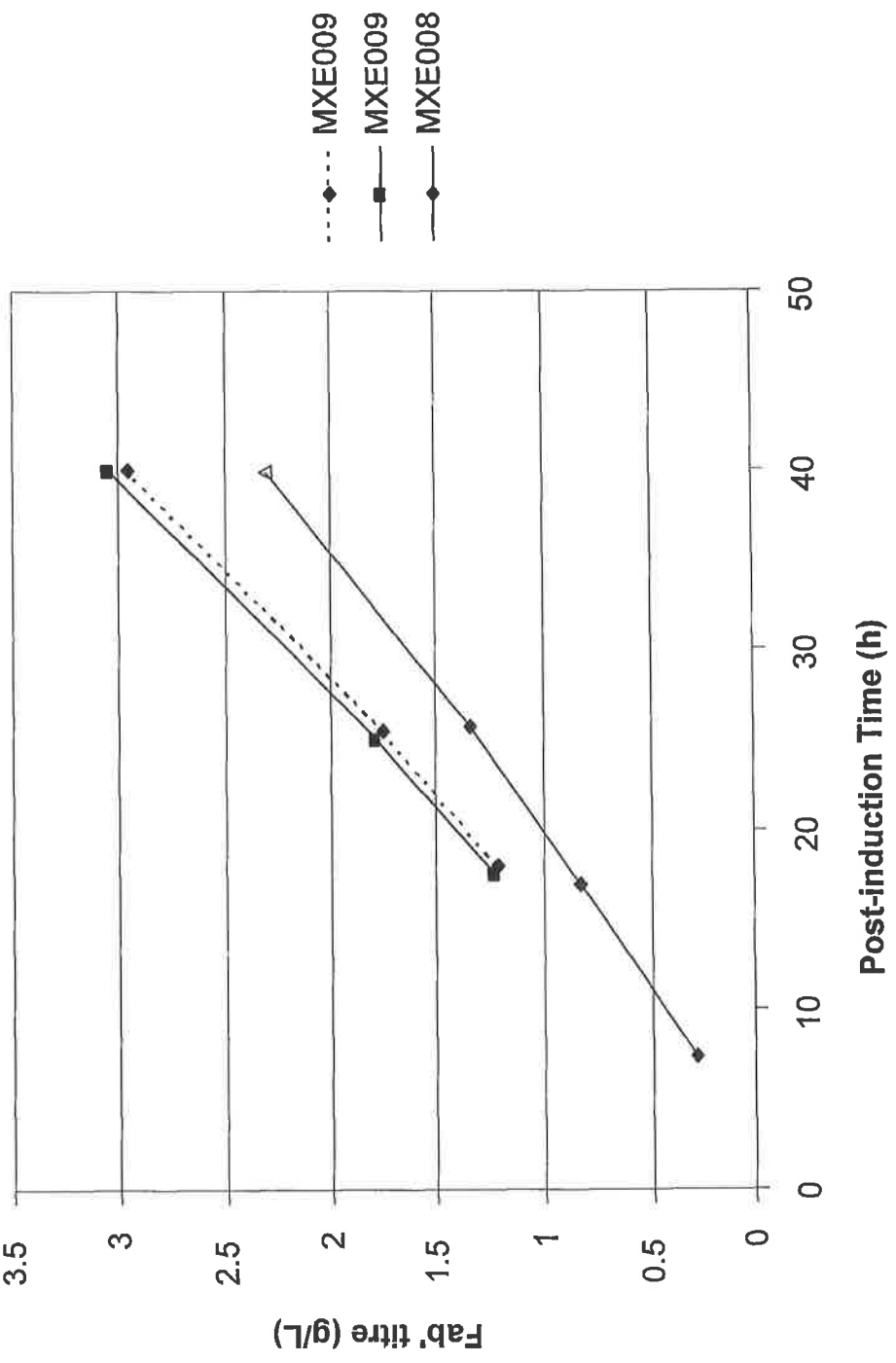

MXE009
MXE009
MXE008
Fab' titre (g/L)
Post-induction Time (h)
0
0.5
1
1.5
2
2.5
3
3.5
0
10
20
30
40
50

Figure 10