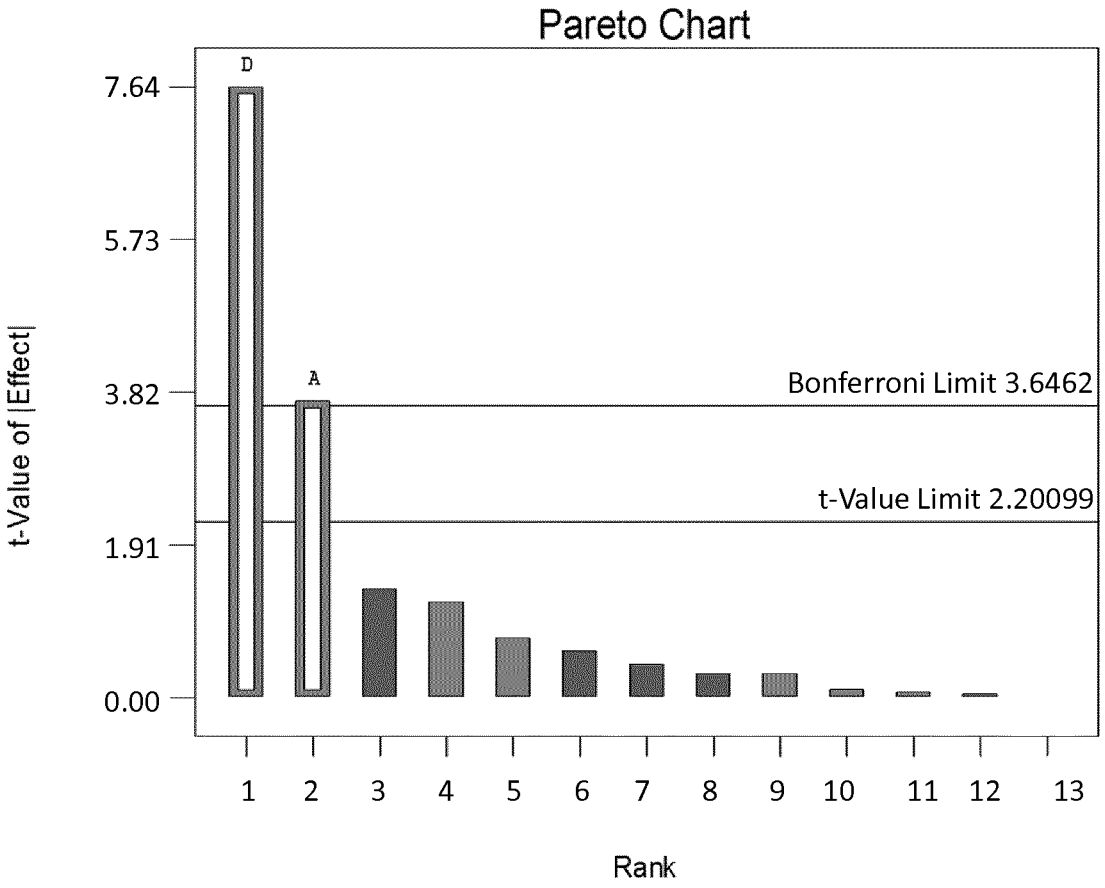


Design-Expert® Software
Titer (g/L)

A: Na_2SeO_3 (µM)

D: $ZnCl_2$ (µM)

Fig. 1

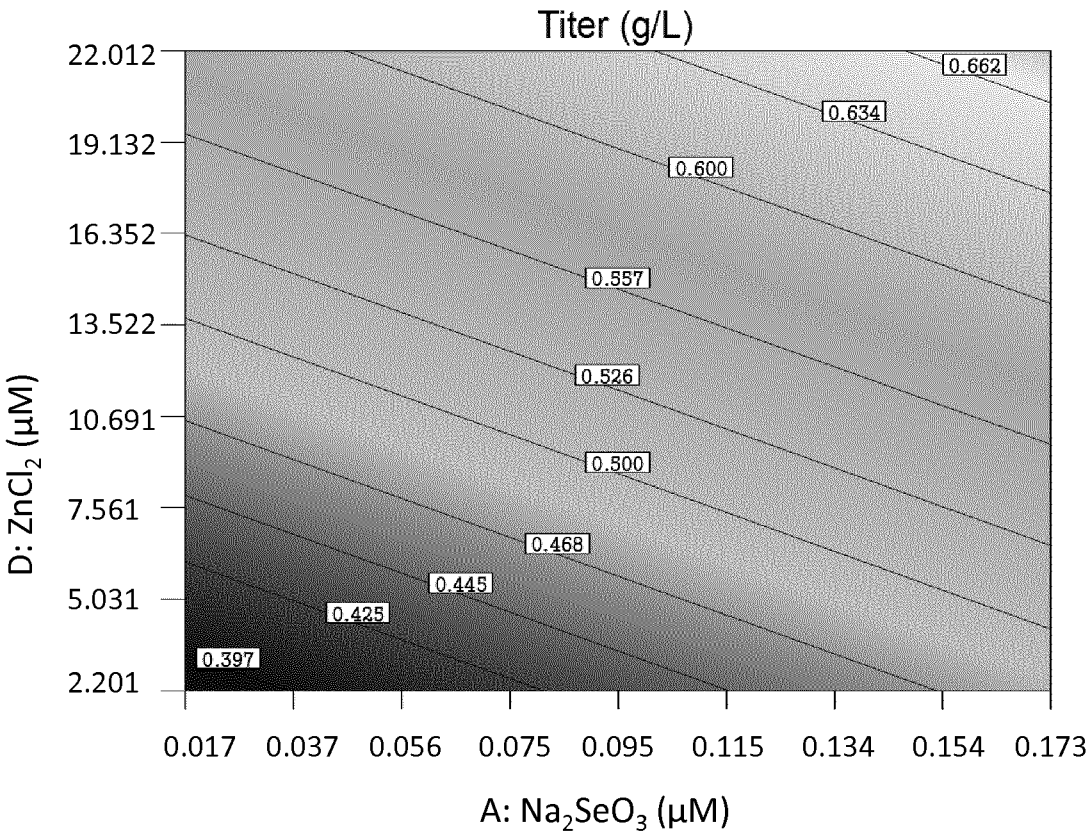
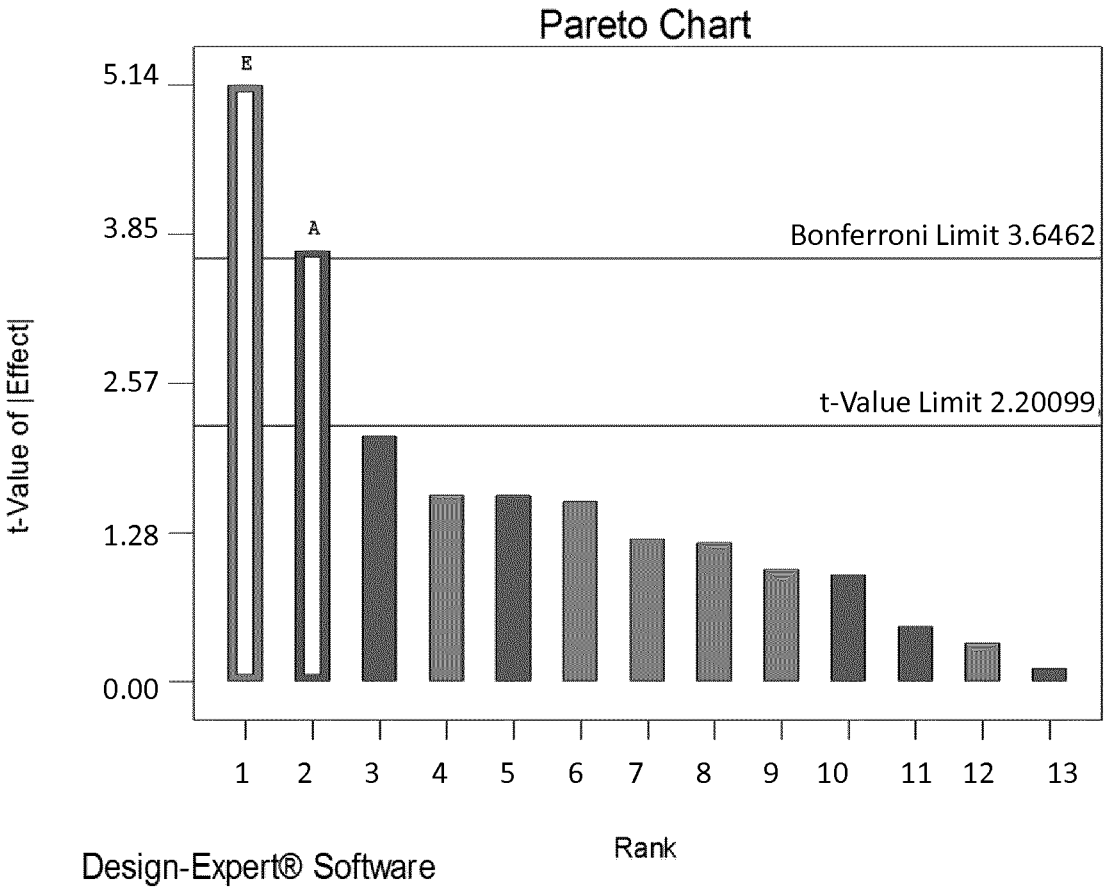

Titer (g/L)
22.012
19.132
16.352
13.522
10.691
7.561
5.031
2.201
D: ZnCl2 (µM)
0.662
0.634
0.600
0.557
0.526
0.500
0.468
0.445
0.425
0.397
0.017
0.037
0.056
0.075
0.095
0.115
0.134
0.154
0.173
A: Na2SeO3 (µM)

Fig. 2



A: Na_2SeO_3 (µM)

E: CUCL2 x $2H_2O$ (µM)

Fig. 3

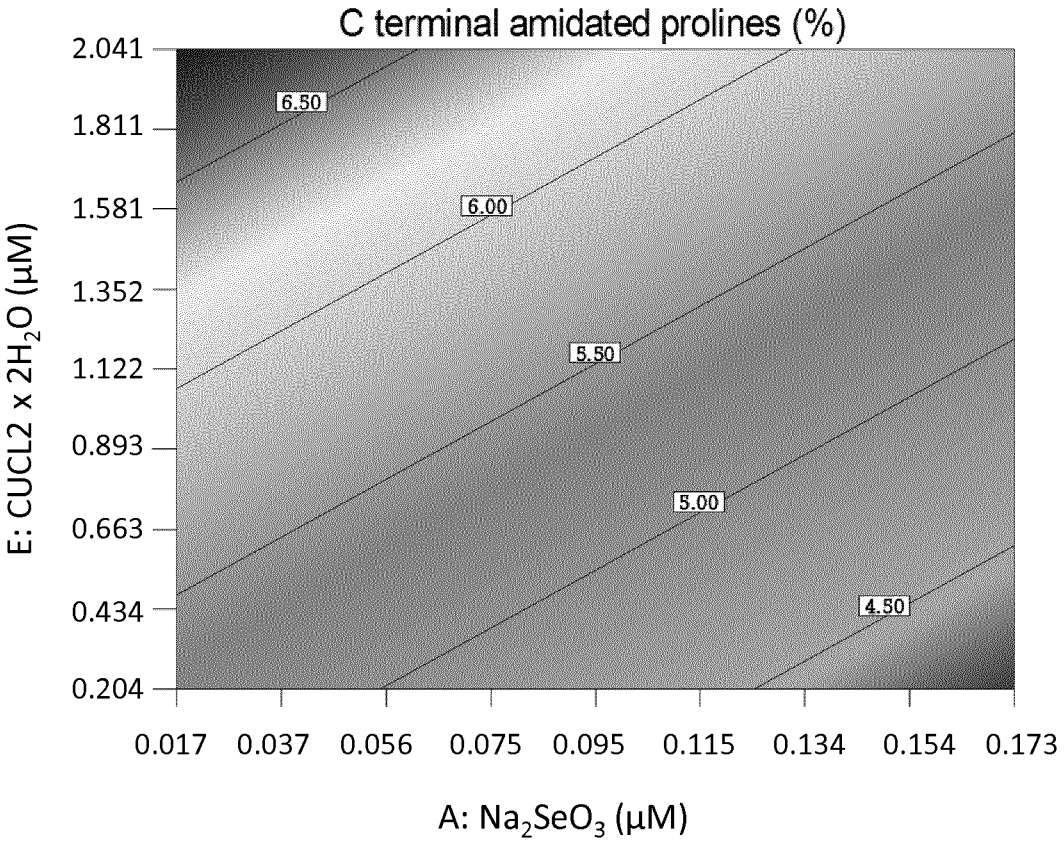

C terminal amidated prolines (%)
2.041
1.811
1.581
1.352
1.122
0.893
0.663
0.434
0.204
E: CUCL2 x 2H2O (µM)
6.50
6.00
5.50
5.00
4.50
0.017
0.037
0.056
0.075
0.095
0.115
0.134
0.154
0.173
A: Na2SeO3 (µM)

Fig. 4

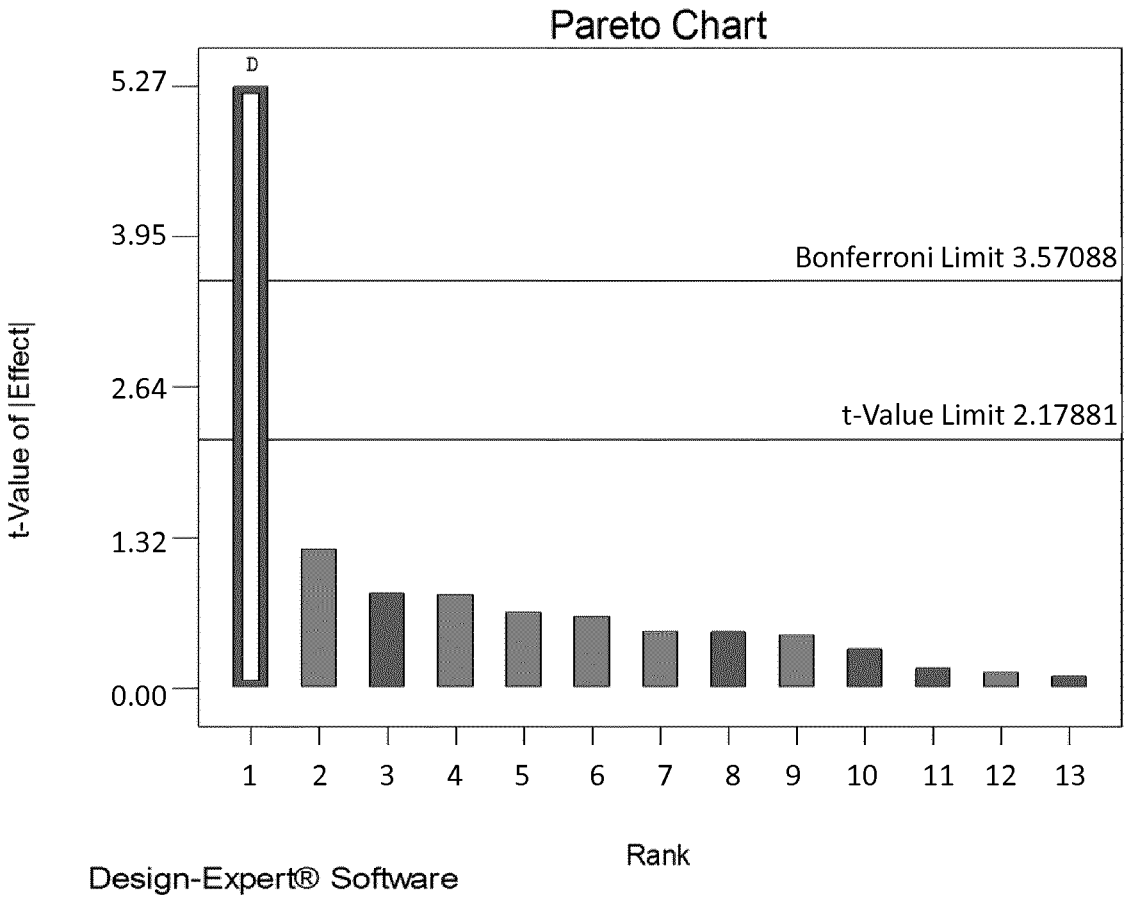

Pareto Chart
D
5.27
3.95
2.64
1.32
0.00
Bonferroni Limit 3.57088
t-Value Limit 2.17881
t-Value of |Effect|
1
2
3
4
5
6
7
8
9
10
11
12
13
Rank
Design-Expert® Software
C terminal Lys (%)
D: ZnCl2 (µM)

Fig. 5

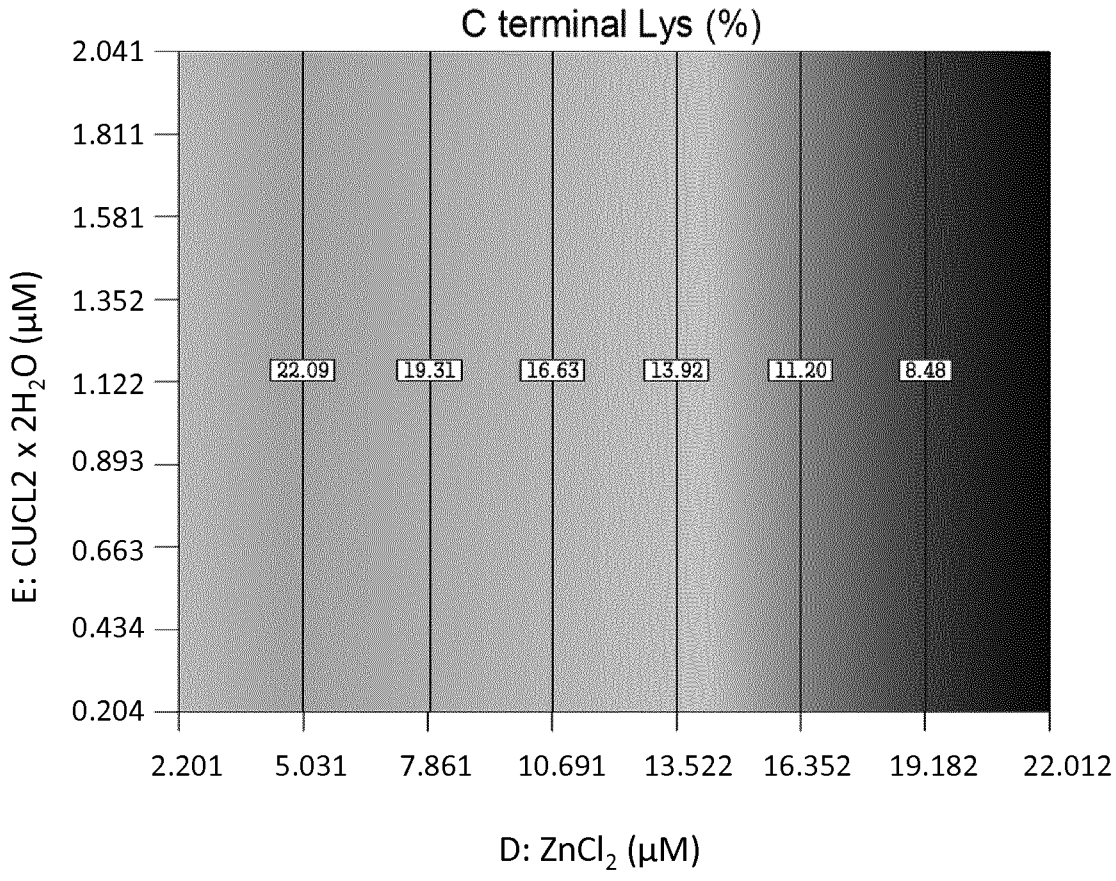

C terminal Lys (%)
2.041
1.811
1.581
1.352
1.122
0.893
0.663
0.434
0.204
E: CUCL2 x 2H2O (µM)
22.09
19.31
16.63
13.92
11.20
8.48
2.201
5.031
7.861
10.691
13.522
16.352
19.182
22.012
D: ZnCl2 (µM)

Fig. 6

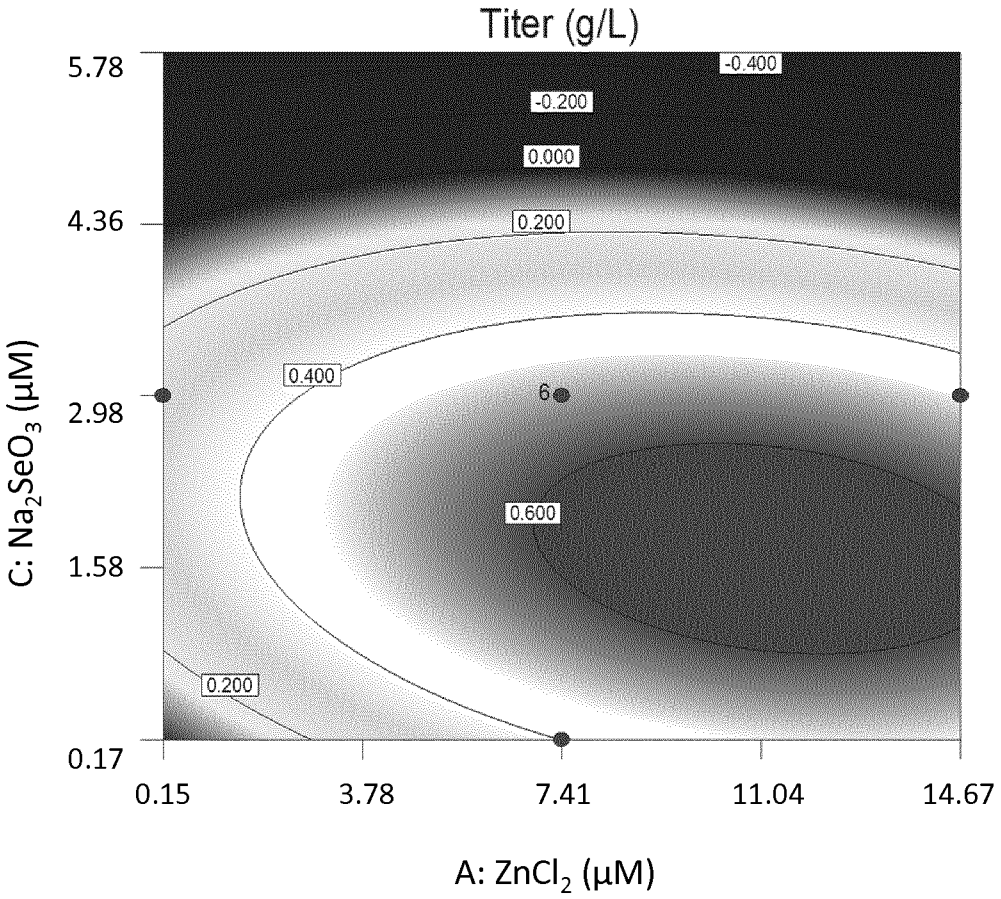

Titer (g/L)
5.78
4.36
2.98
1.58
0.17
C: Na2SeO3 (µM)
-0.400
-0.200
0.000
0.200
0.400
0.600
0.200
6
0.15
3.78
7.41
11.04
14.67
A: ZnCl2 (µM)

Fig. 7

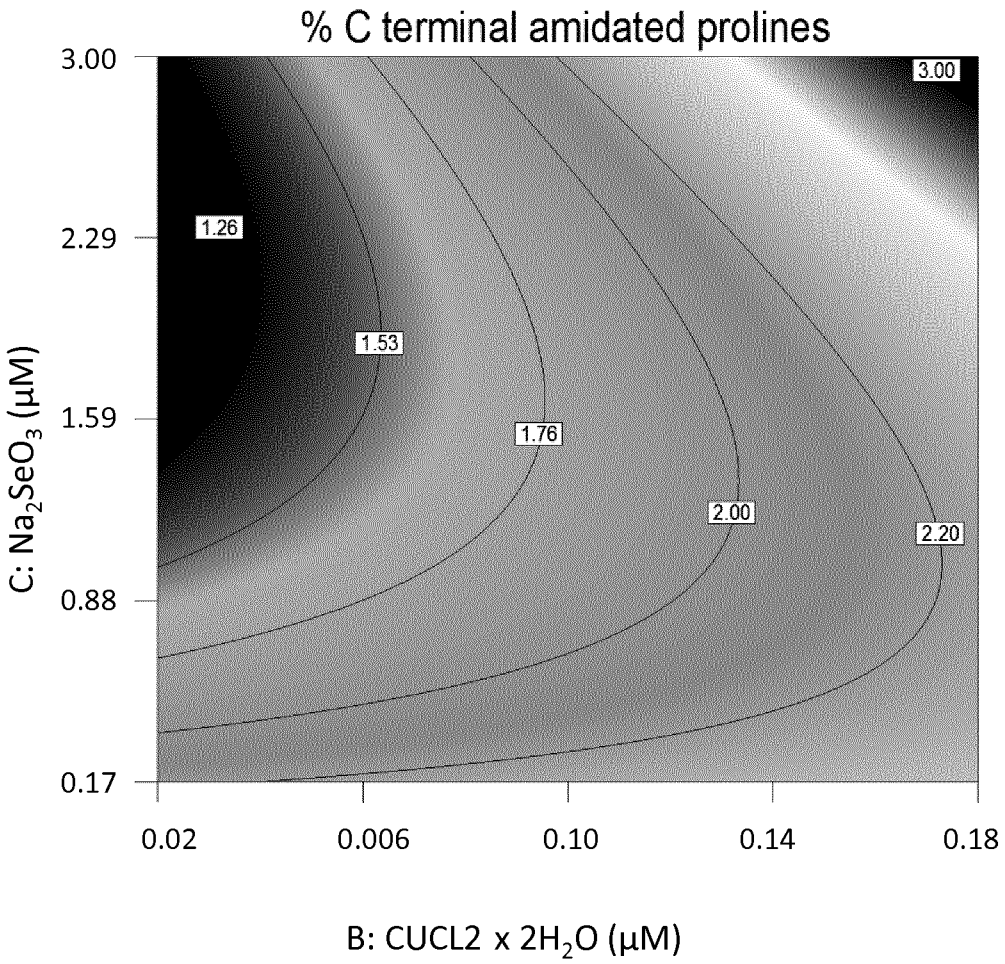

% C terminal amidated prolines
3.00
2.29
1.59
0.88
0.17
C: Na2SeO3 (µM)
1.26
1.53
1.76
2.00
2.20
3.00
0.02
0.006
0.10
0.14
0.18
B: CUCL2 x 2H2O (µM)

Fig. 8

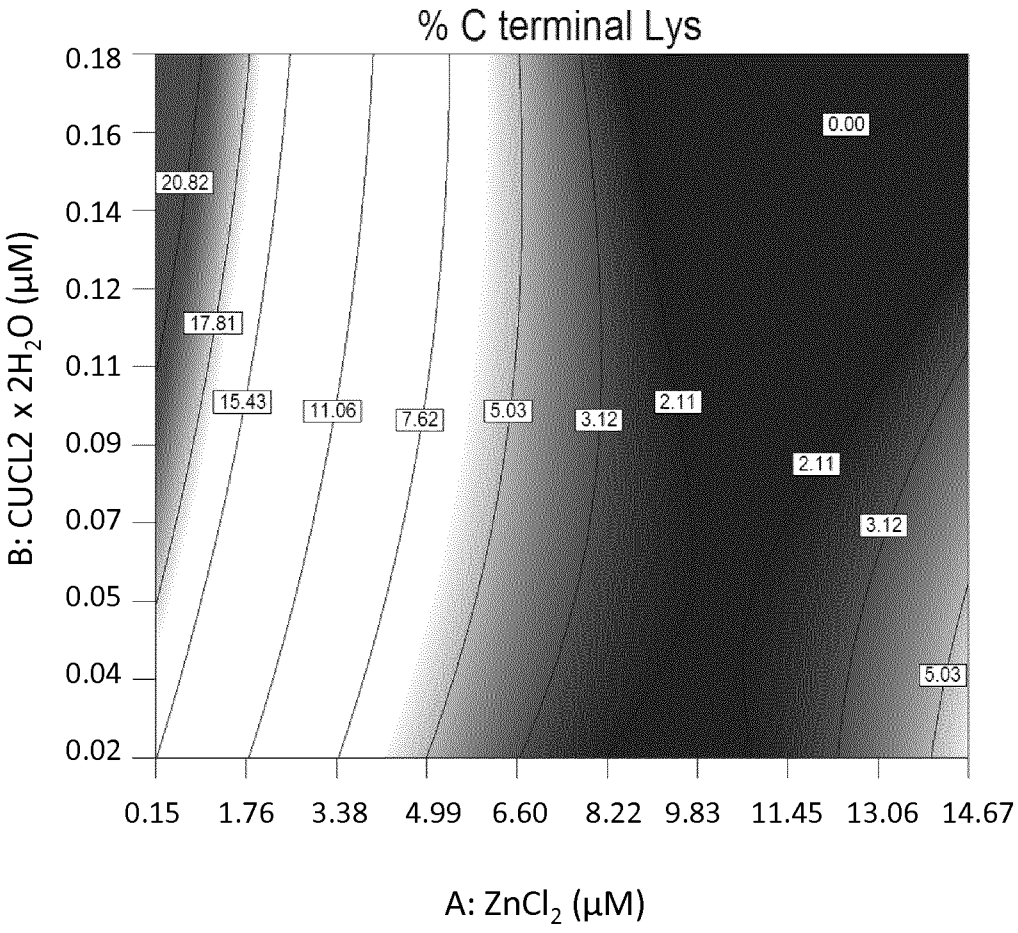

% C terminal Lys
0.18
0.16
0.14
0.12
0.11
0.09
0.07
0.05
0.04
0.02
B: CUCL2 x 2H2O (µM)
0.00
20.82
17.81
15.43
11.06
7.62
5.03
3.12
2.11
2.11
3.12
5.03
0.15
1.76
3.38
4.99
6.60
8.22
9.83
11.45
13.06
14.67
A: ZnCl2 (µM)

Fig. 9

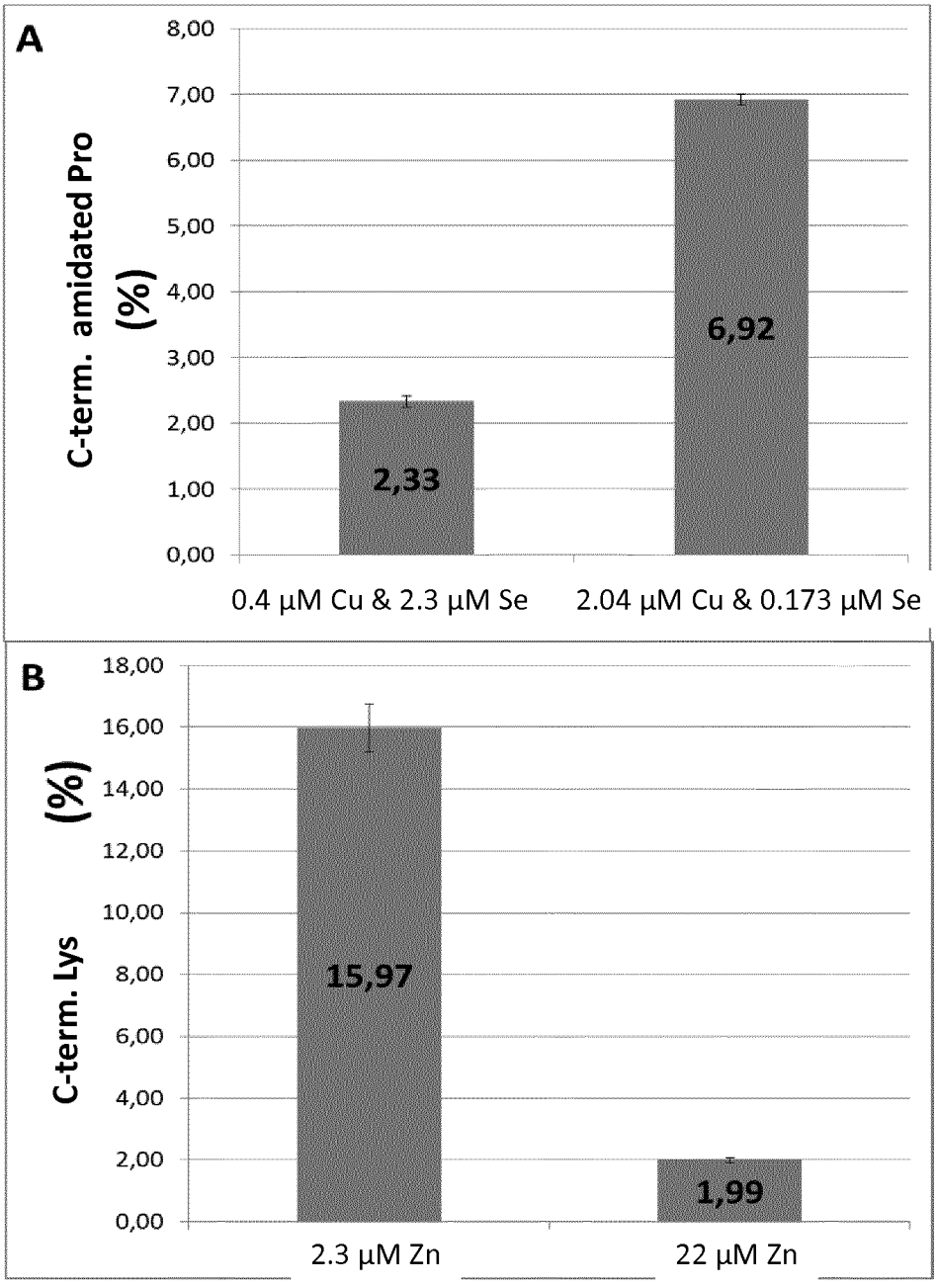

A
C-term. amidated Pro (%)
8,00
7,00
6,00
5,00
4,00
3,00
2,00
1,00
0,00
2,33
6,92
0.4 µM Cu & 2.3 µM Se
2.04 µM Cu & 0.173 µM Se
B
C-term. Lys (%)
18,00
16,00
14,00
12,00
10,00
8,00
6,00
4,00
2,00
0,00
15,97
1,99
2.3 µM Zn
22 µM Zn

Fig. 10

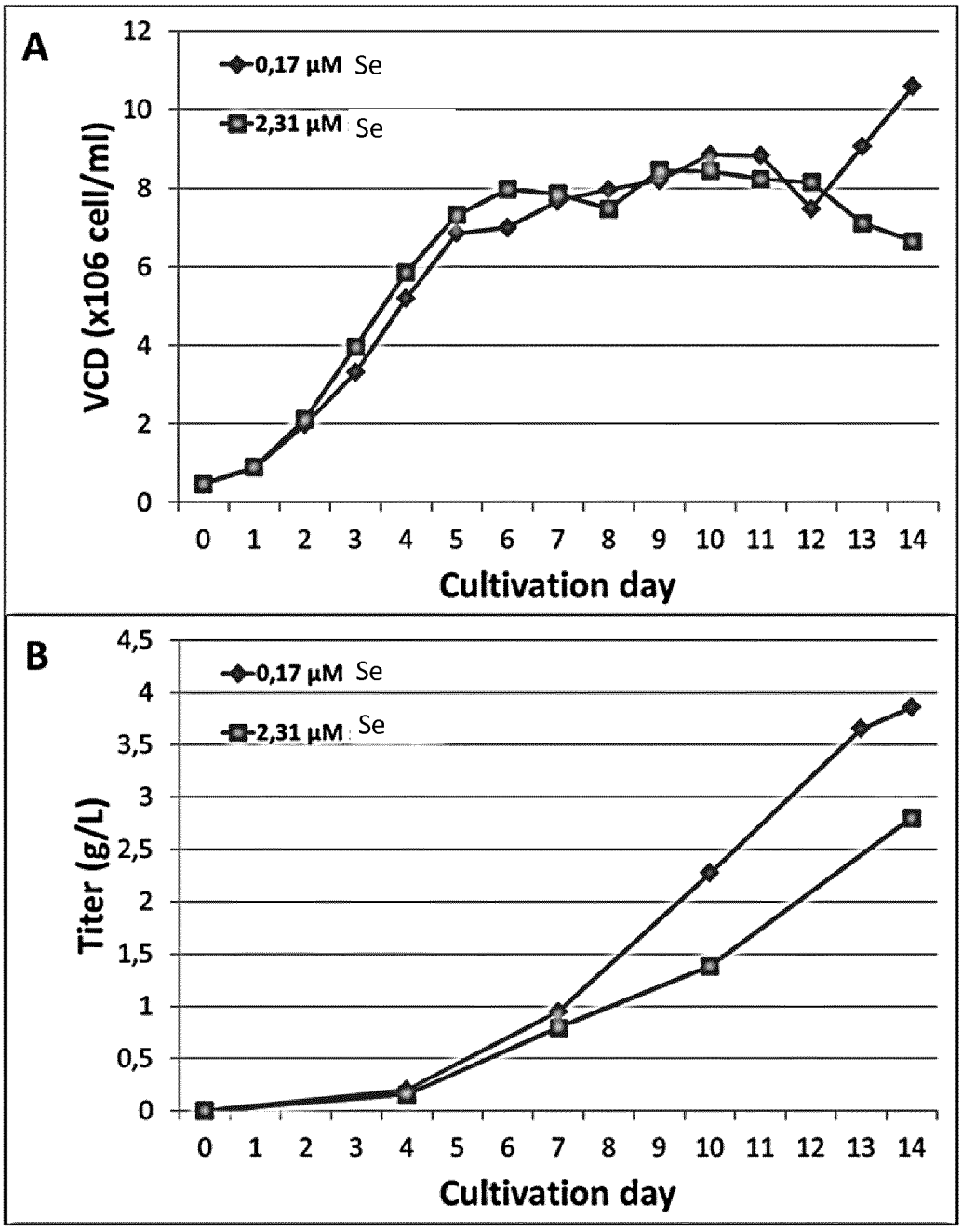

A
0,17 µM Se
2,31 µM Se
VCD (x106 cell/ml)
Cultivation day
B
0,17 µM Se
2,31 µM Se
Titer (g/L)
Cultivation day

Fig. 11

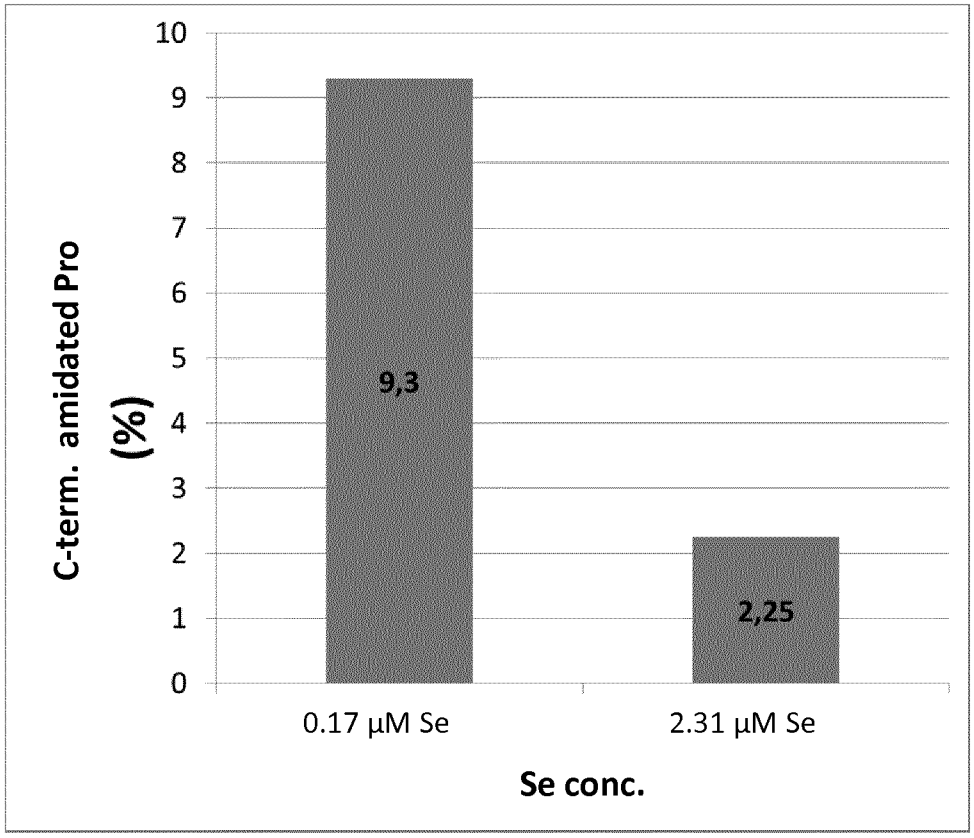

C-term. amidated Pro (%)
10
9
8
7
6
5
4
3
2
1
0
9,3
2,25
0.17 µM Se
2.31 µM Se
Se conc.

Fig. 12

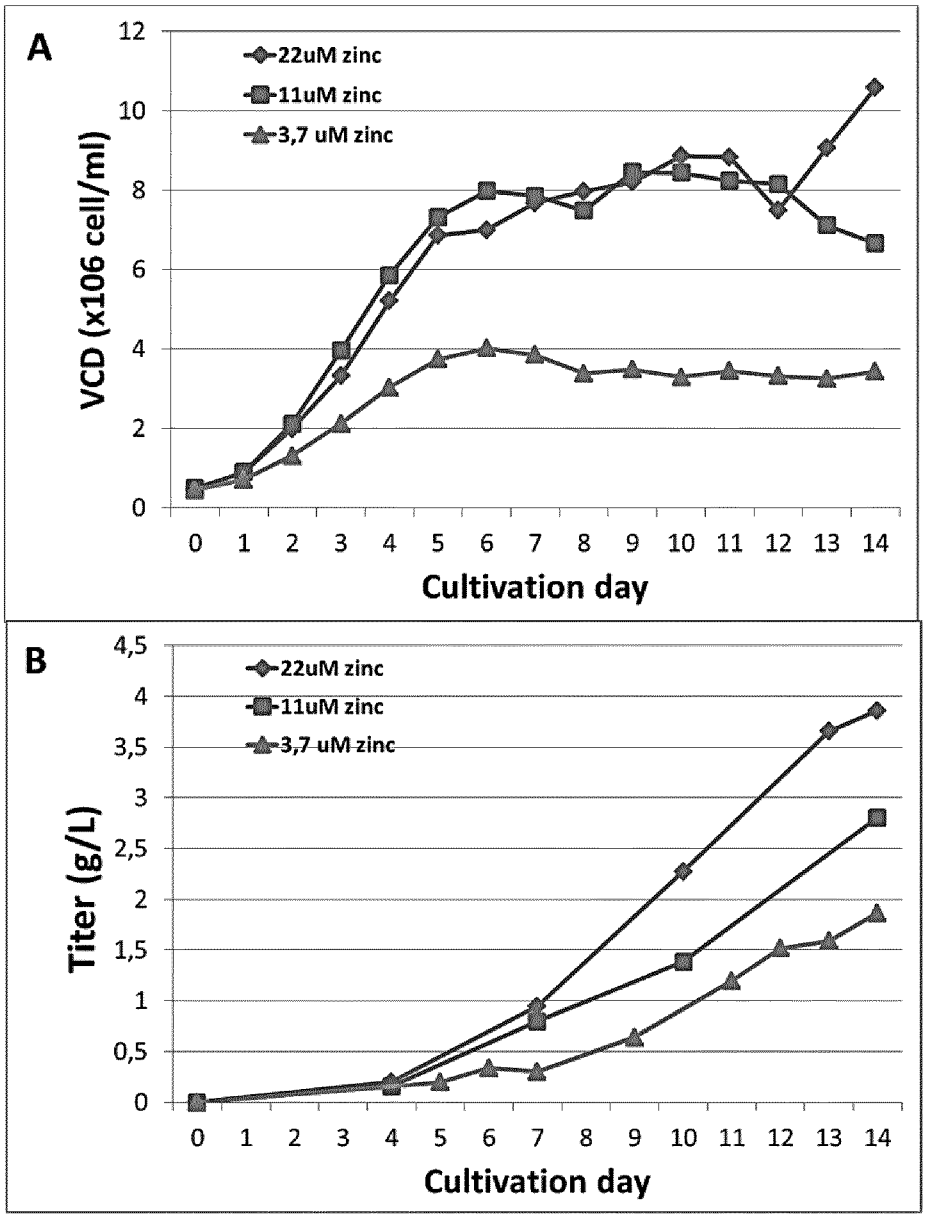

A
22uM zinc
11uM zinc
3,7 uM zinc
VCD (x106 cell/ml)
Cultivation day
B
22uM zinc
11uM zinc
3,7 uM zinc
Titer (g/L)
Cultivation day

Fig. 13

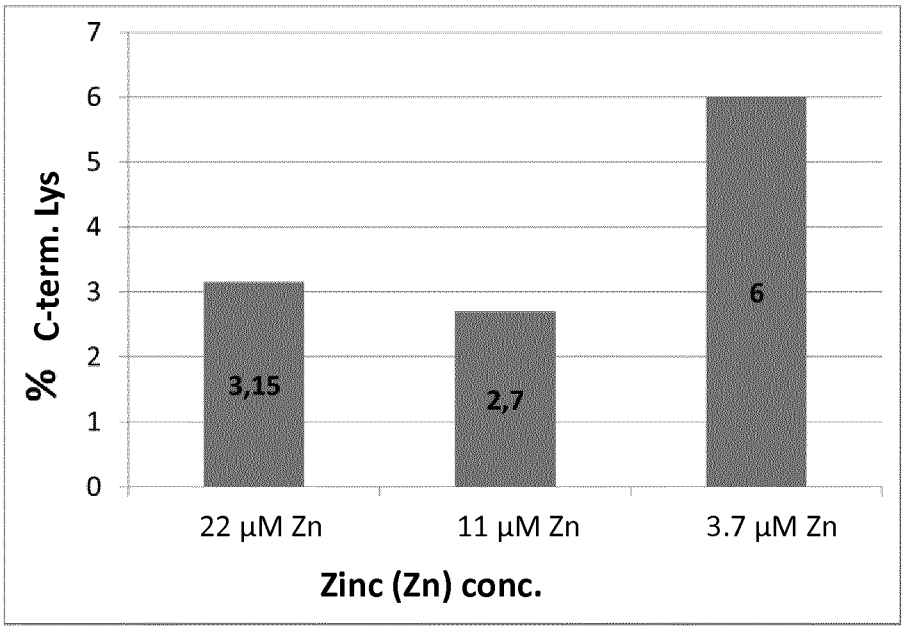

7
6
5
4
3
2
1
0
% C-term. Lys
3,15
2,7
6
22 µM Zn
11 µM Zn
3.7 µM Zn
Zinc (Zn) conc.

Fig. 14