Figures

Fig. 1 A

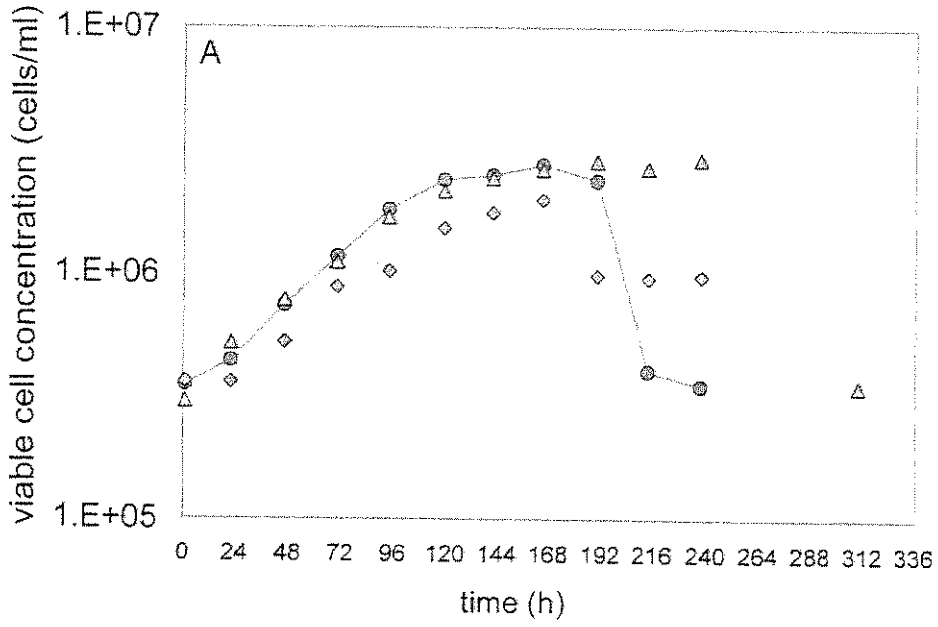


Fig. 1 B

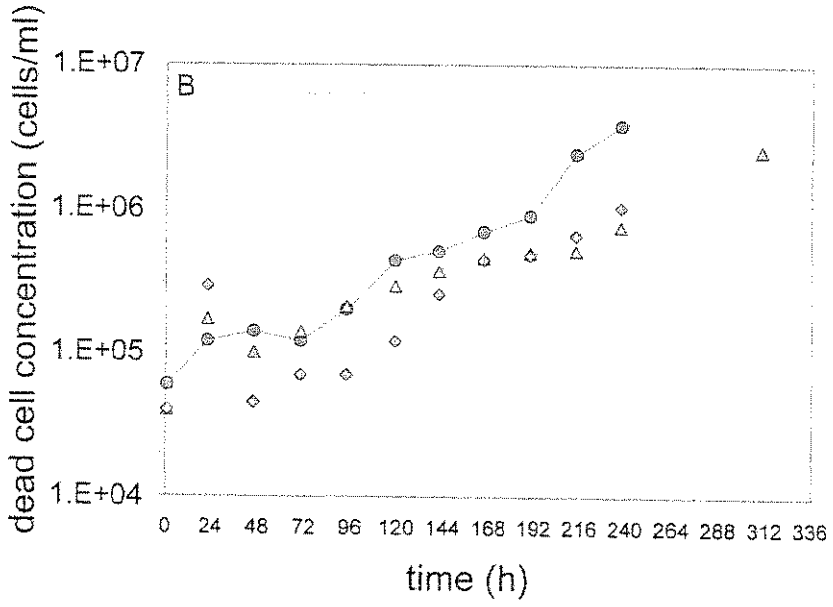


Fig. 1 C

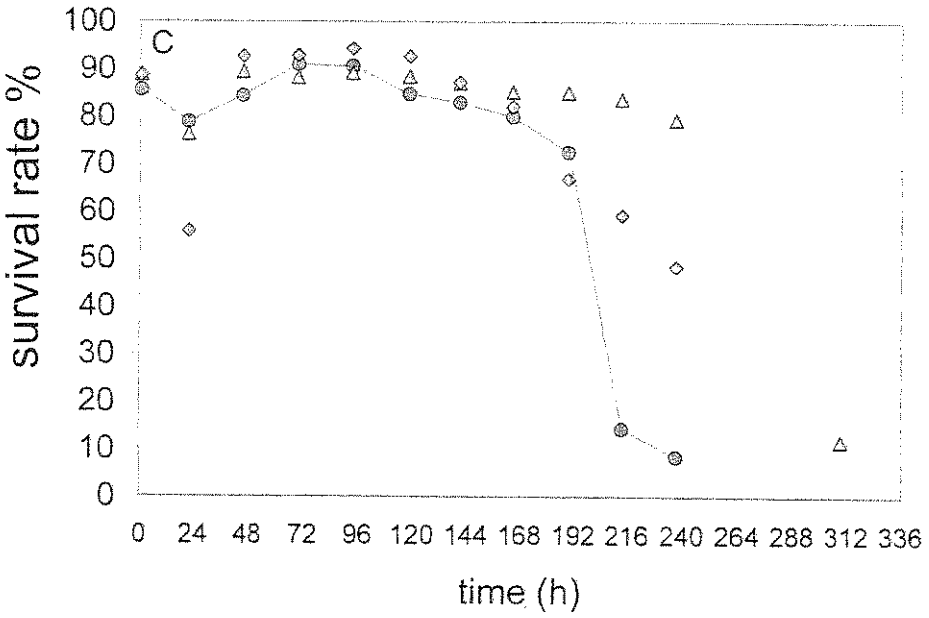

C
survival rate %
100
90
80
70
60
50
40
30
20
10
0
0 24 48 72 96 120 144 168 192 216 240 264 288 312 336
time (h)

Fig. 1D

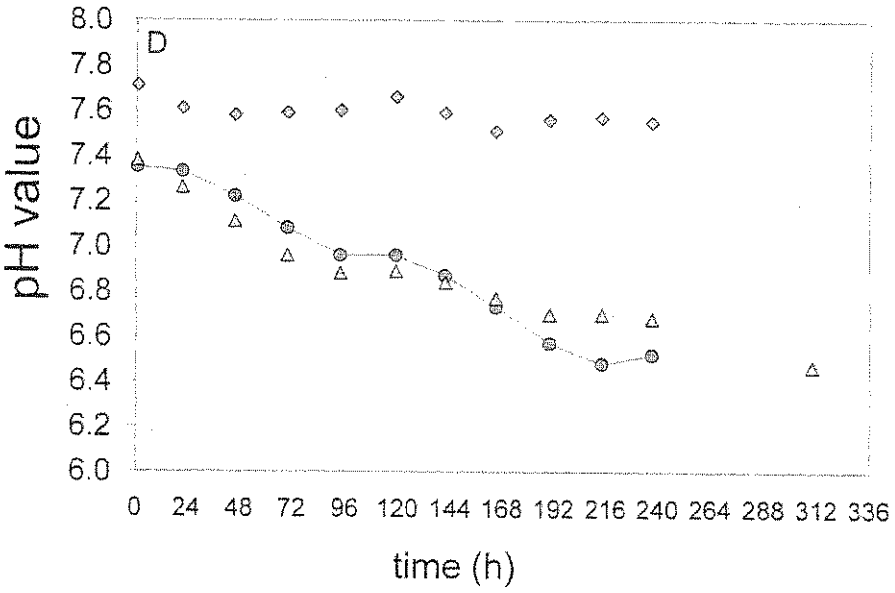

D
pH value
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
6.0
0 24 48 72 96 120 144 168 192 216 240 264 288 312 336
time (h)

Fig. 1 E

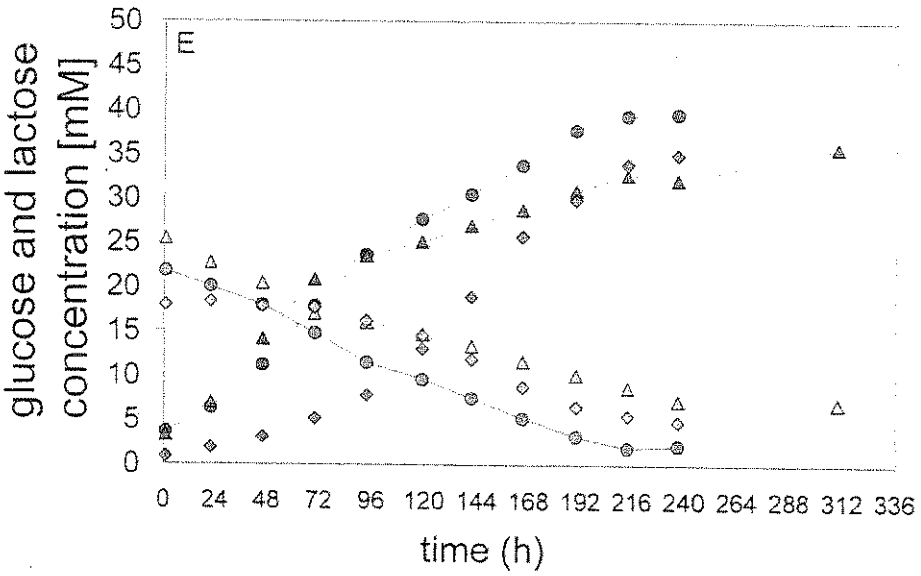

E
glucose and lactose concentration [mM]
50
45
40
35
30
25
20
15
10
5
0
0 24 48 72 96 120 144 168 192 216 240 264 288 312 336
time (h)

Fig. 1 F

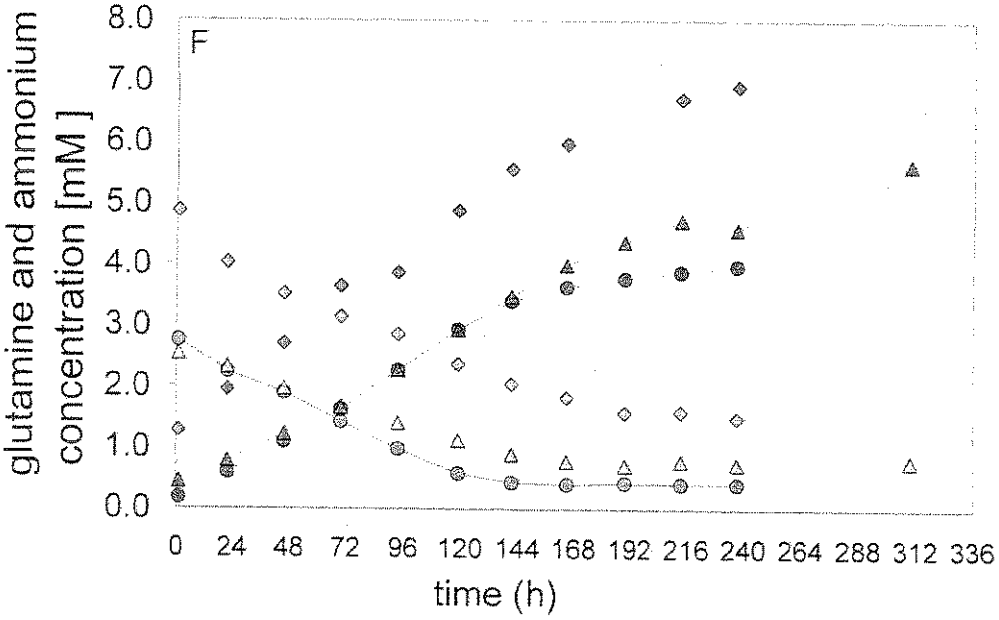

F
glutamine and ammonium concentration [mM]
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0 24 48 72 96 120 144 168 192 216 240 264 288 312 336
time (h)

Fig. 1 G

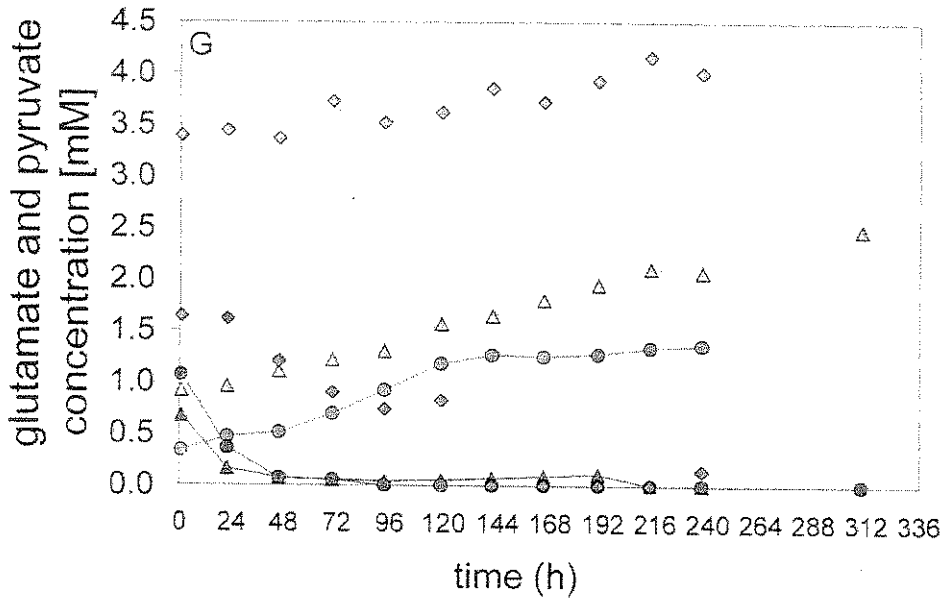

G
glutamate and pyruvate concentration [mM]
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0 24 48 72 96 120 144 168 192 216 240 264 288 312 336
time (h)

Fig. 2

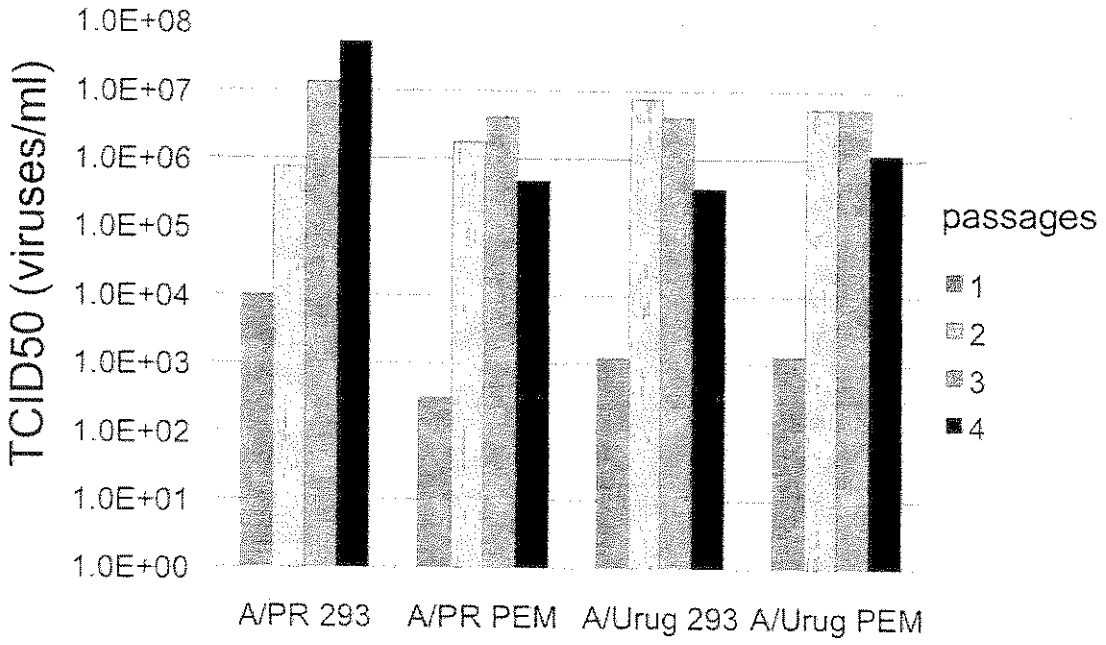

TCID50 (viruses/ml)
1.0E+08
1.0E+07
1.0E+06
1.0E+05
1.0E+04
1.0E+03
1.0E+02
1.0E+01
1.0E+00
A/PR 293
A/PR PEM
A/Urug 293
A/Urug PEM
passages
1
2
3
4

Fig. 3 A

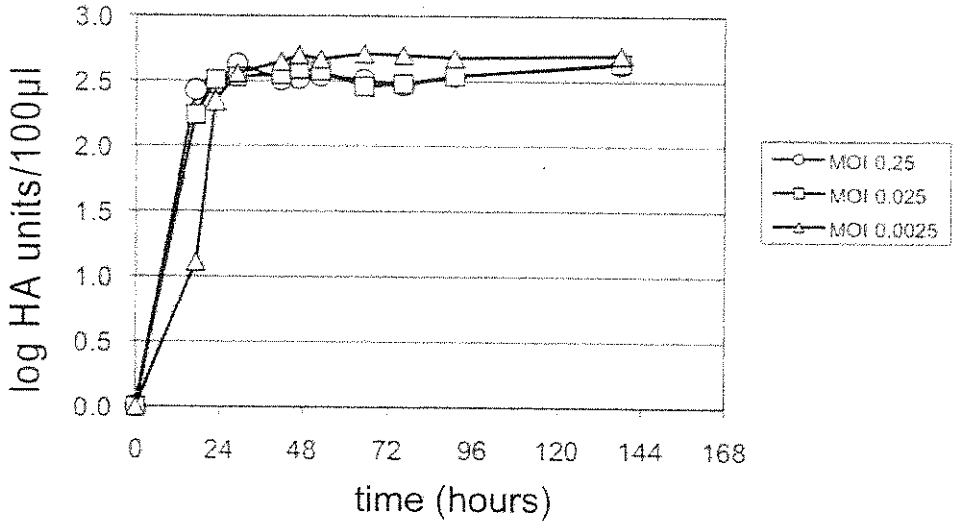

log HA units/100µl
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
24
48
72
96
120
144
168
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 3 B

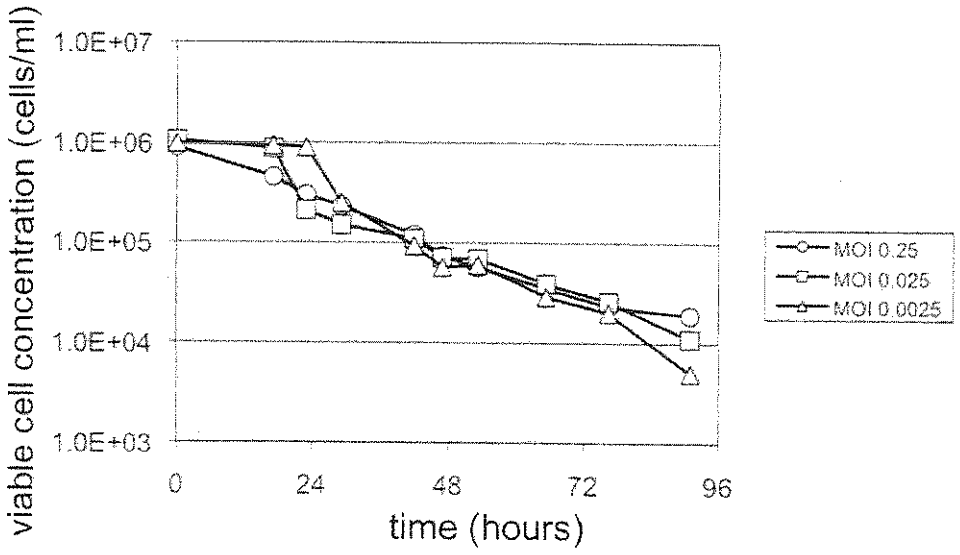

viable cell concentration (cells/ml)
1.0E+07
1.0E+06
1.0E+05
1.0E+04
1.0E+03
0
24
48
72
96
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 3 C

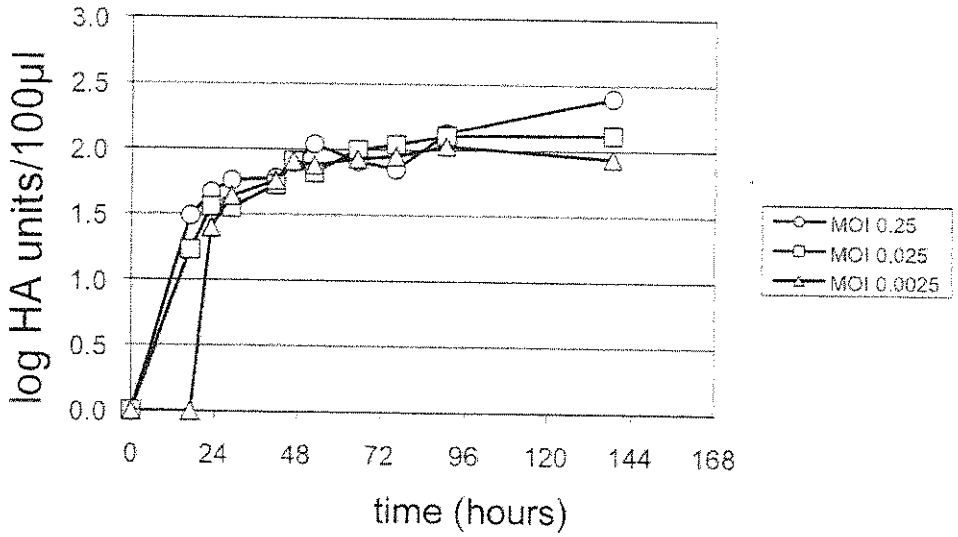

log HA units/100µl
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
24
48
72
96
120
144
168
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 3 D

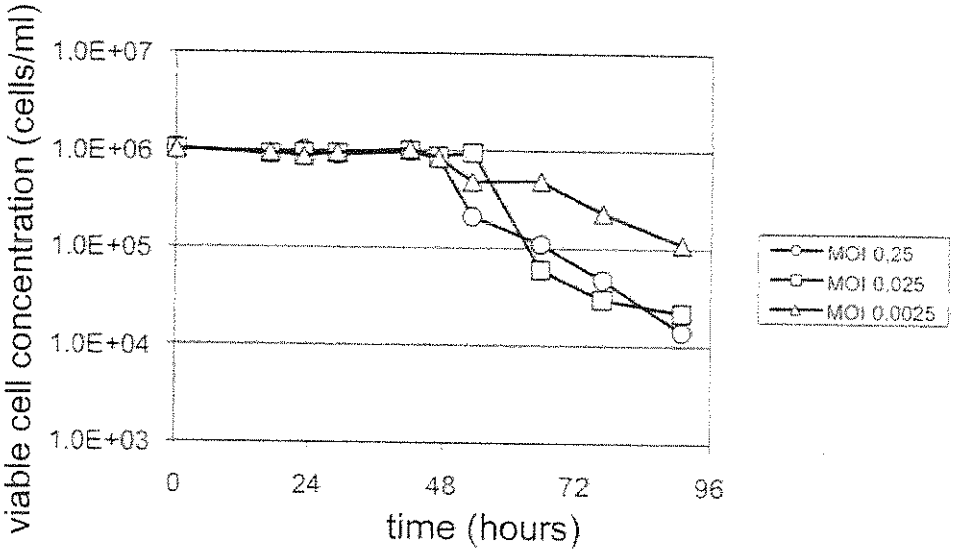

viable cell concentration (cells/ml)
1.0E+07
1.0E+06
1.0E+05
1.0E+04
1.0E+03
0
24
48
72
96
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 3 E

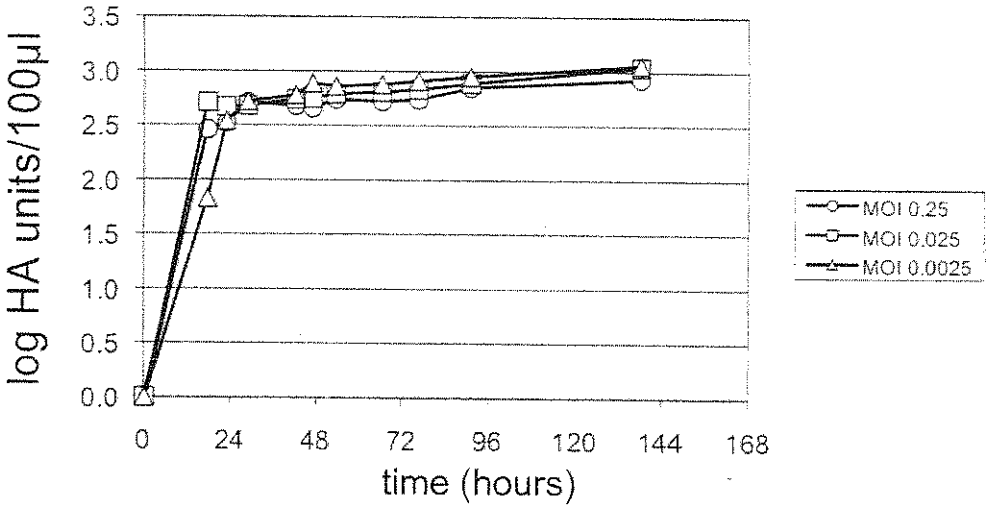

log HA units/100µl
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
24
48
72
96
120
144
168
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 3 F

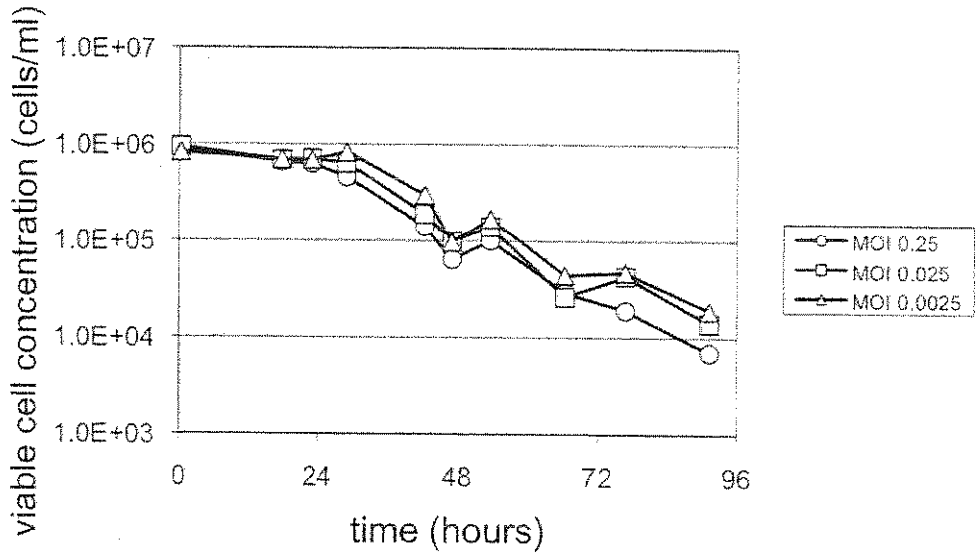

viable cell concentration (cells/ml)
1.0E+07
1.0E+06
1.0E+05
1.0E+04
1.0E+03
0
24
48
72
96
time (hours)
MOI 0.25
MOI 0.025
MOI 0.0025

Fig. 4 A

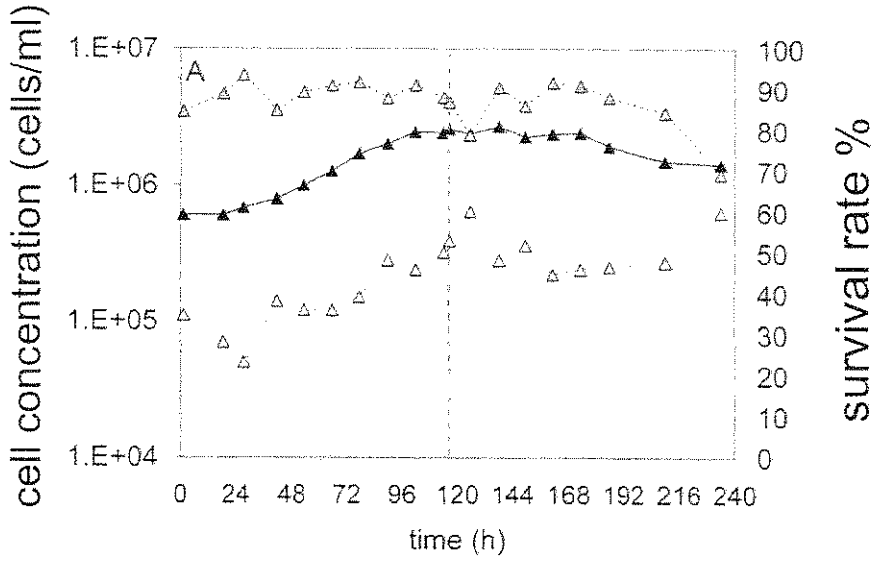

cell concentration (cells/ml)
1.E+07
1.E+06
1.E+05
1.E+04
A
100
90
80
70
60
50
40
30
20
10
0
survival rate %
0 24 48 72 96 120 144 168 192 216 240
time (h)

Fig. 4 B

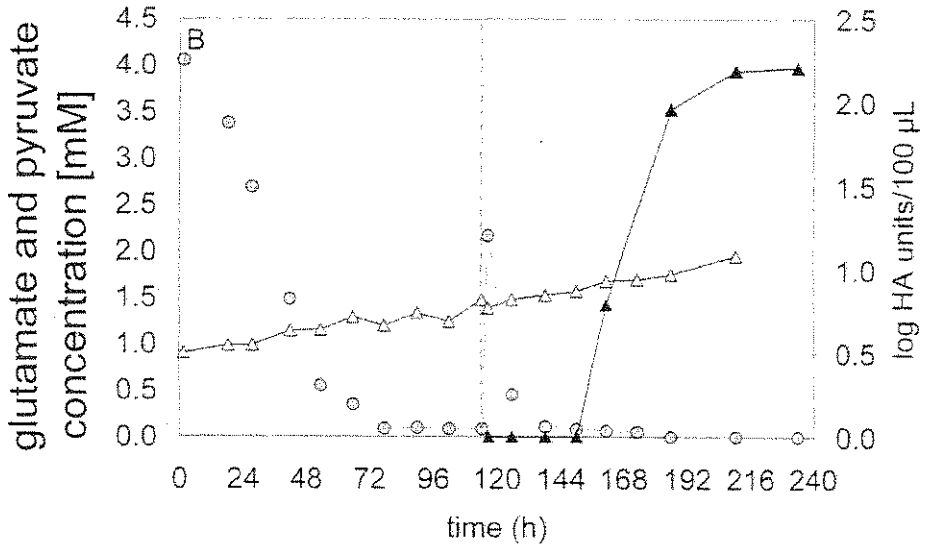

glutamate and pyruvate concentration [mM]
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
B
2.5
2.0
1.5
1.0
0.5
0.0
log HA units/100 µL
0 24 48 72 96 120 144 168 192 216 240
time (h)

Fig. 4 C

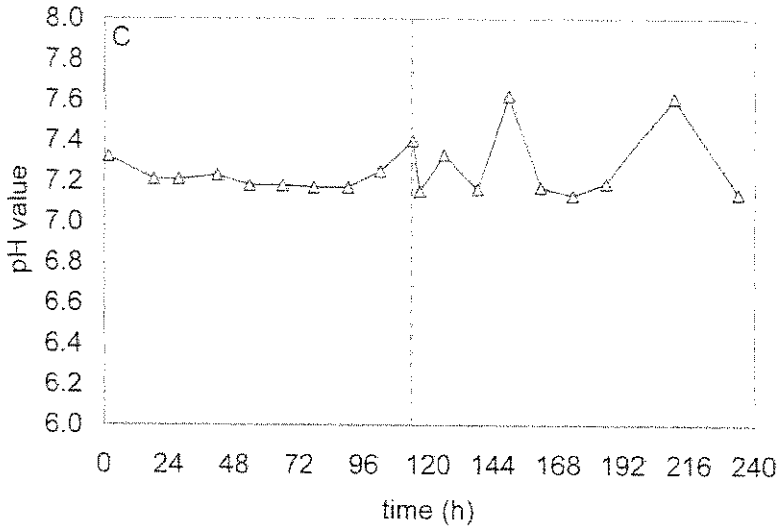

C
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
6.0
pH value
0 24 48 72 96 120 144 168 192 216 240
time (h)

Fig. 4 D

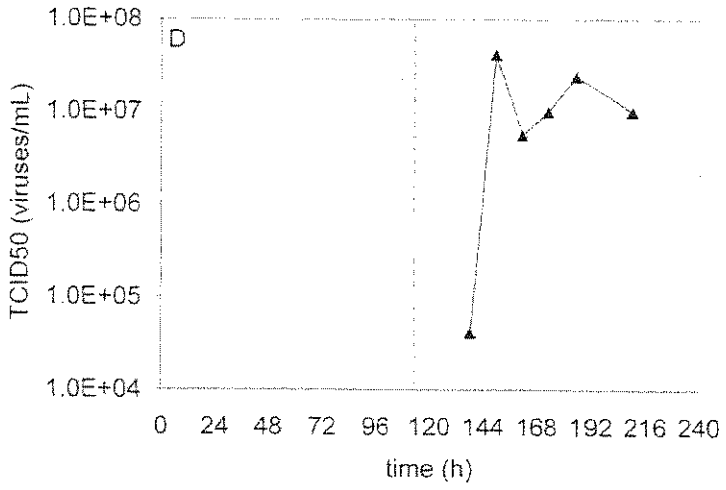

D
1.0E+08
1.0E+07
1.0E+06
1.0E+05
1.0E+04
TCID50 (viruses/mL)
0 24 48 72 96 120 144 168 192 216 240
time (h)

Fig. 5 A

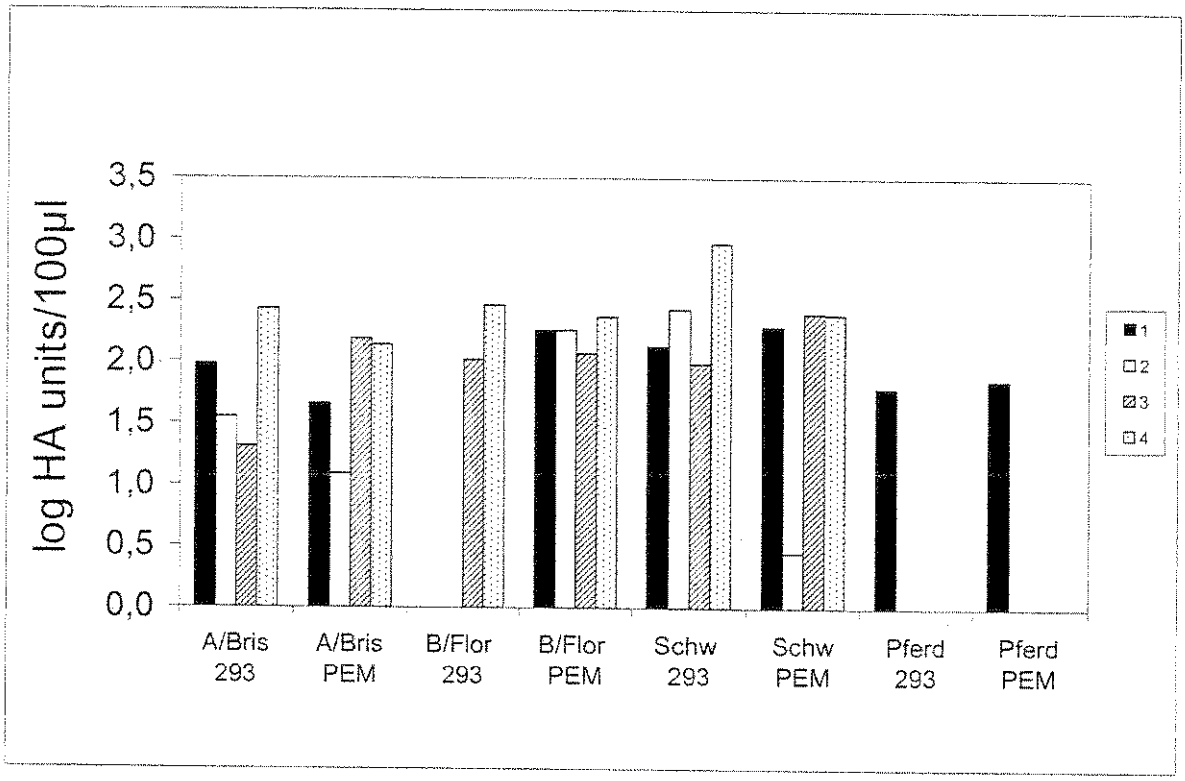

log HA units/100µl
3,5
3,0
2,5
2,0
1,5
1,0
0,5
0,0
A/Bris 293
A/Bris PEM
B/Flor 293
B/Flor PEM
Schw 293
Schw PEM
Pferd 293
Pferd PEM
1
2
3
4

Fig. 5 B

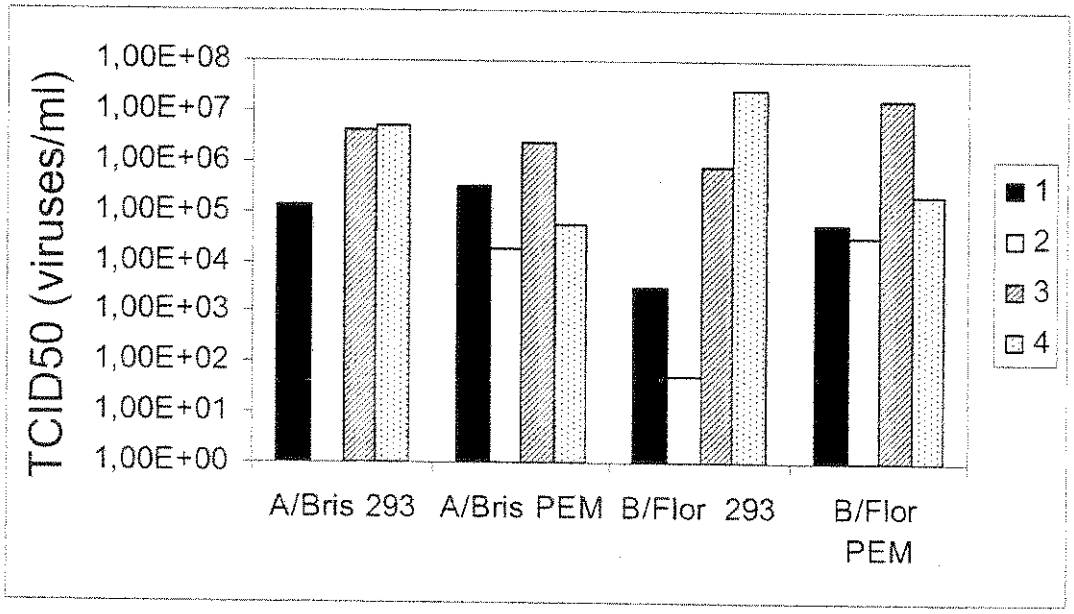

TCID50 (viruses/ml)
1,00E+08
1,00E+07
1,00E+06
1,00E+05
1,00E+04
1,00E+03
1,00E+02
1,00E+01
1,00E+00
A/Bris 293
A/Bris PEM
B/Flor 293
B/Flor PEM
1
2
3
4

Fig. 6A

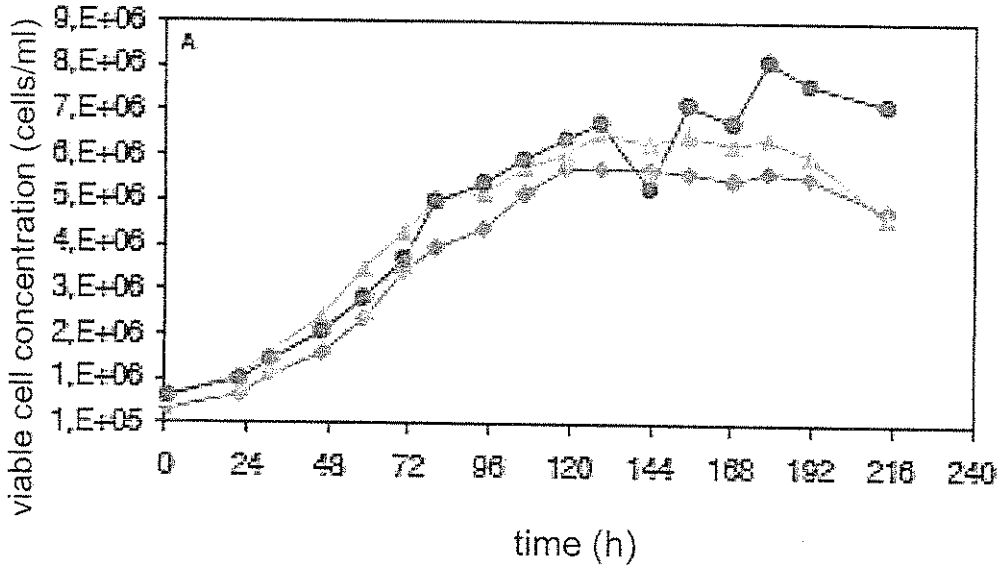

A
viable cell concentration (cells/ml)
9,E+06
8,E+06
7,E+06
6,E+06
5,E+06
4,E+06
3,E+06
2,E+06
1,E+06
1,E+05
0
24
48
72
96
120
144
168
192
216
240
time (h)

Fig. 6B

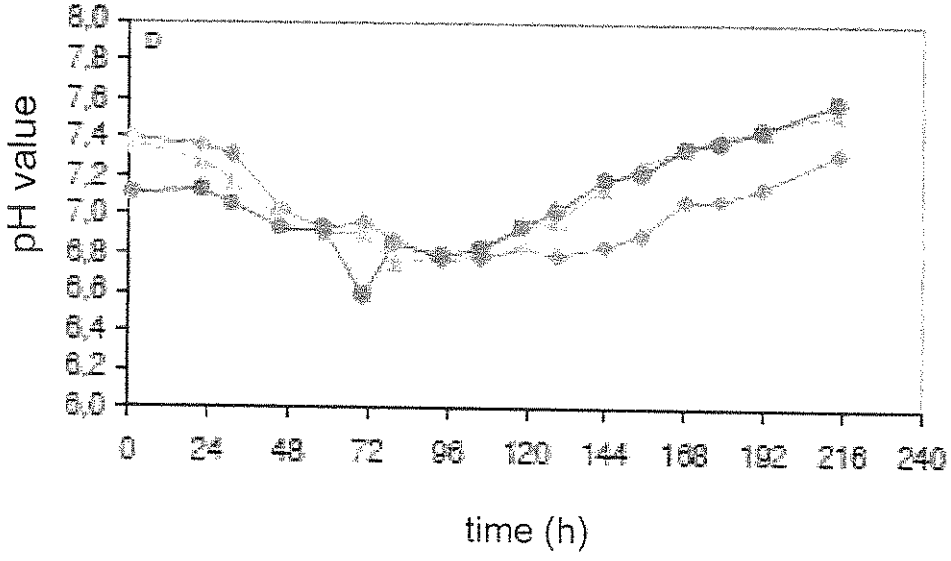

B
pH value
8,0
7,8
7,6
7,4
7,2
7,0
6,8
6,6
6,4
6,2
6,0
0
24
48
72
96
120
144
168
192
216
240
time (h)

Fig. 7A

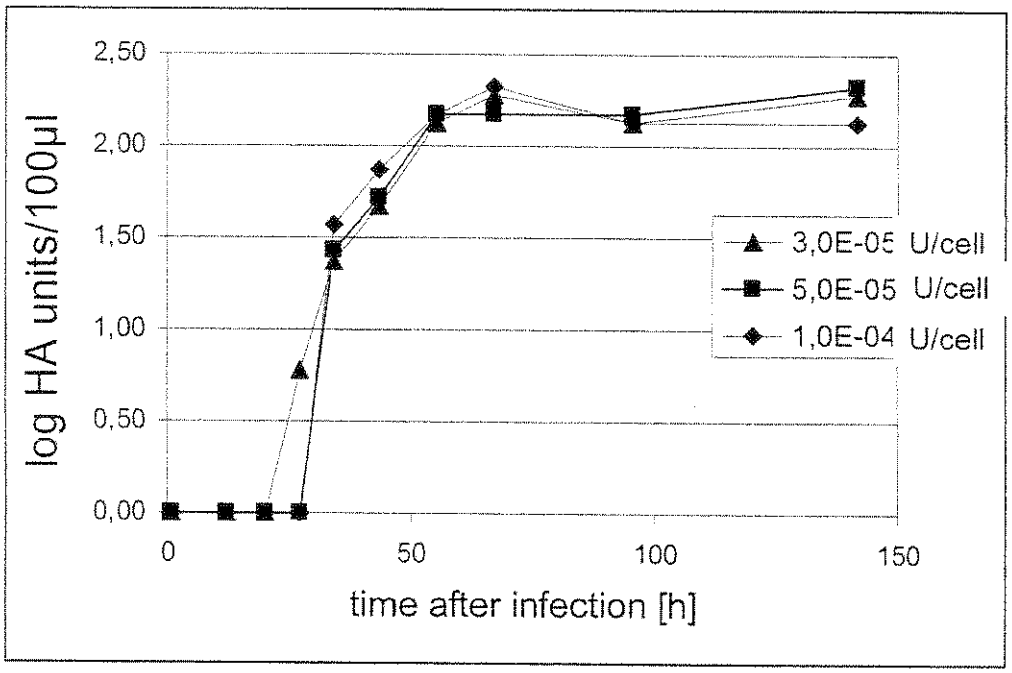

log HA units/100µl
2,50
2,00
1,50
1,00
0,50
0,00
0
50
100
150
time after infection [h]
3,0E-05 U/cell
5,0E-05 U/cell
1,0E-04 U/cell

Fig. 7 B

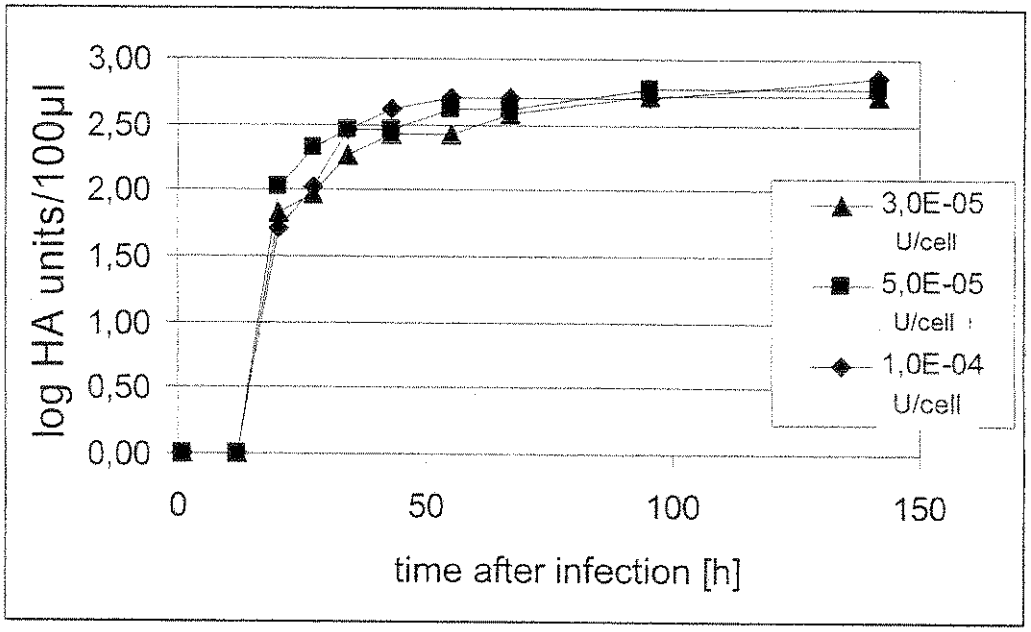

log HA units/100µl
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
50
100
150
time after infection [h]
3,0E-05 U/cell
5,0E-05 U/cell
1,0E-04 U/cell

Fig. 7 C

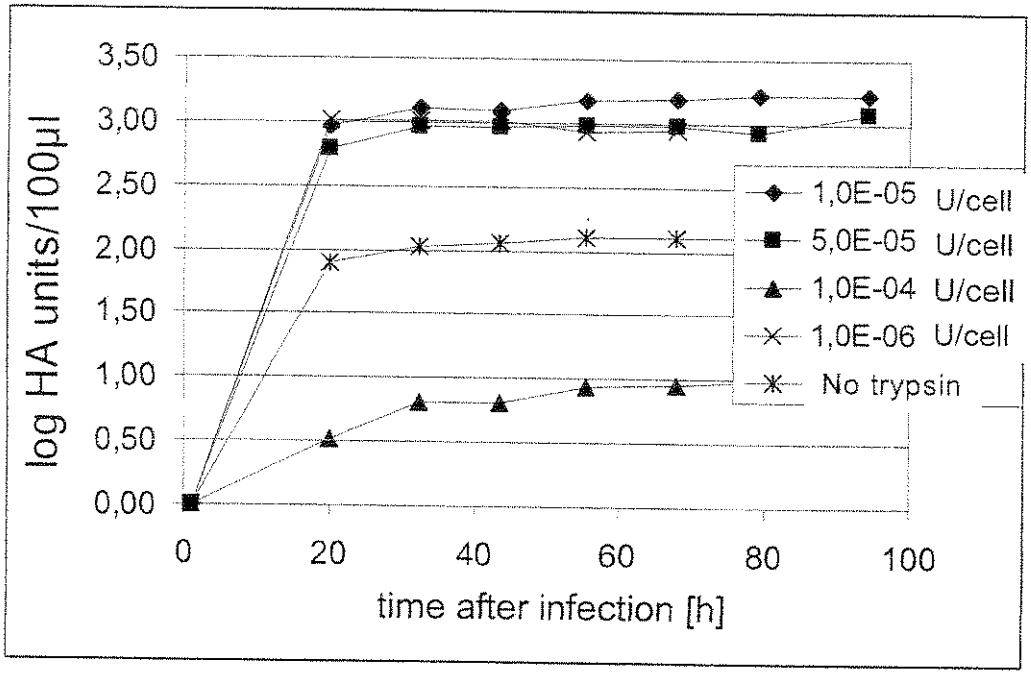

log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
20
40
60
80
100
time after infection [h]
1,0E-05 U/cell
5,0E-05 U/cell
1,0E-04 U/cell
1,0E-06 U/cell
No trypsin

Fig. 8 A

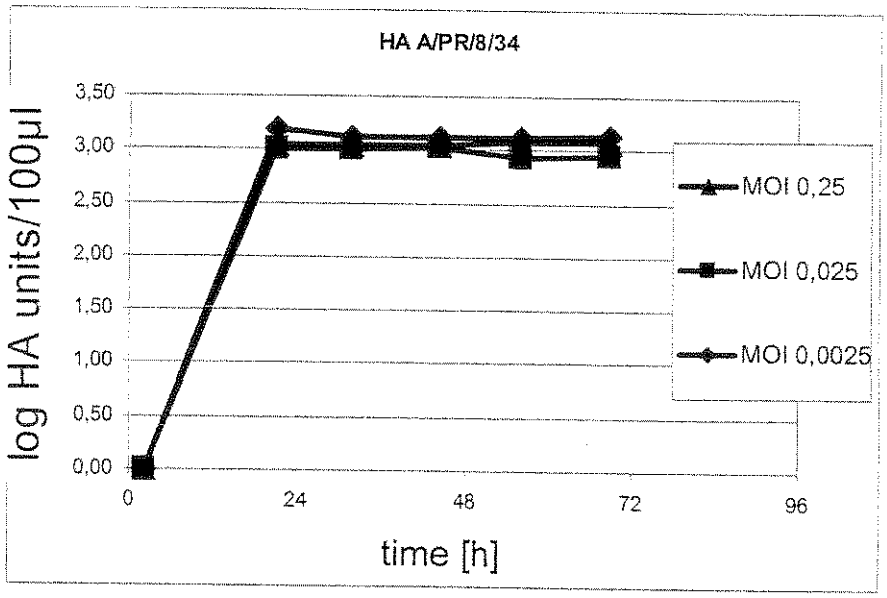

HA A/PR/8/34
log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
time [h]
MOI 0,25
MOI 0,025
MOI 0,0025

Fig. 8 B

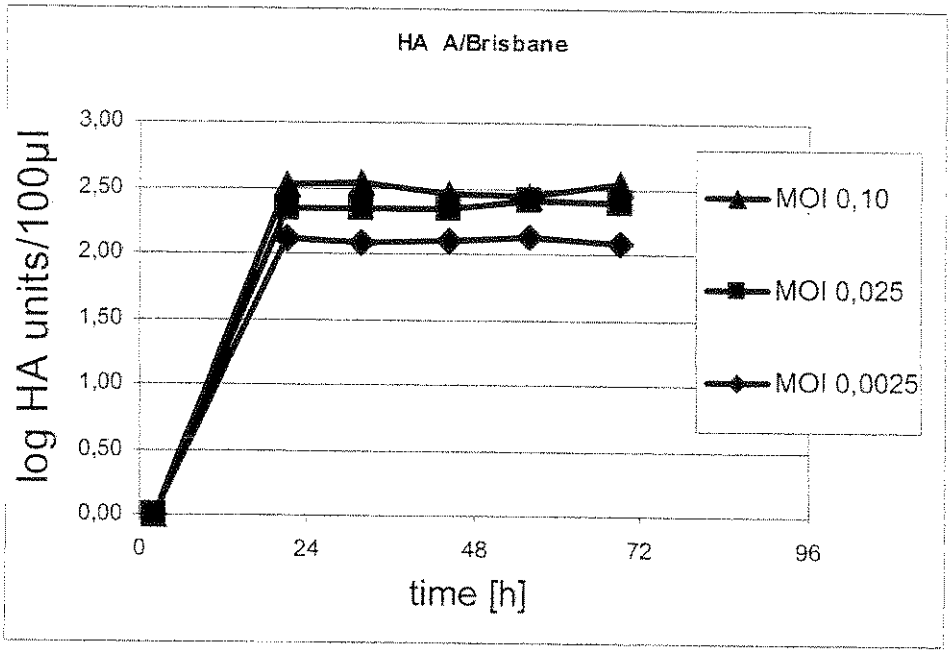

HA A/Brisbane
log HA units/100µl
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
time [h]
MOI 0,10
MOI 0,025
MOI 0,0025

Fig. 8 C

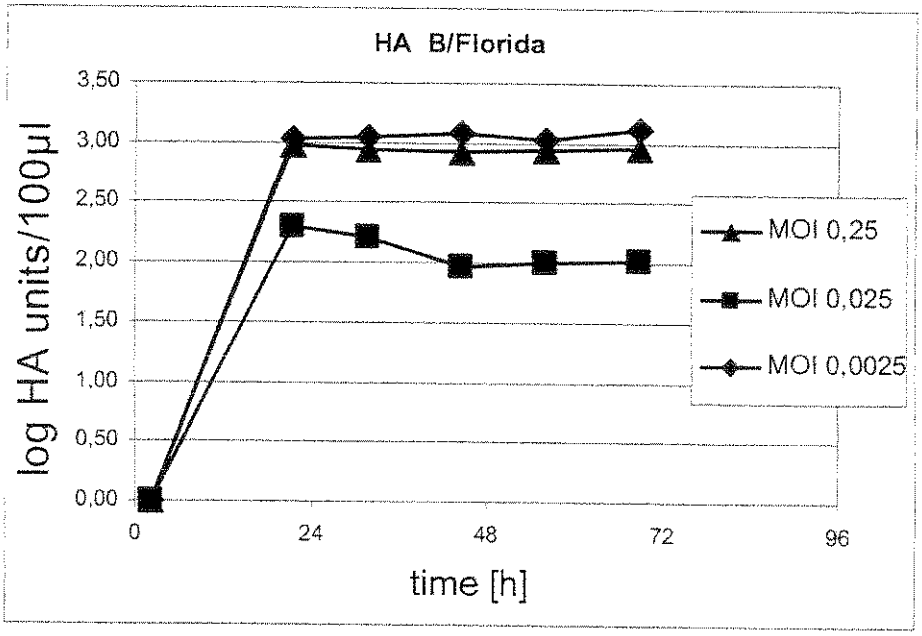

HA B/Florida
log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
time [h]
MOI 0,25
MOI 0,025
MOI 0,0025

Fig. 8 D

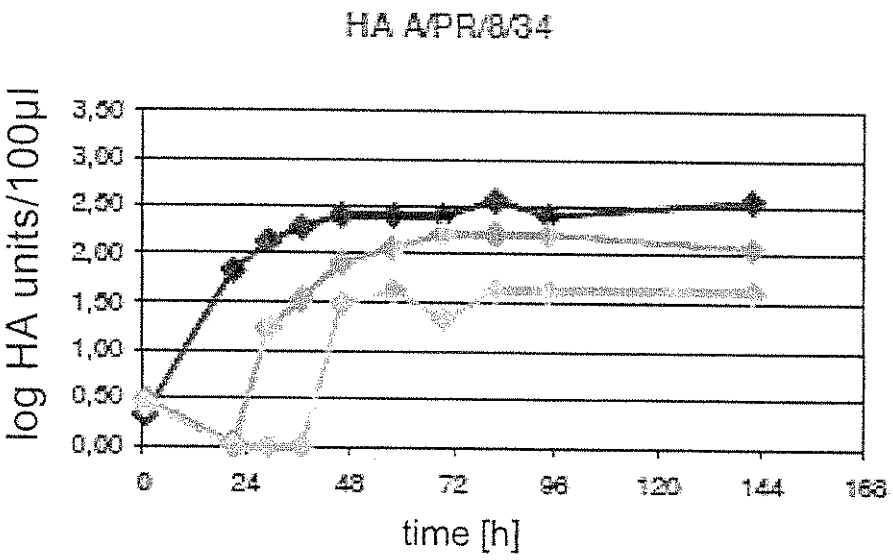

HA A/PR/8/34
log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
120
144
168
time [h]

Fig. 8 E

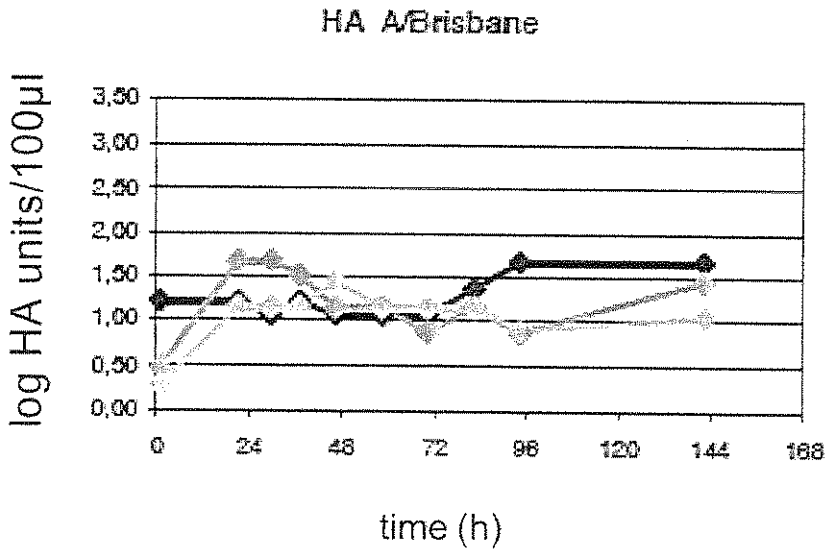

HA A/Brisbane
log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
120
144
168
time (h)

Fig. 8 F

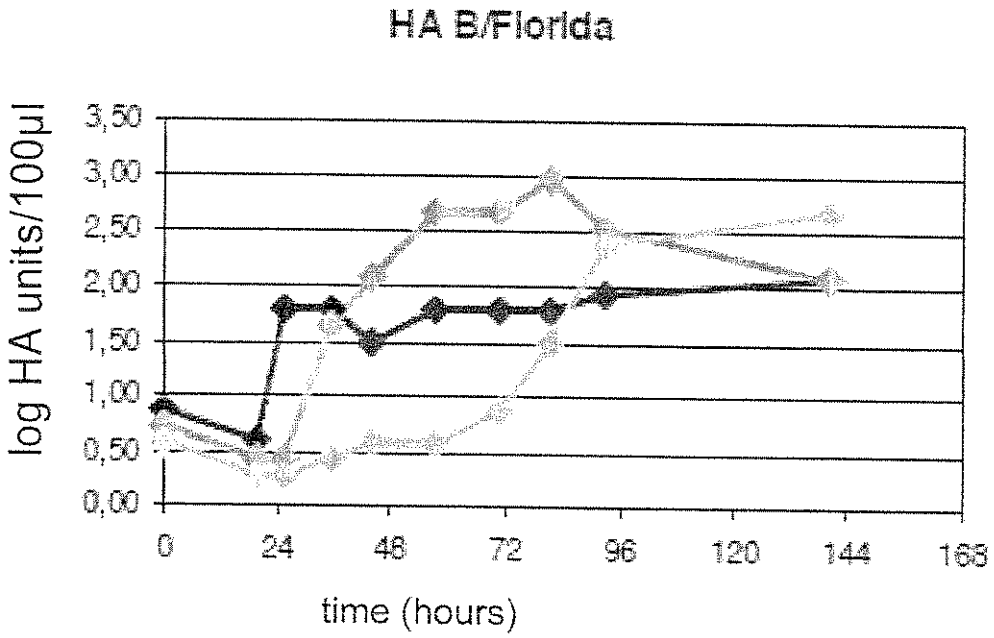

HA B/Florida
log HA units/100µl
3,50
3,00
2,50
2,00
1,50
1,00
0,50
0,00
0
24
48
72
96
120
144
168
time (hours)

Fig. 9 A

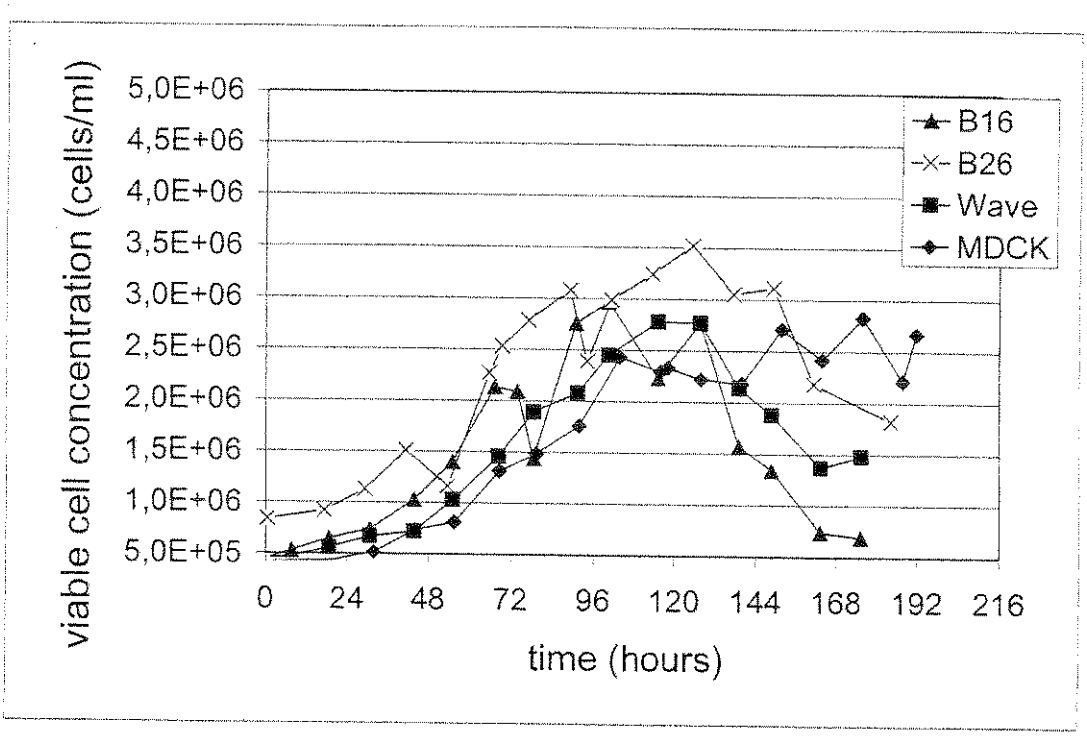

viable cell concentration (cells/ml)
5,0E+06
4,5E+06
4,0E+06
3,5E+06
3,0E+06
2,5E+06
2,0E+06
1,5E+06
1,0E+06
5,0E+05
0
24
48
72
96
120
144
168
192
216
time (hours)
B16
B26
Wave
MDCK

Fig. 9 B

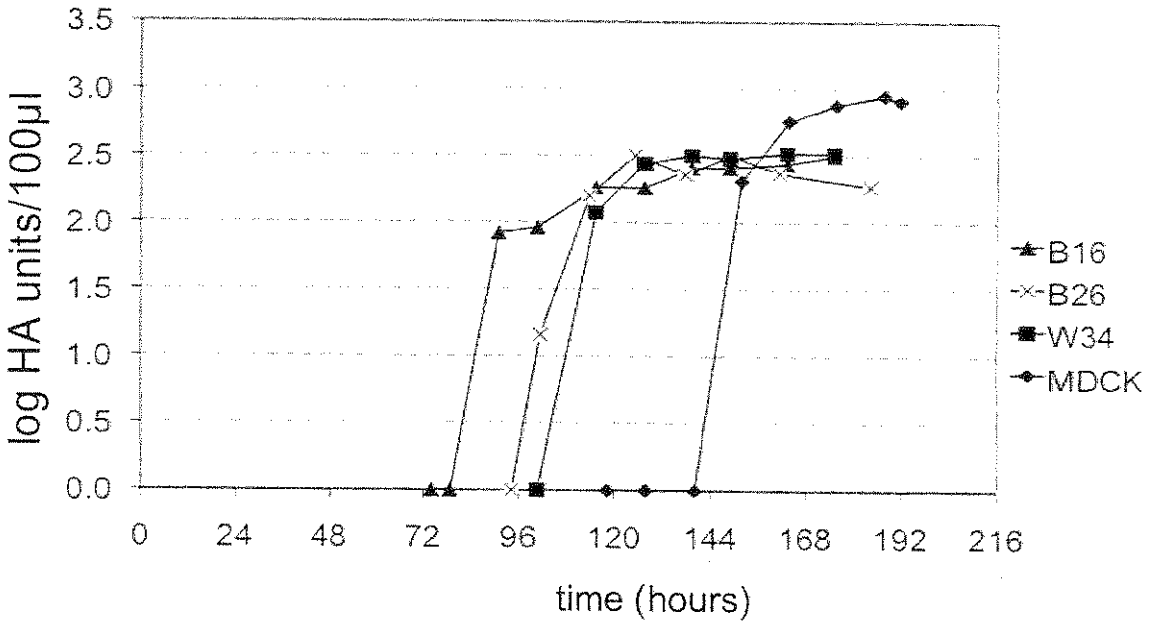


Fig. 10 A

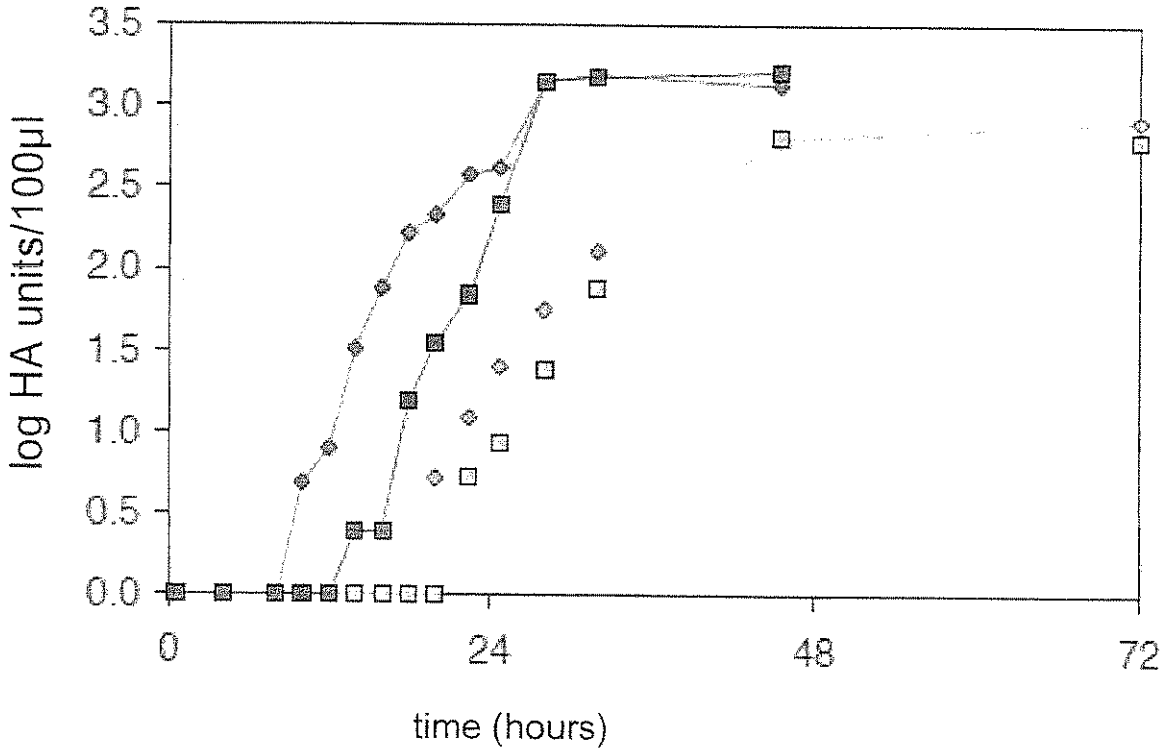


Fig. 10 B

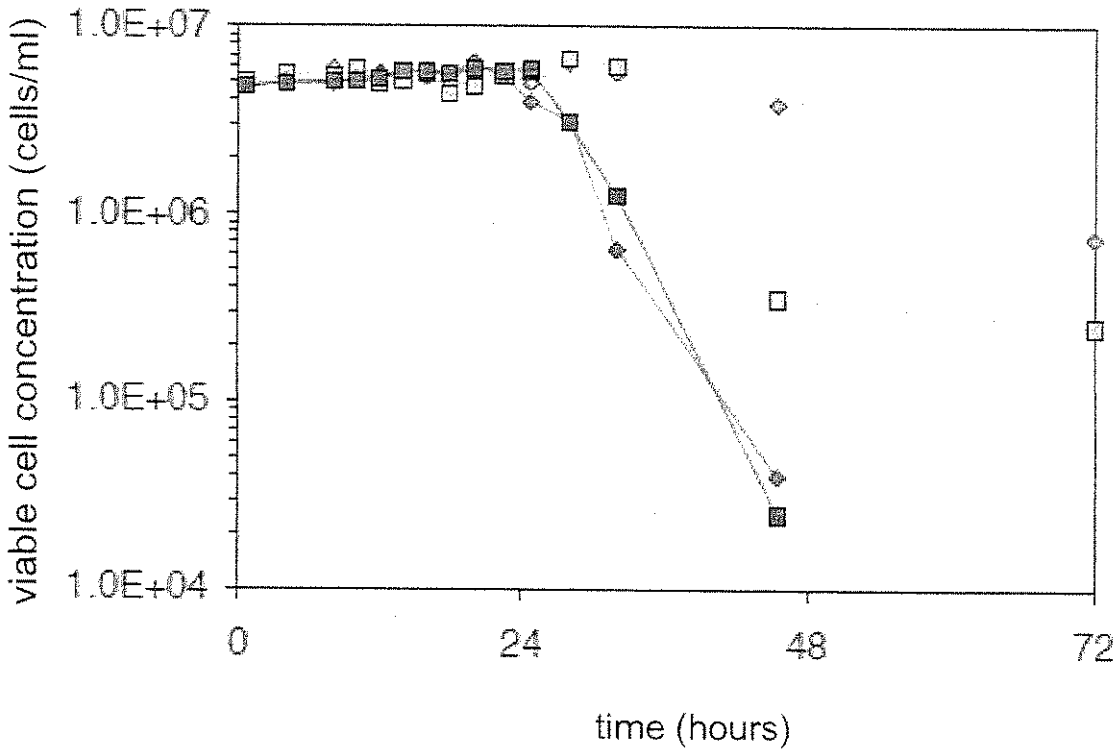


Fig. 10 C

