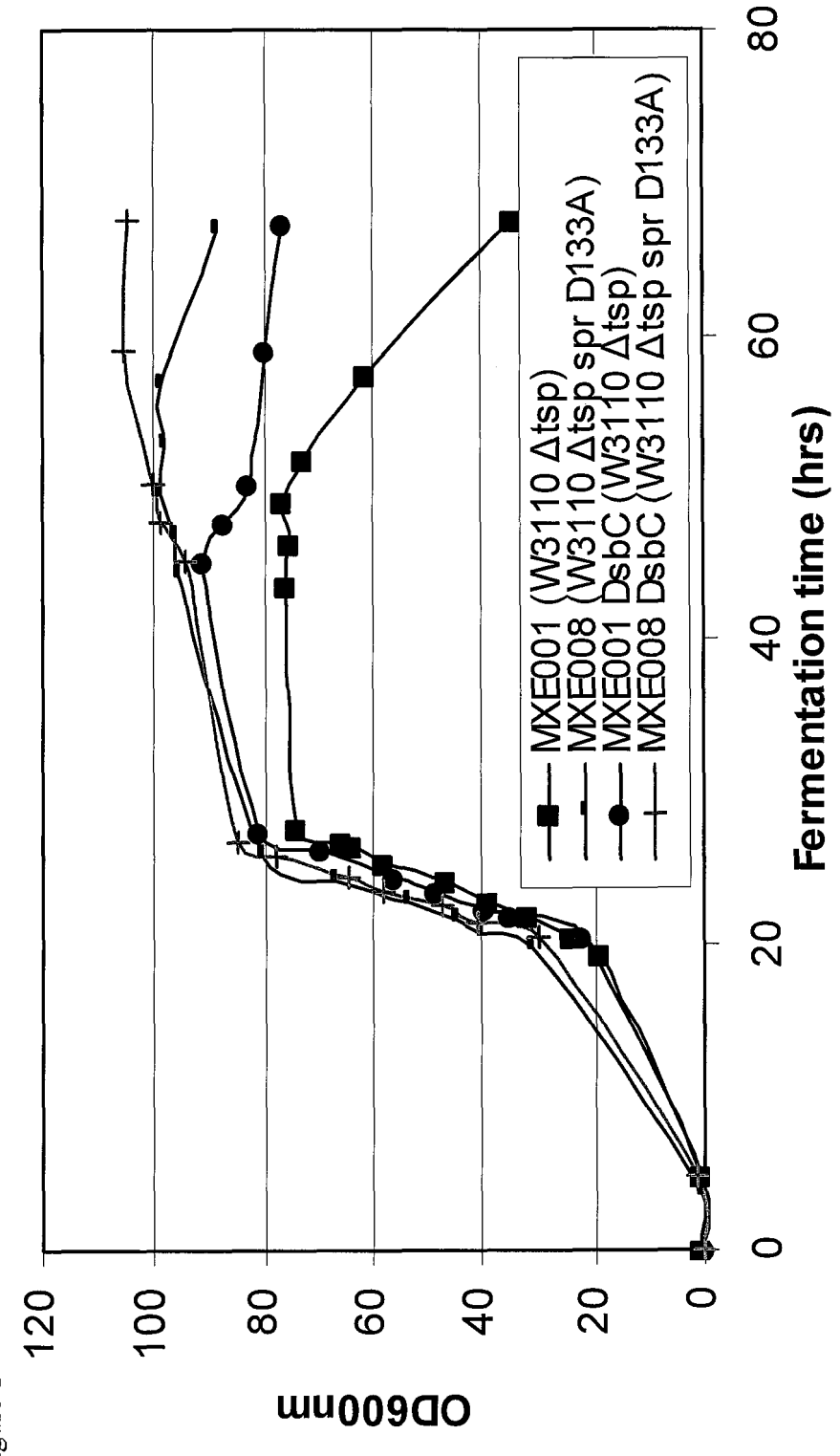

OD600nm
120
100
80
60
40
20
0
0
20
40
60
80
Fermentation time (hrs)
MXE001 (W3110 Δtsp)
MXE008 (W3110 Δtsp spr D133A)
MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)

Figure 1

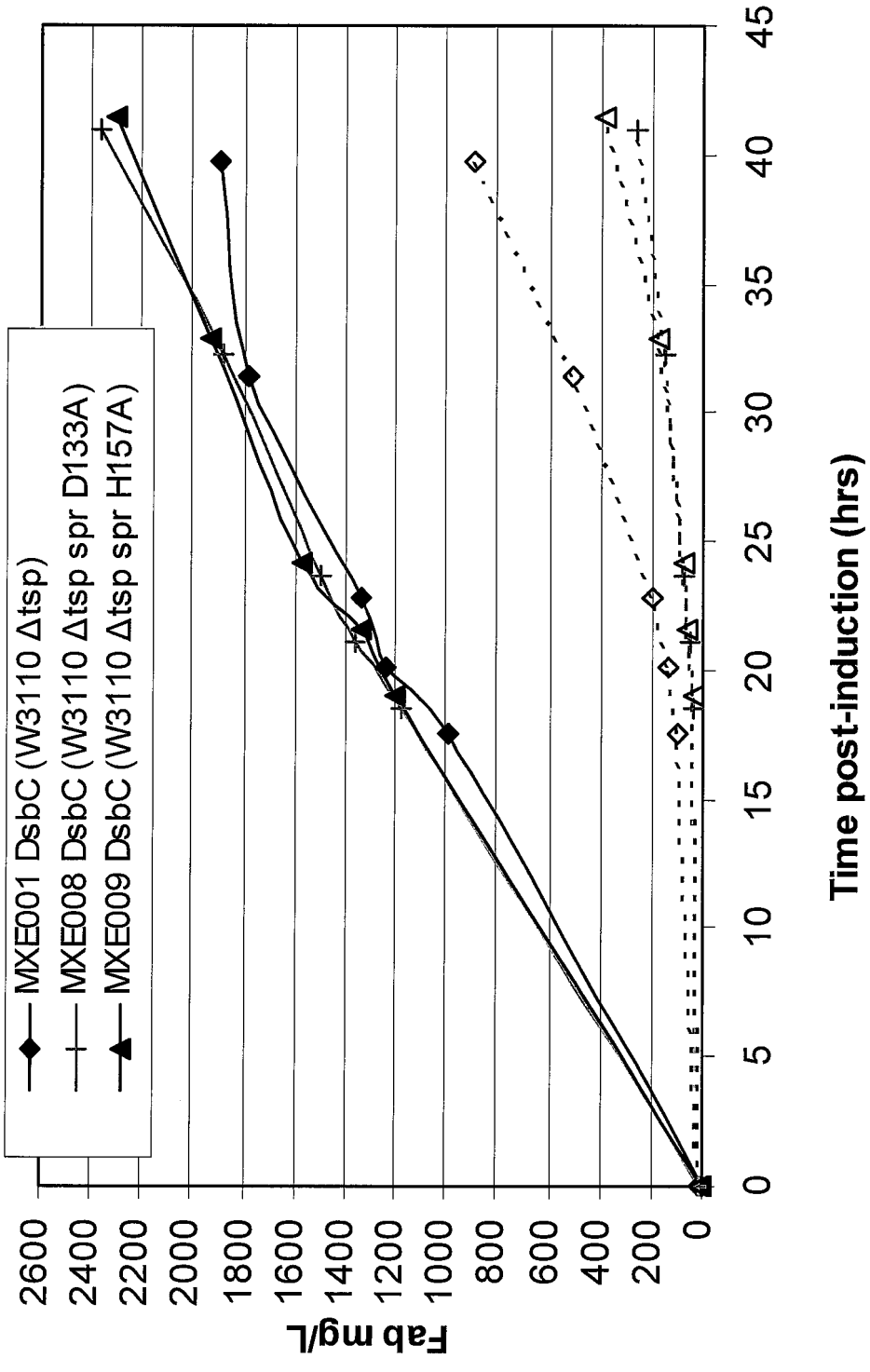

MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)
MXE009 DsbC (W3110 Δtsp spr H157A)
Fab mg/L
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
Time post-induction (hrs)
0
5
10
15
20
25
30
35
40
45

Figure 2

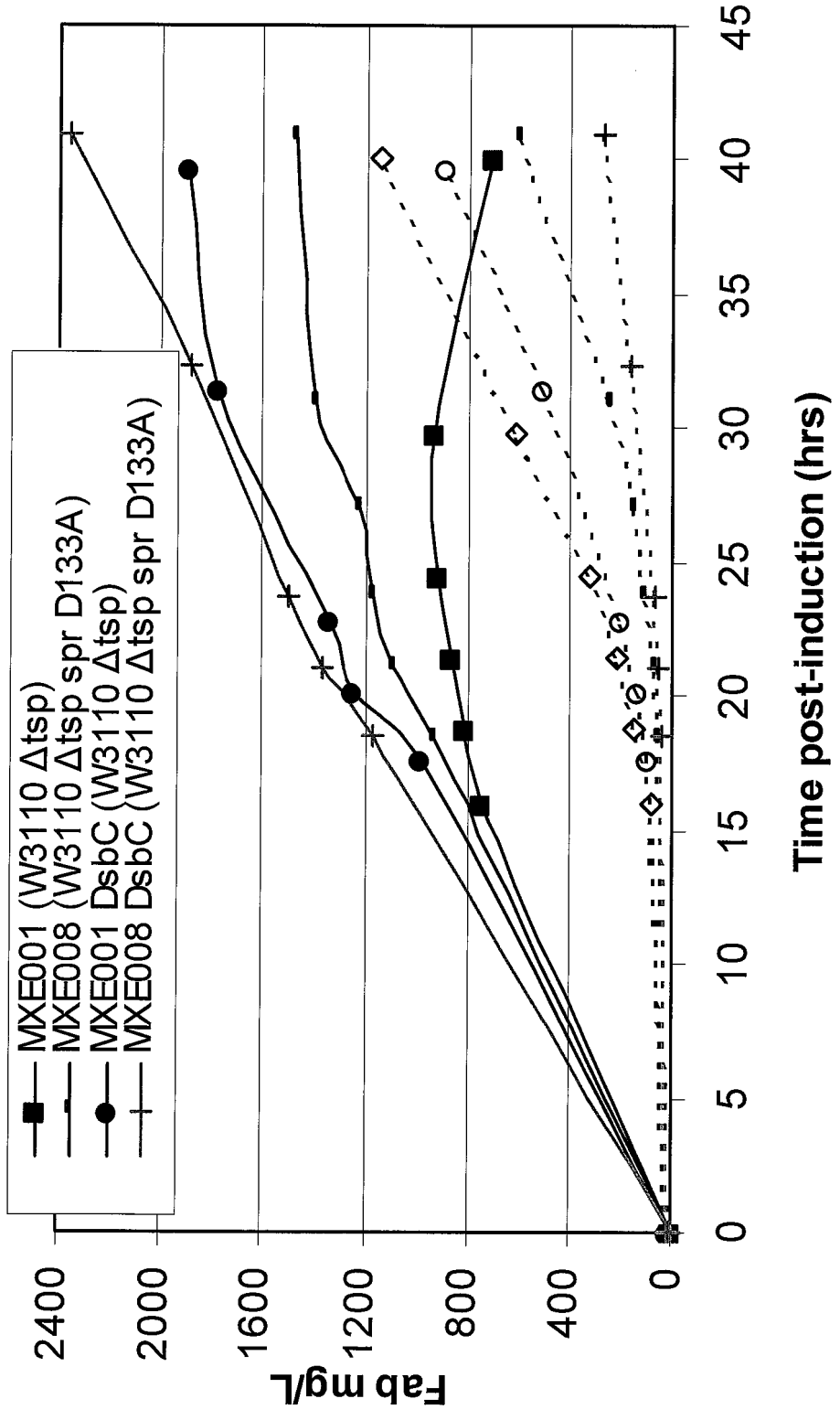

MXE001 (W3110 Δtsp)
MXE008 (W3110 Δtsp spr D133A)
MXE001 DsbC (W3110 Δtsp)
MXE008 DsbC (W3110 Δtsp spr D133A)
Fab mg/L
0
400
800
1200
1600
2000
2400
0
5
10
15
20
25
30
35
40
45
Time post-induction (hrs)

Figure 3

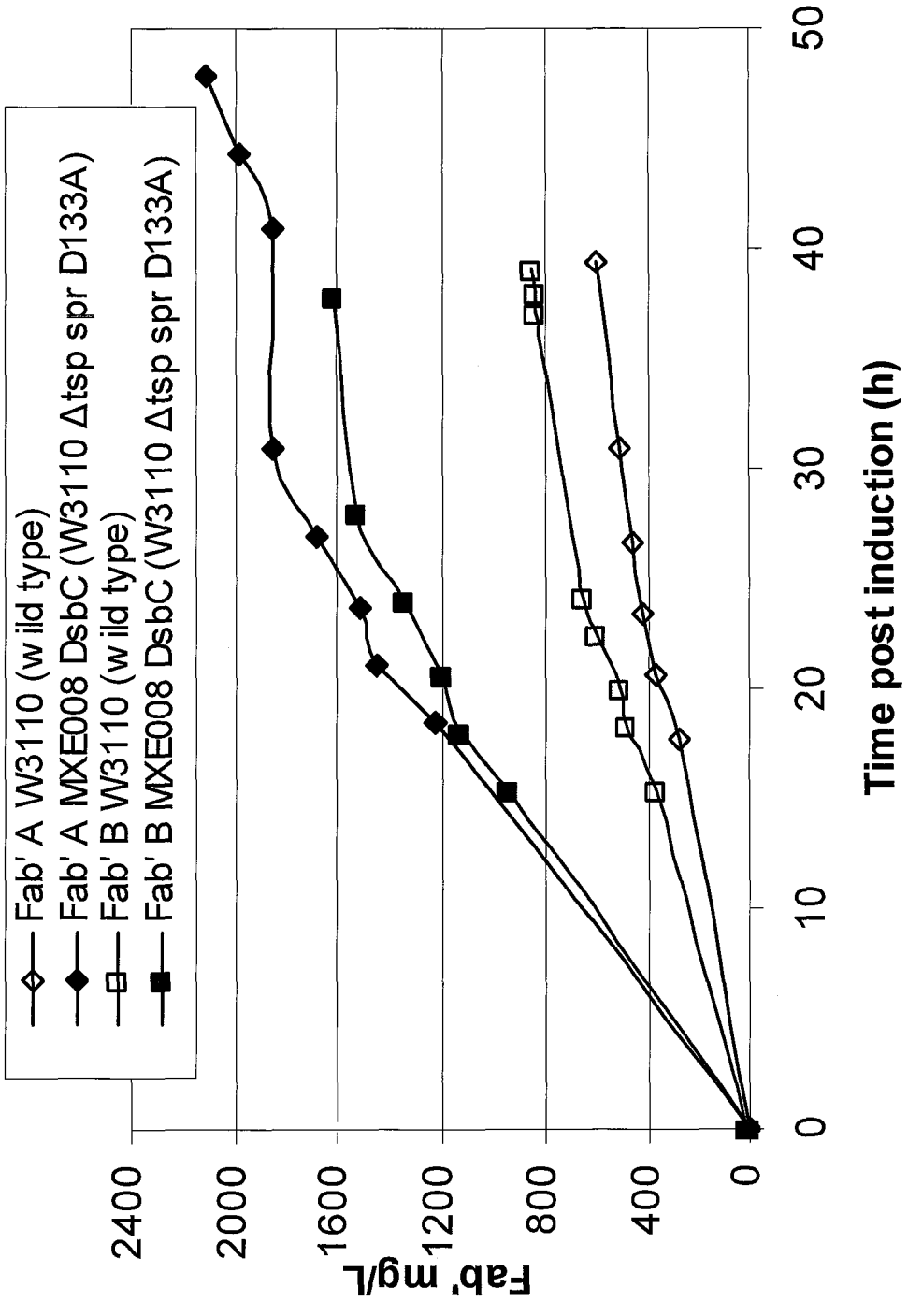

Fab' A W3110 (w ild type)
Fab' A MXE008 DsbC (W3110 Δtsp spr D133A)
Fab' B W3110 (w ild type)
Fab' B MXE008 DsbC (W3110 Δtsp spr D133A)
Fab' mg/L
0
400
800
1200
1600
2000
2400
0
10
20
30
40
50
Time post induction (h)

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 |
~~~~~~~~

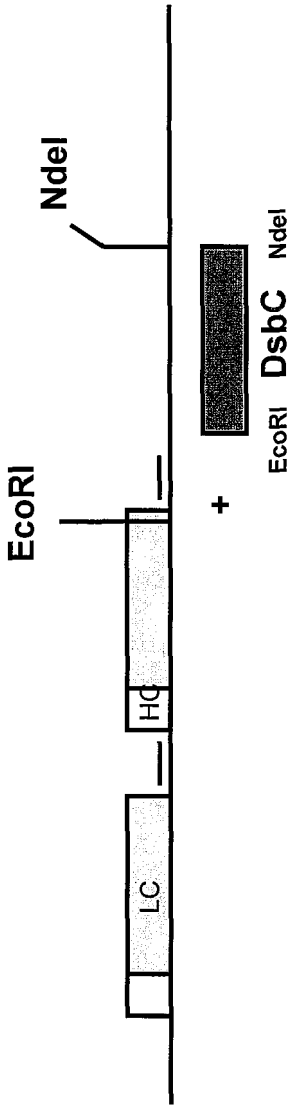



Figure 6

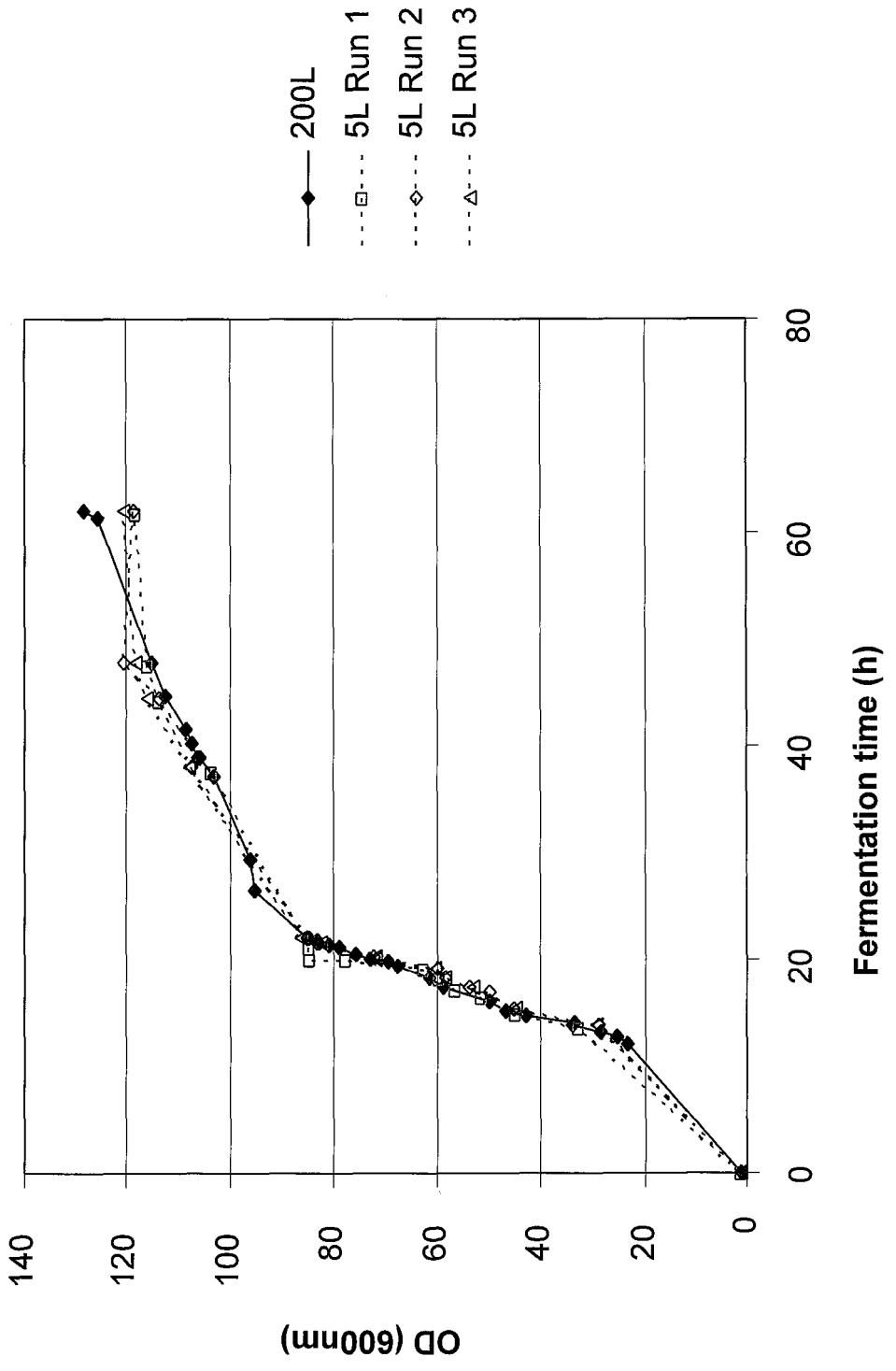

200L
5L Run 1
5L Run 2
5L Run 3
OD (600nm)
0
20
40
60
80
100
120
140
Fermentation time (h)
0
20
40
60
80

Figure 7

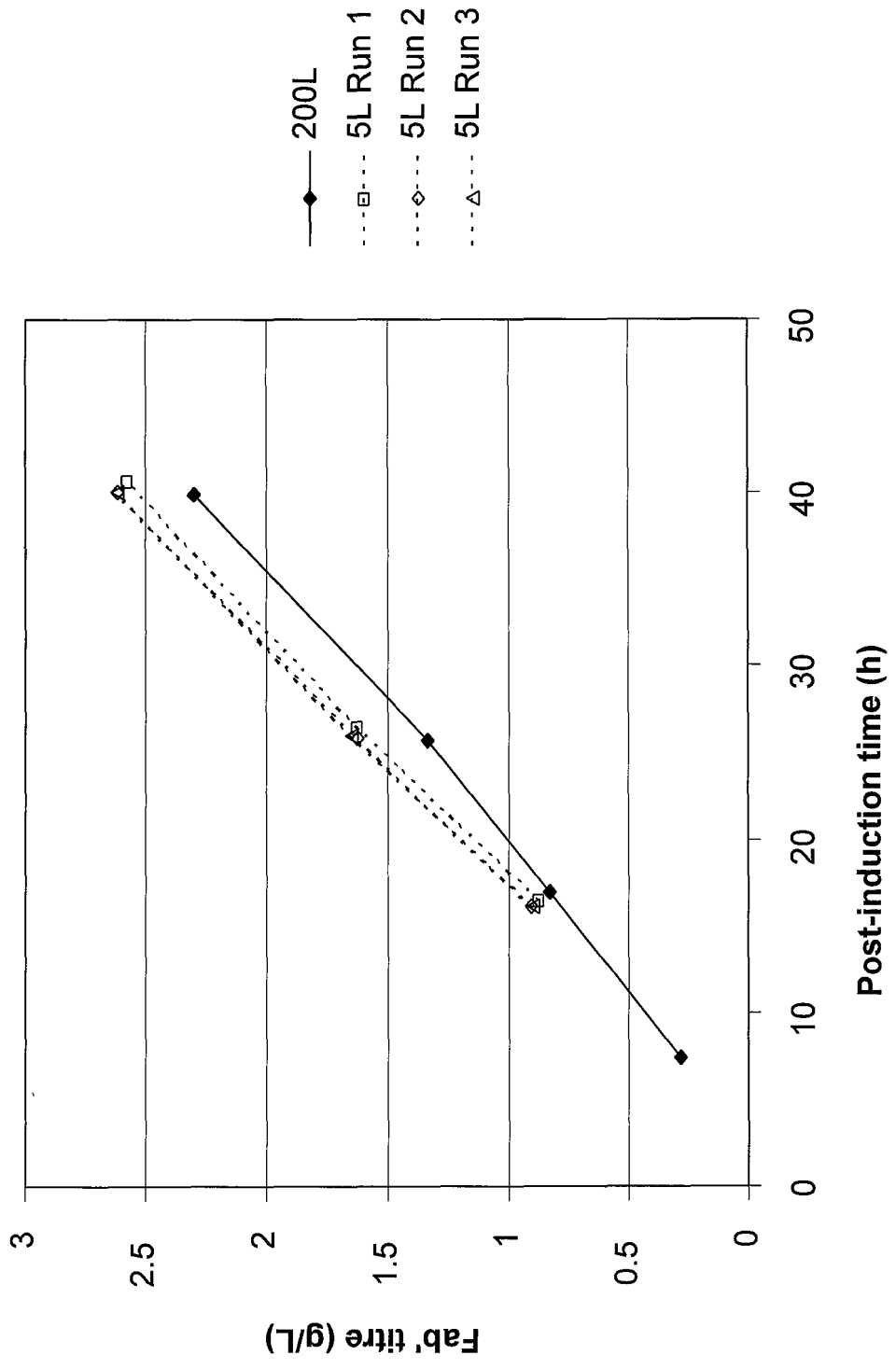

200L
5L Run 1
5L Run 2
5L Run 3
Fab' titre (g/L)
0
0.5
1
1.5
2
2.5
3
0
10
20
30
40
50
Post-induction time (h)

Figure 8

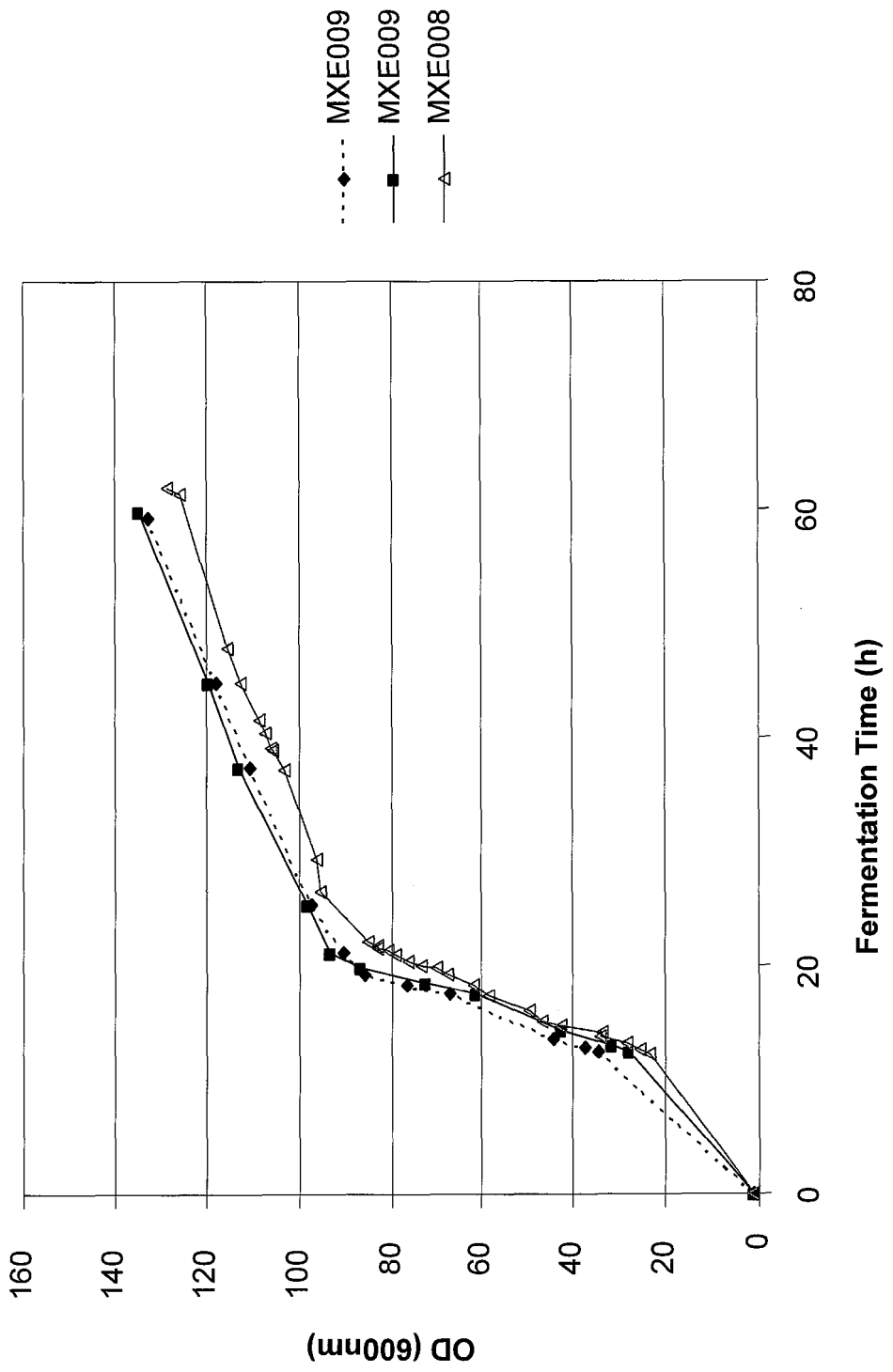

MXE009
MXE009
MXE008
OD (600nm)
0
20
40
60
80
100
120
140
160
0
20
40
60
80
Fermentation Time (h)

Figure 9

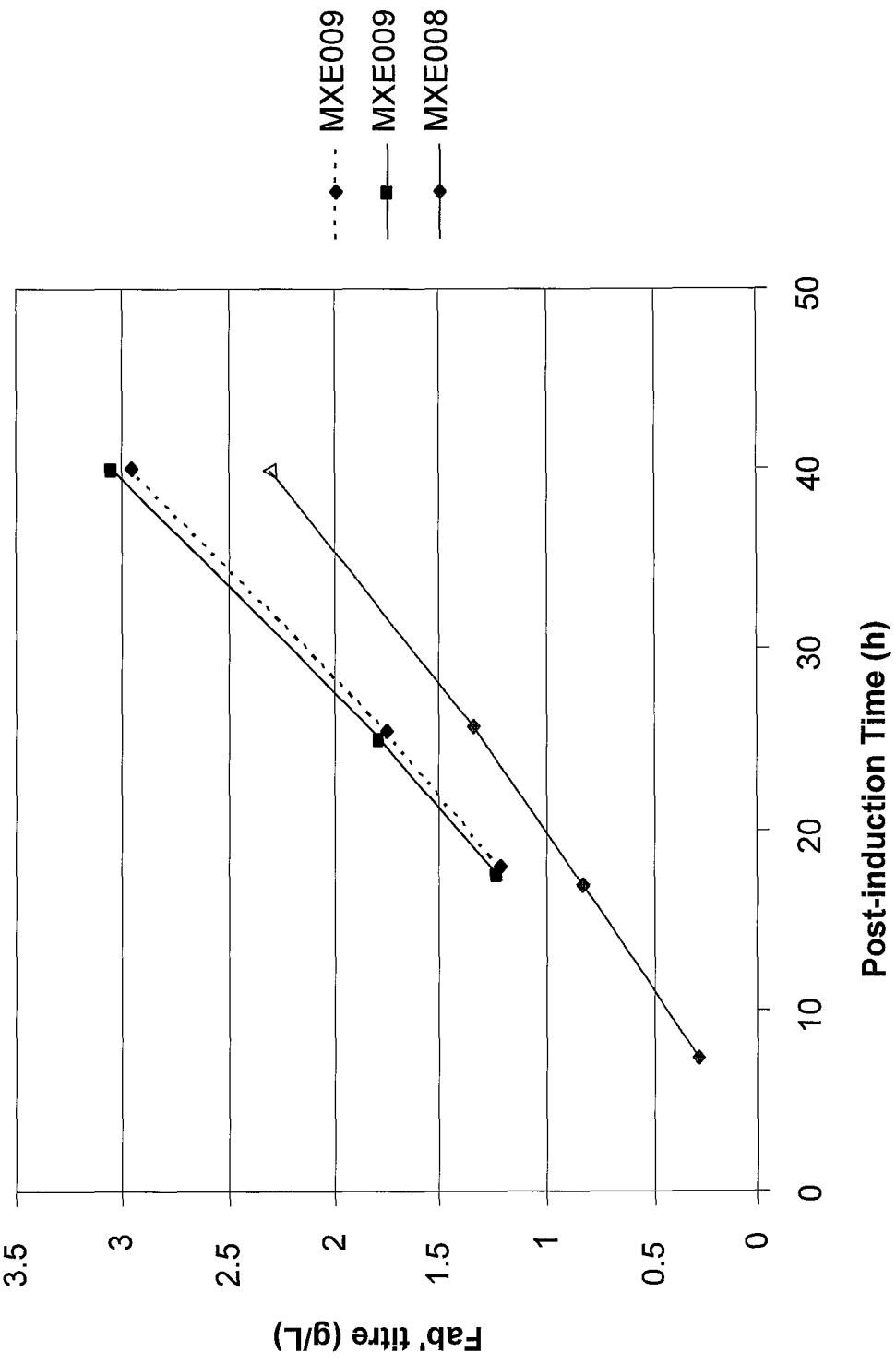

MXE009
MXE009
MXE008
Fab' titre (g/L)
0
0.5
1
1.5
2
2.5
3
3.5
0
10
20
30
40
50
Post-induction Time (h)

Figure 10