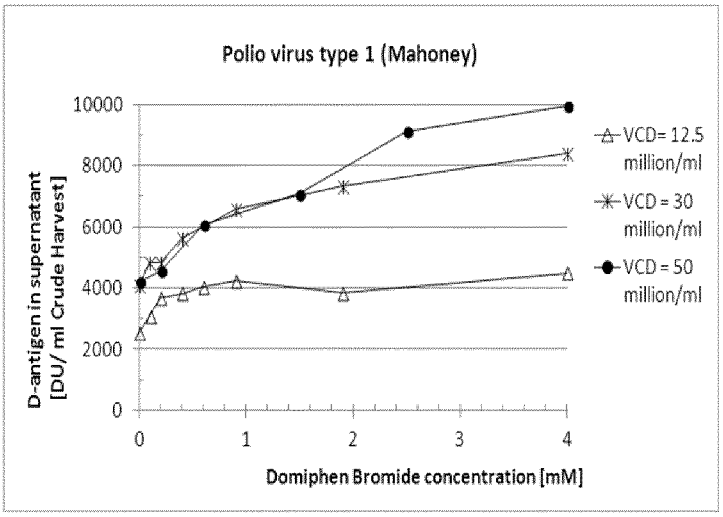
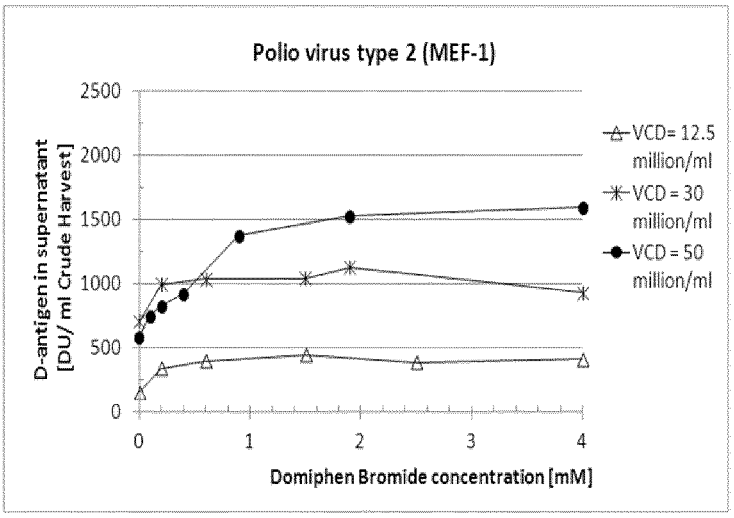
A


Polio virus type 1 (Mahoney)
D-antigen in supernatant [DU/ ml Crude Harvest]
10000
8000
6000
4000
2000
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD= 12.5 million/ml
VCD = 30 million/ml
VCD = 50 million/ml

B


Polio virus type 2 (MEF-1)
D-antigen in supernatant [DU/ ml Crude Harvest]
2500
2000
1500
1000
500
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD= 12.5 million/ml
VCD = 30 million/ml
VCD = 50 million/ml

C

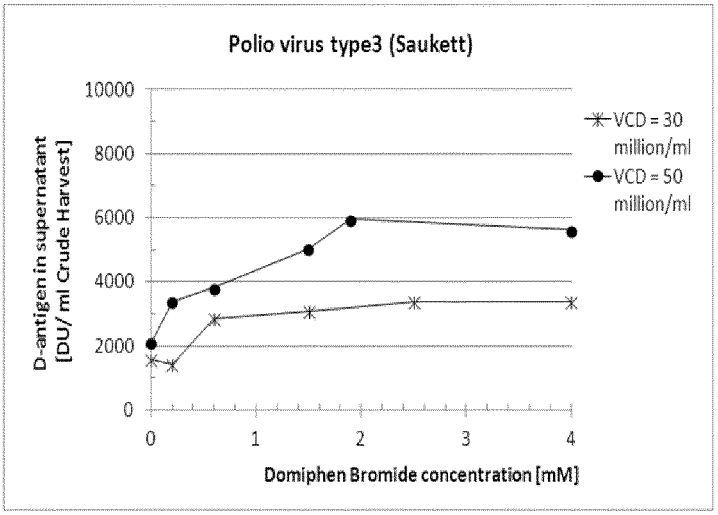
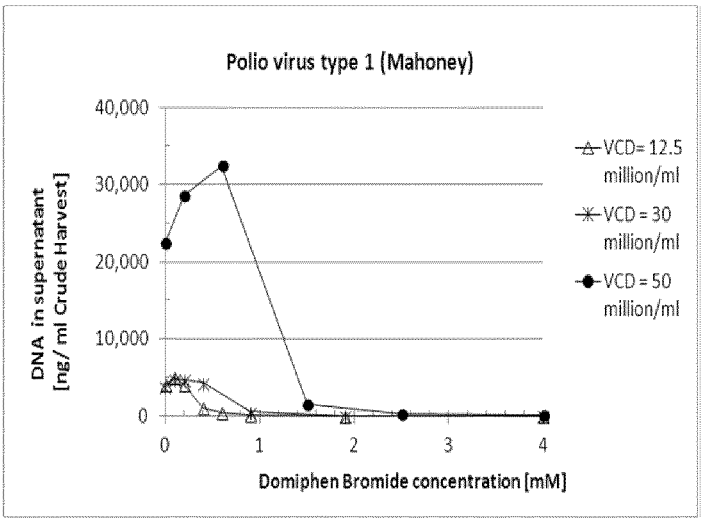
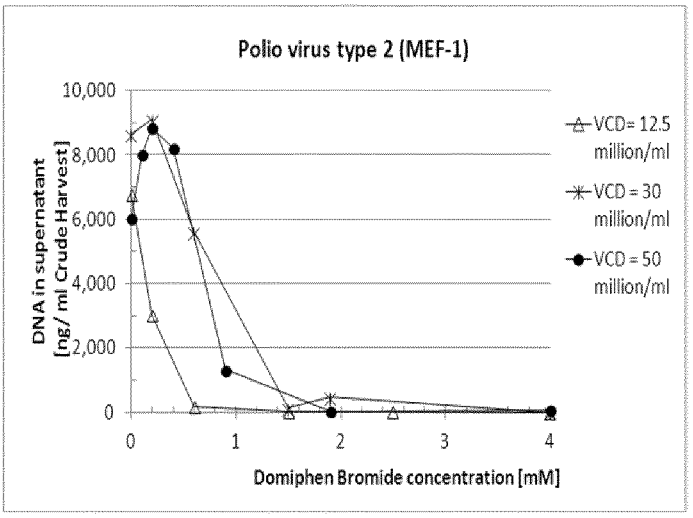

Polio virus type3 (Saukett)
D-antigen in supernatant [DU/ ml Crude Harvest]
10000
8000
6000
4000
2000
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD = 30 million/ml
VCD = 50 million/ml

Fig. 1

A


Polio virus type 1 (Mahoney)
DNA in supernatant [ng/ ml Crude Harvest]
40,000
30,000
20,000
10,000
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD= 12.5 million/ml
VCD = 30 million/ml
VCD = 50 million/ml

B


Polio virus type 2 (MEF-1)
DNA in supernatant [ng/ ml Crude Harvest]
10,000
8,000
6,000
4,000
2,000
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD= 12.5 million/ml
VCD = 30 million/ml
VCD = 50 million/ml

C

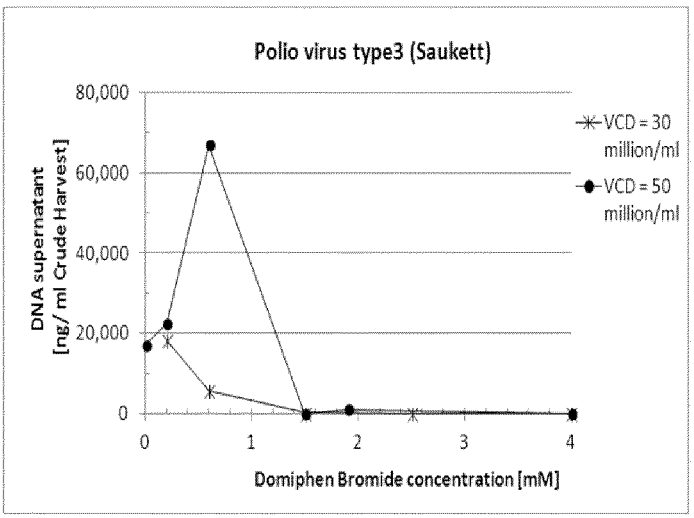

Polio virus type3 (Saukett)
DNA supernatant [ng/ ml Crude Harvest]
80,000
60,000
40,000
20,000
0
0
1
2
3
4
Domiphen Bromide concentration [mM]
VCD = 30 million/ml
VCD = 50 million/ml

Fig. 2

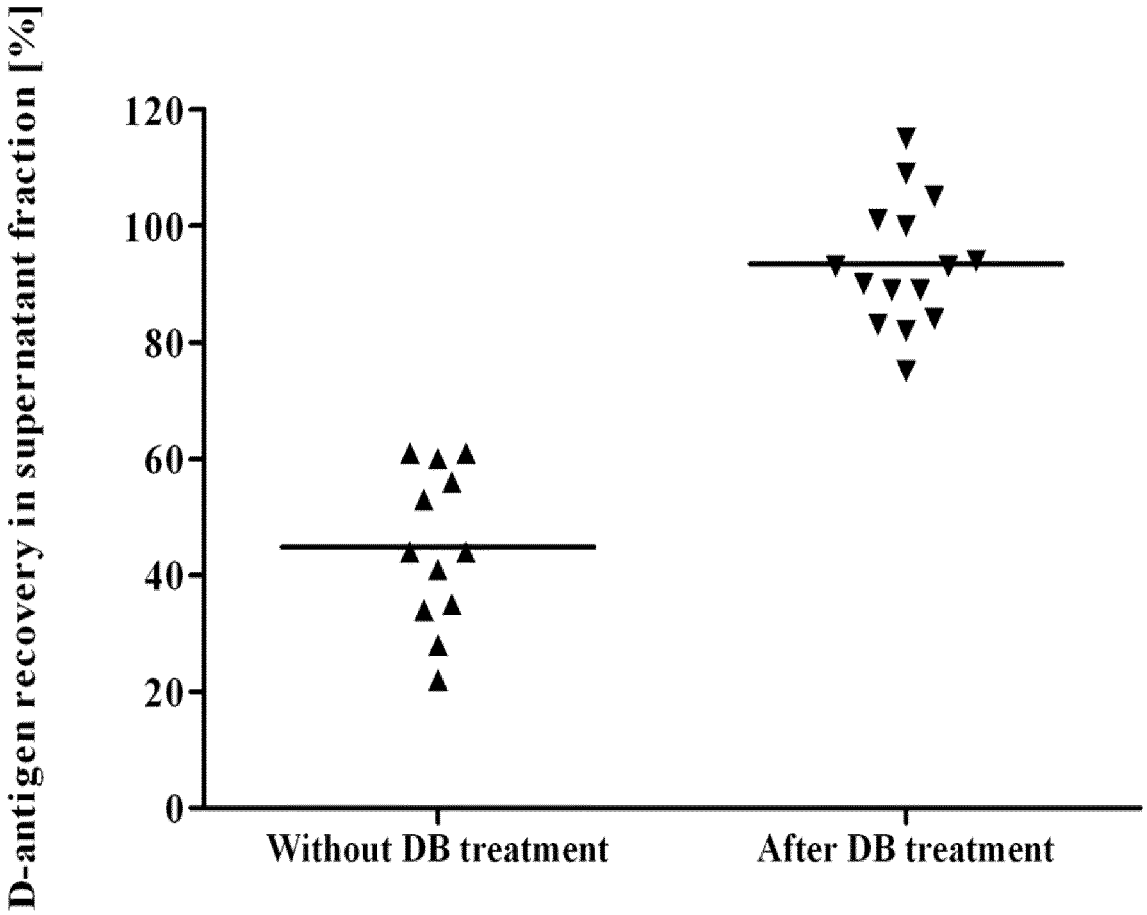

D-antigen recovery in supernatant fraction [%]
120
100
80
60
40
20
0
Without DB treatment
After DB treatment

Fig. 3

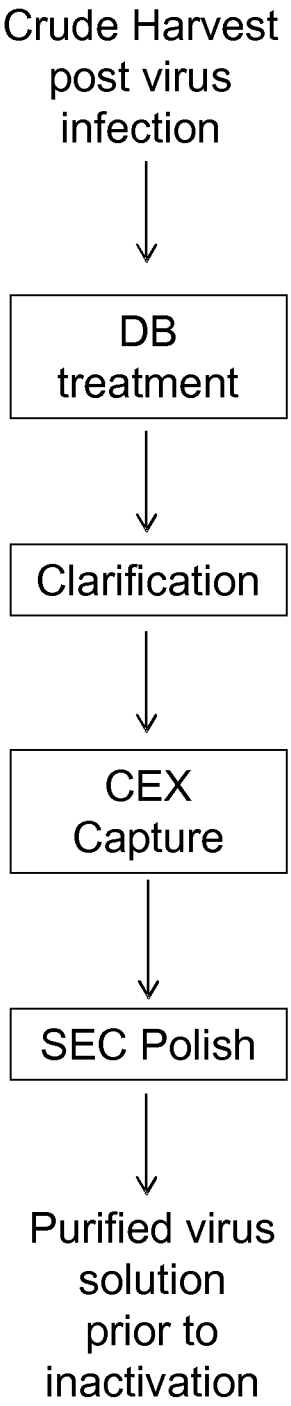

Crude Harvest post virus infection
DB treatment
Clarification
CEX Capture
SEC Polish
Purified virus solution prior to inactivation

Fig. 4

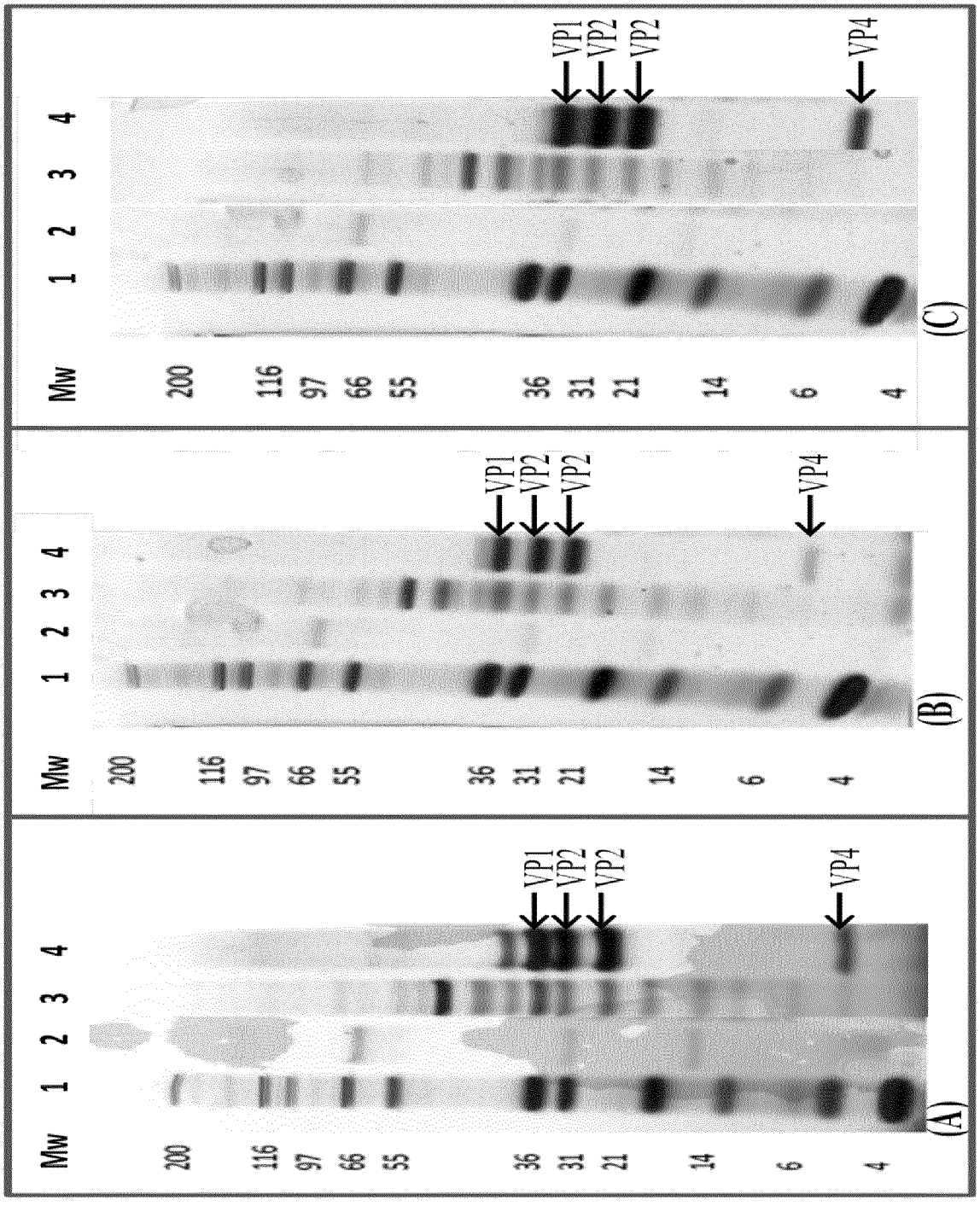
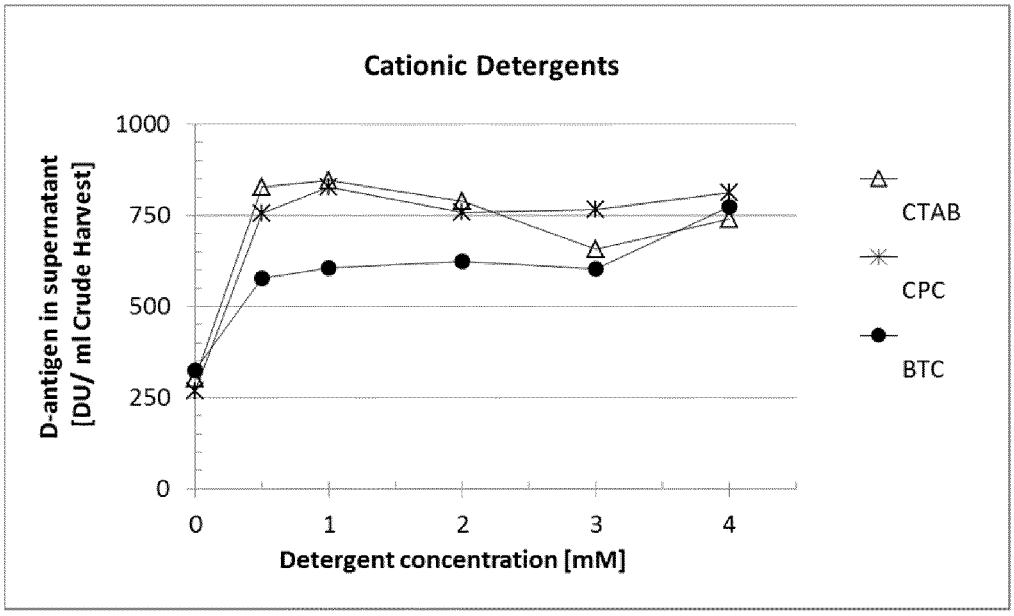


Fig. 5

A


Cationic Detergents
D-antigen in supernatant [DU/ ml Crude Harvest]
1000
750
500
250
0
0
1
2
3
4
Detergent concentration [mM]
CTAB
CPC
BTC

B

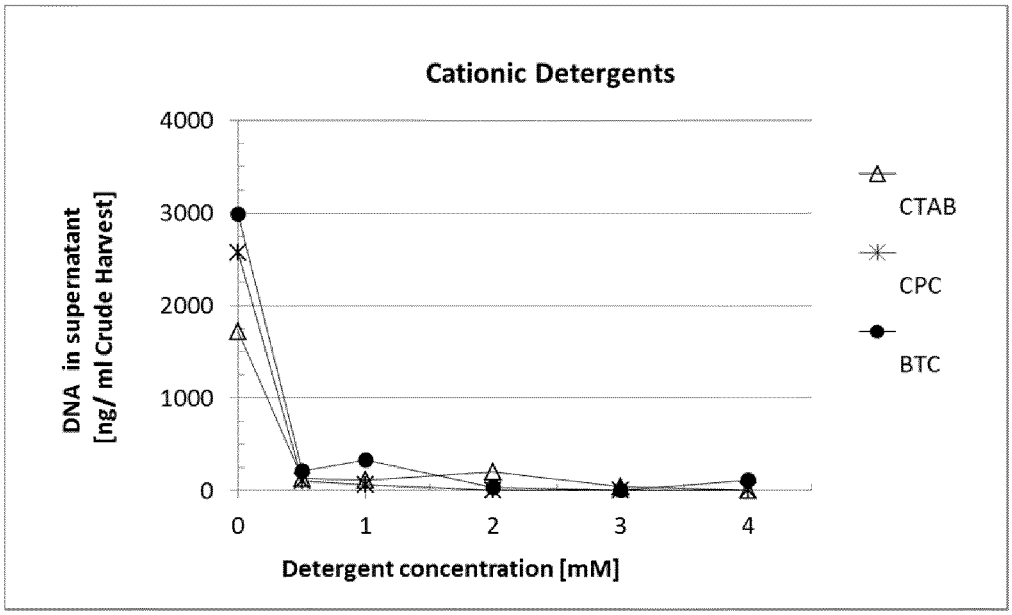
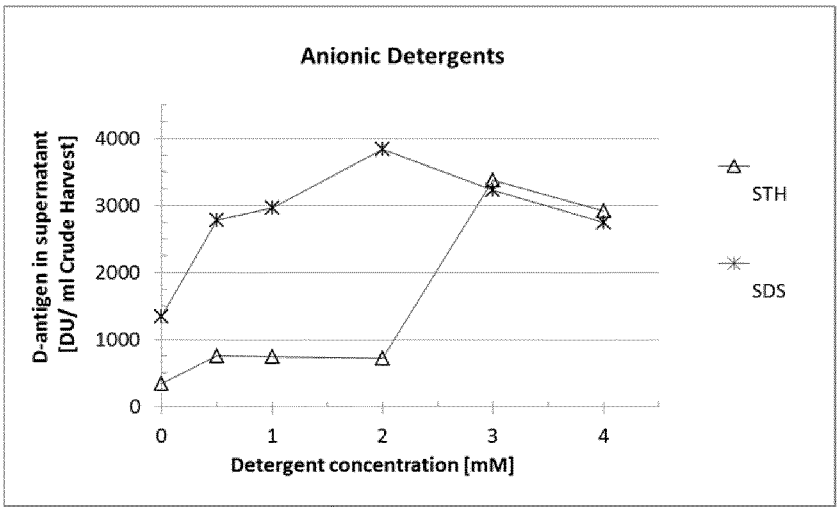
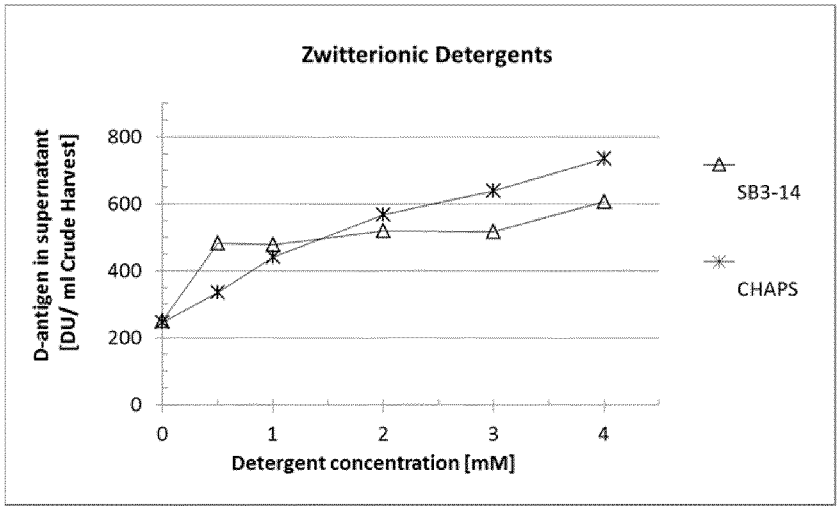

Cationic Detergents
DNA in supernatant [ng/ ml Crude Harvest]
4000
3000
2000
1000
0
0
1
2
3
4
Detergent concentration [mM]
CTAB
CPC
BTC

Fig. 6

A


Anionic Detergents
D-antigen in supernatant [DU/ ml Crude Harvest]
4000
3000
2000
1000
0
0
1
2
3
4
Detergent concentration [mM]
STH
SDS

B


Zwitterionic Detergents
D-antigen in supernatant [DU/ ml Crude Harvest]
800
600
400
200
0
0
1
2
3
4
Detergent concentration [mM]
SB3-14
CHAPS

C

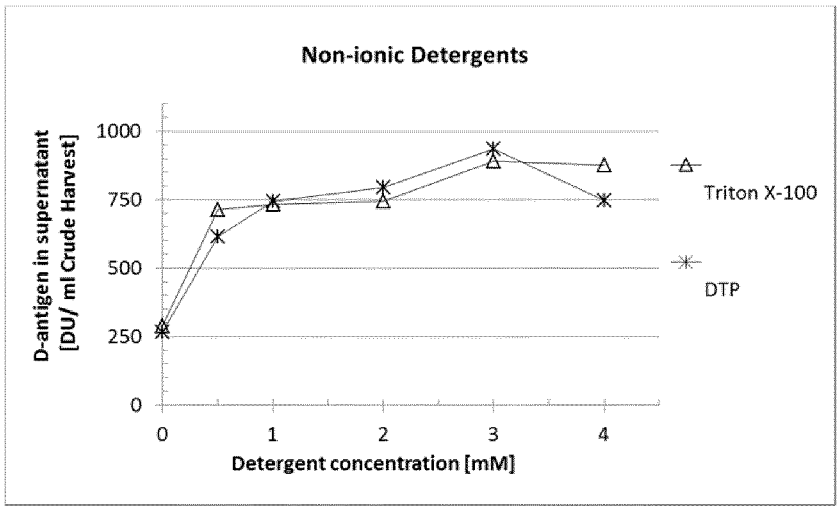
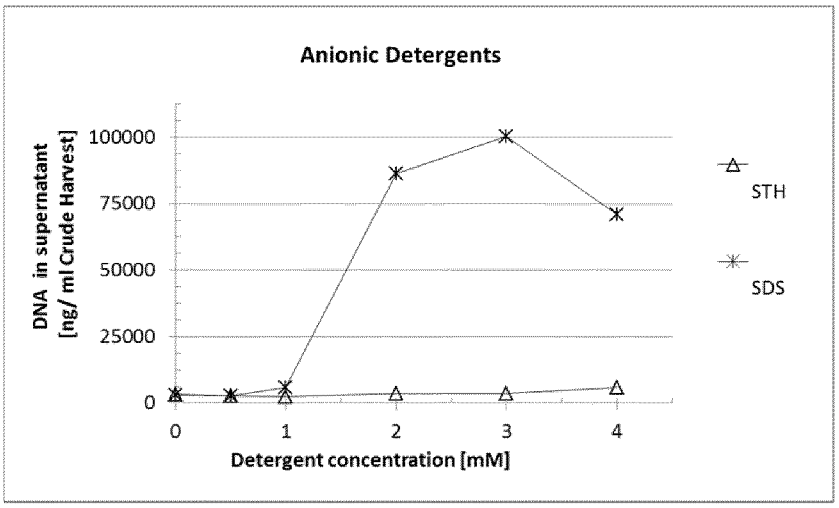
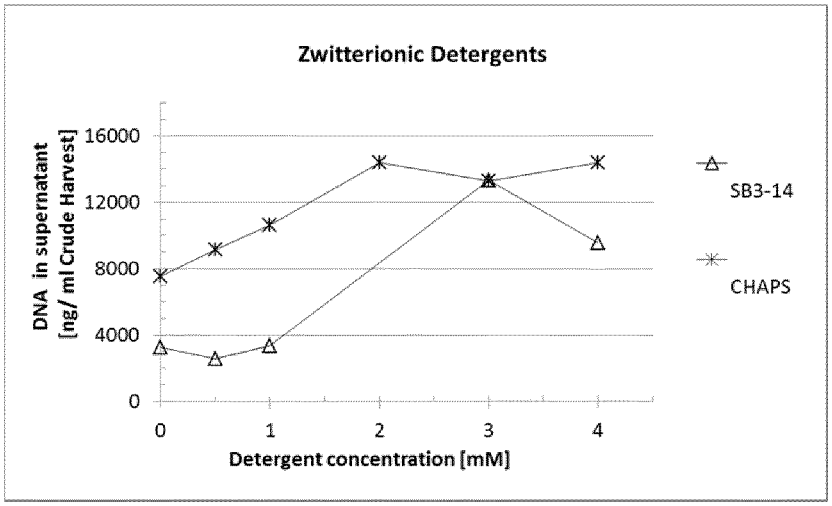

Non-ionic Detergents
D-antigen in supernatant [DU/ ml Crude Harvest]
1000
750
500
250
0
0
1
2
3
4
Detergent concentration [mM]
Triton X-100
DTP

Fig. 7

A


Anionic Detergents
DNA in supernatant [ng/ ml Crude Harvest]
100000
75000
50000
25000
0
0
1
2
3
4
Detergent concentration [mM]
STH
SDS

B


Zwitterionic Detergents
DNA in supernatant [ng/ ml Crude Harvest]
16000
12000
8000
4000
0
0
1
2
3
4
Detergent concentration [mM]
SB3-14
CHAPS

C

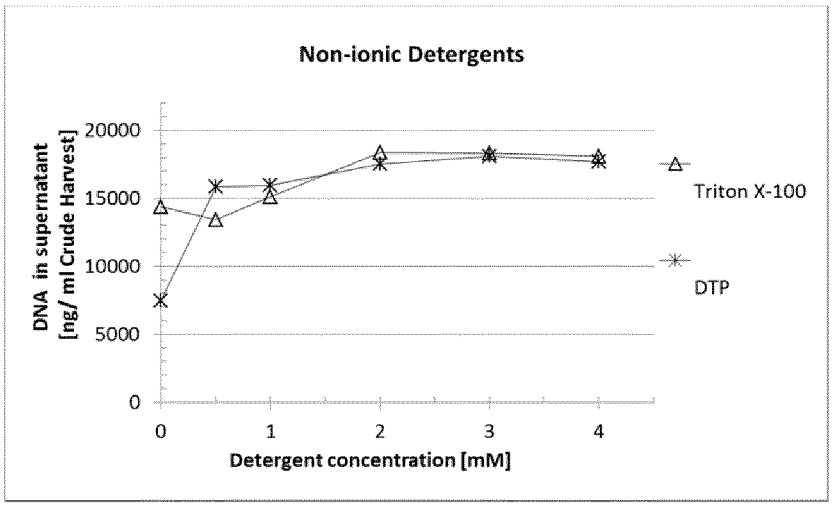

Non-ionic Detergents
DNA in supernatant [ng/ ml Crude Harvest]
20000
15000
10000
5000
0
0
1
2
3
4
Detergent concentration [mM]
Triton X-100
DTP

Fig. 8