Figure 1- Effect of various di-peptides on titer and viability in Cell line A

Figure 1A- Titer

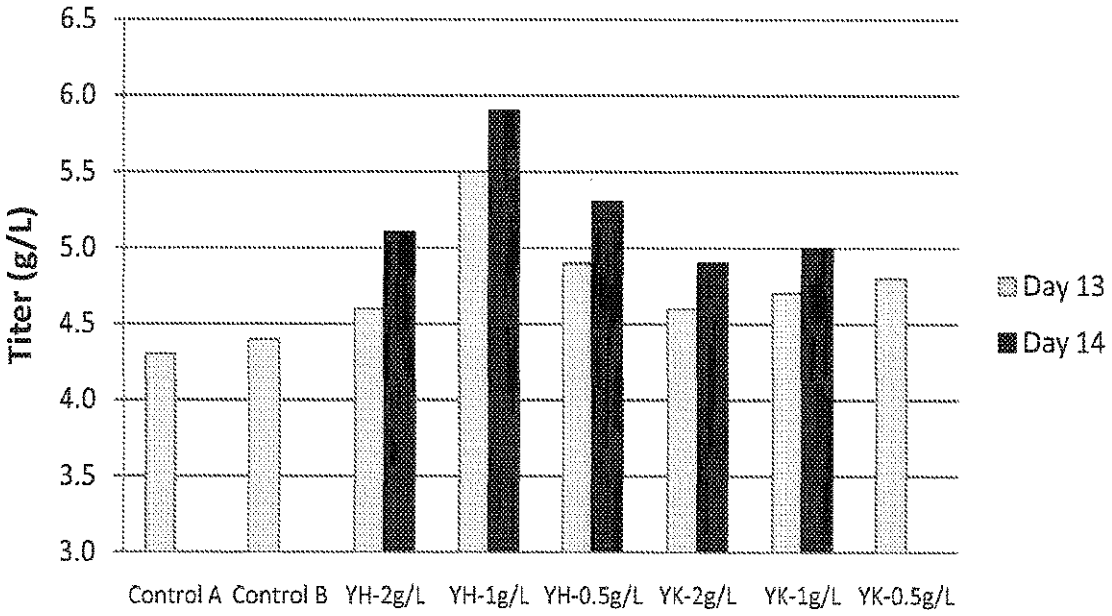


Figure 1B- Viability

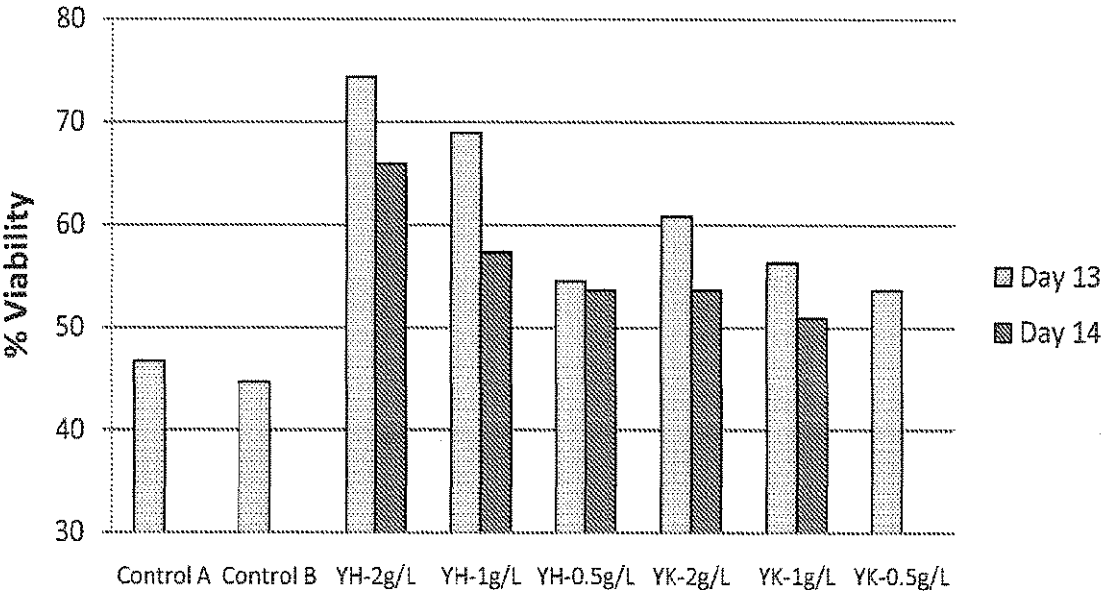


Figure 2- Effect of various di-peptides on titer and viability in Cell line B

Figure 2A- Titer

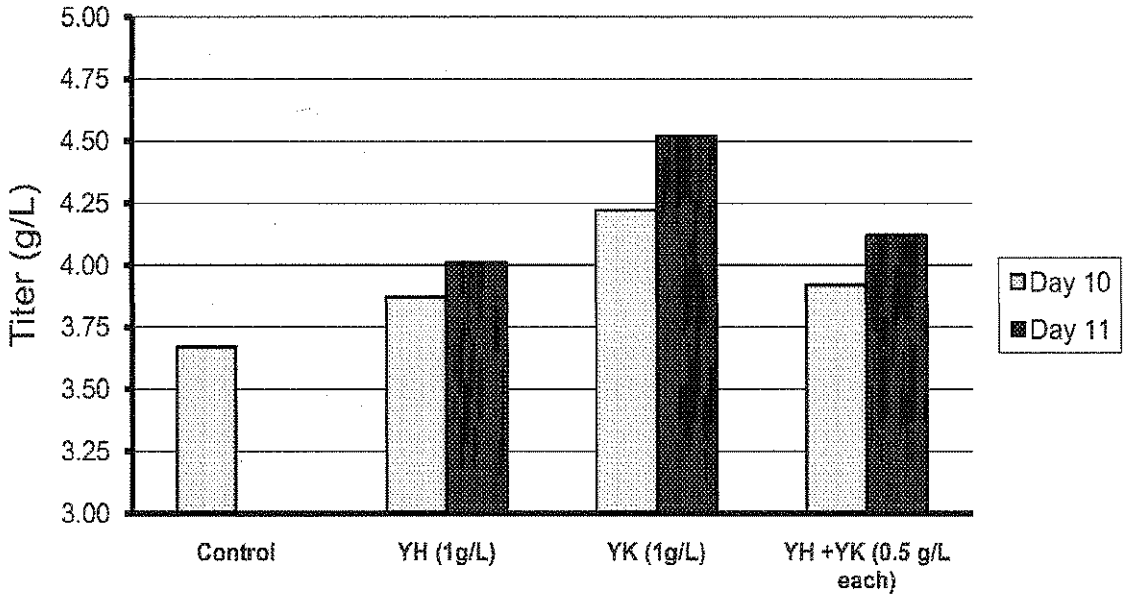


Figure 2B- Viability

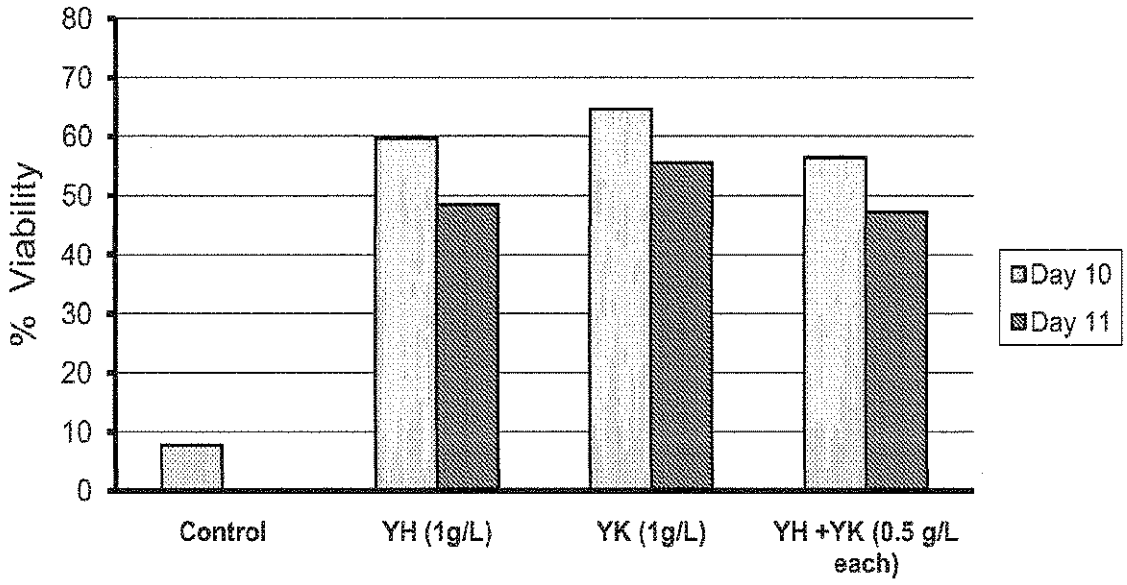


Figure 3- Effect of various di-peptides on titer and viability in Cell line C

Figure 3A- Titer

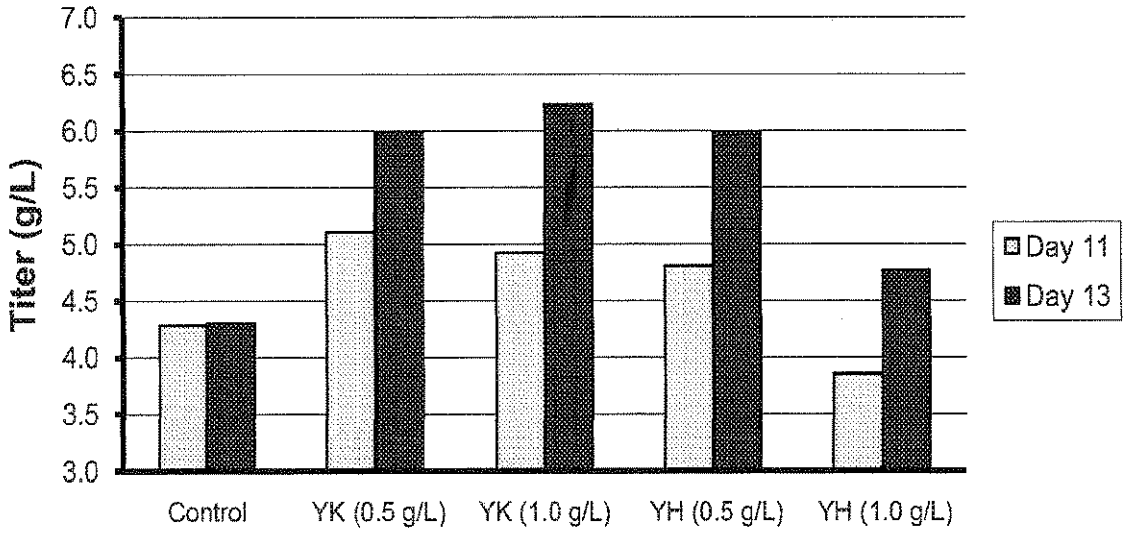


Figure 3B- Viability

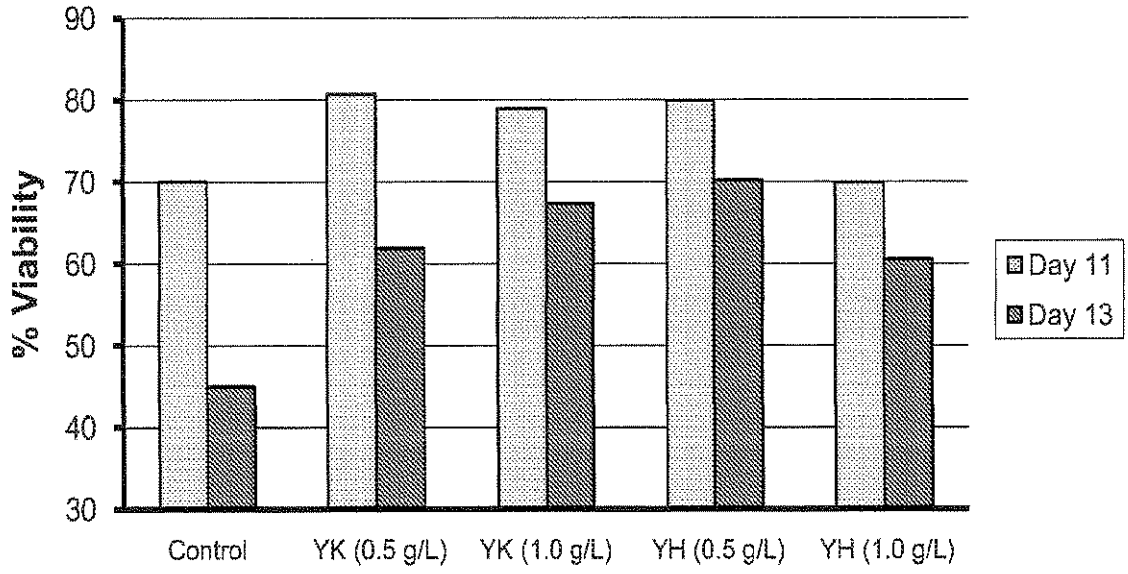


Figure 4- Effect of various di-peptides on titer and viability in Cell line D

Figure 4A- Titer

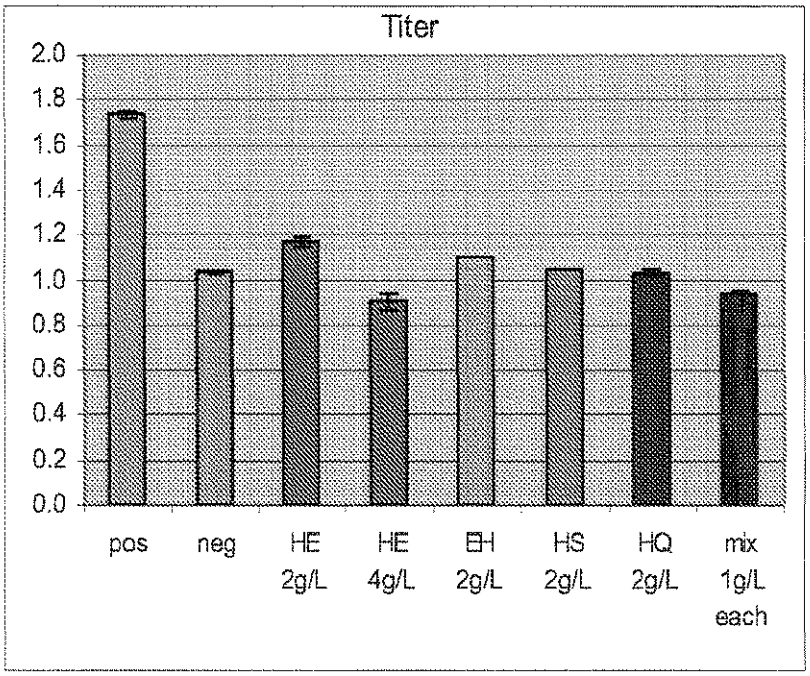


Figure 4B- Viability

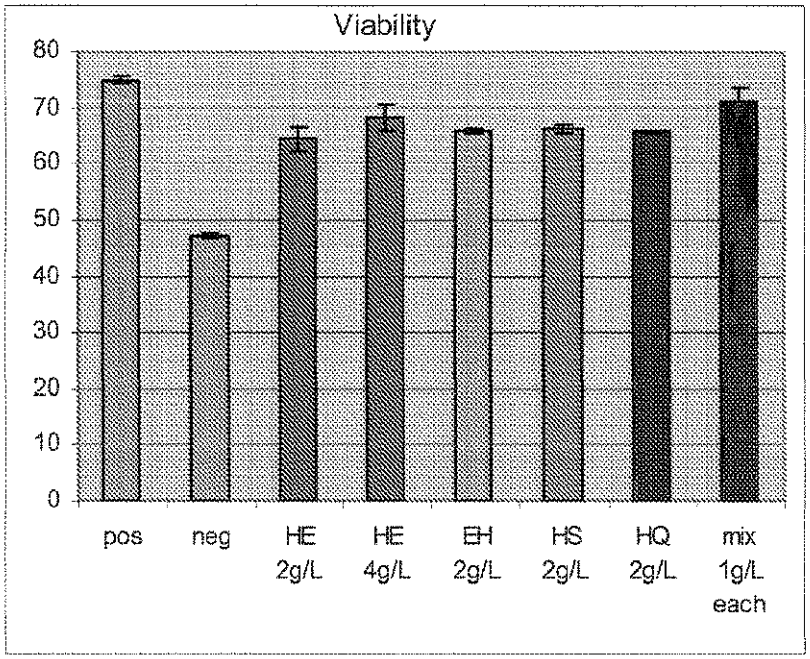


Figure 5- Effect of Various Di-peptides on Day 11 Titer from Cell Line C

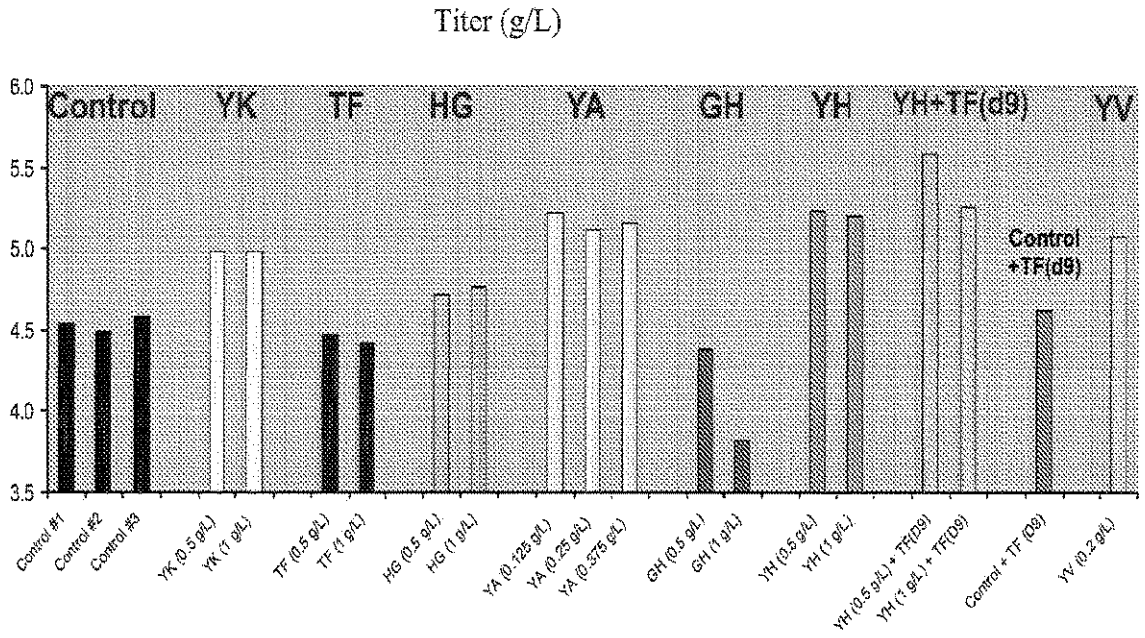


Figure 6- Increase in Cell Size in Cell Line C

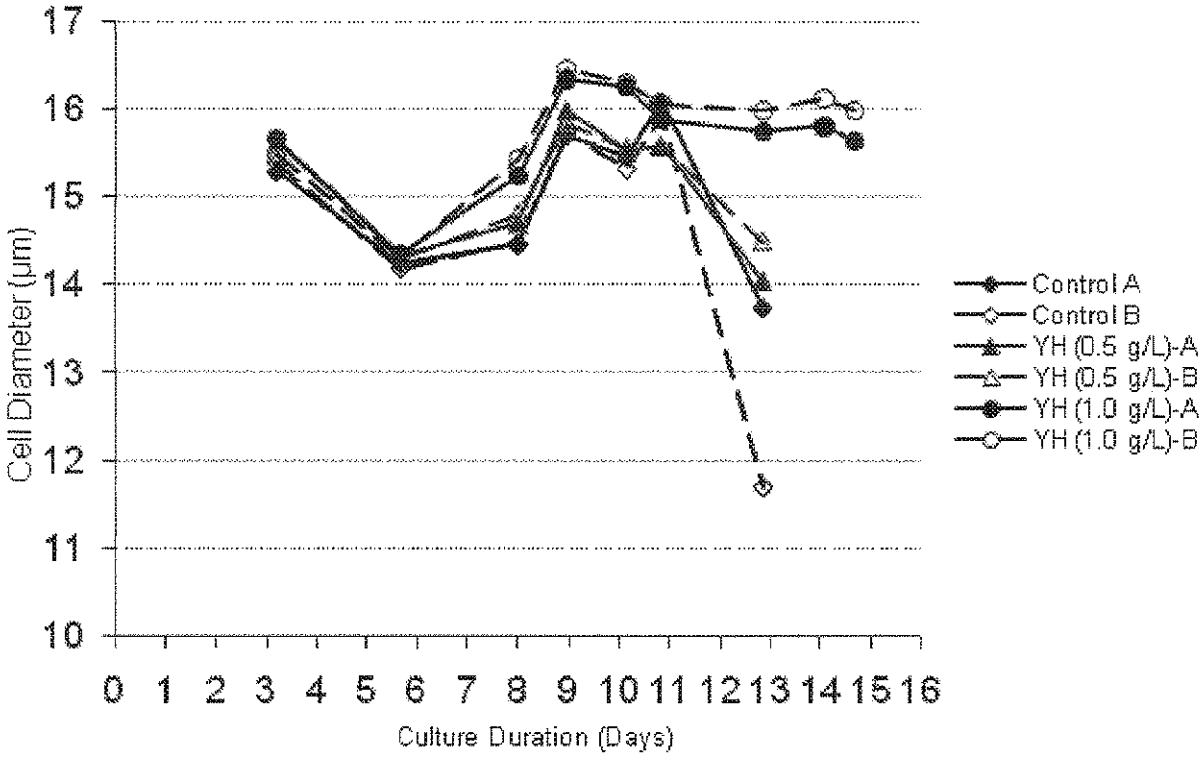
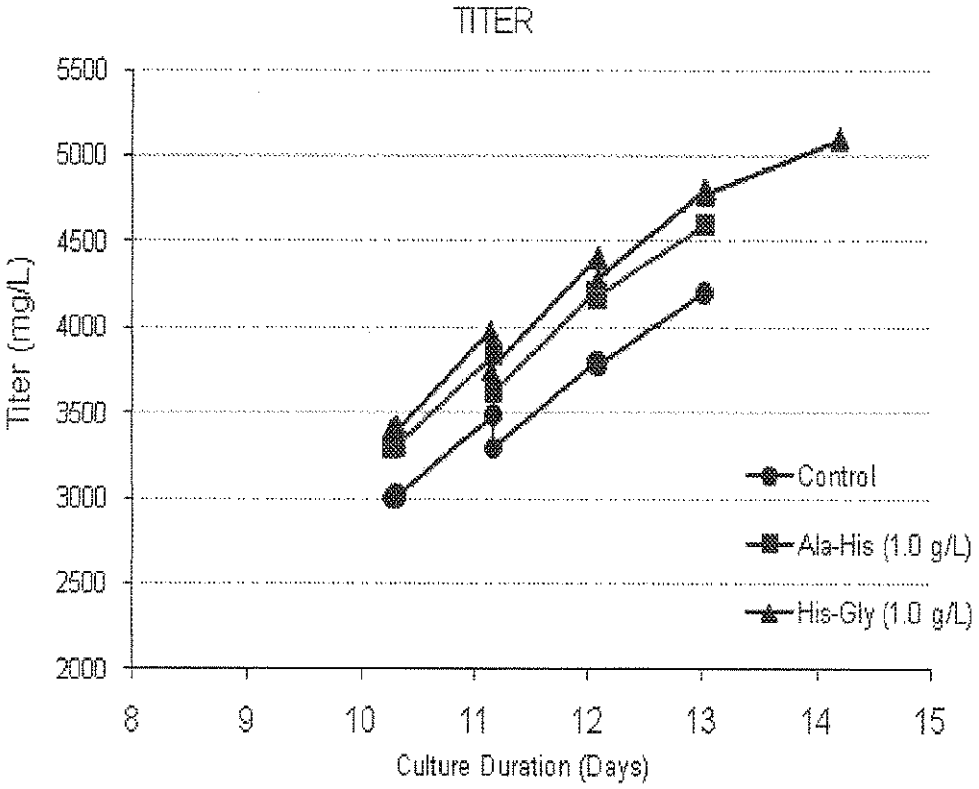


Figure 7- Improved titer (figure 7A) and culture viability (figure 7B) with **Ala-His** addition



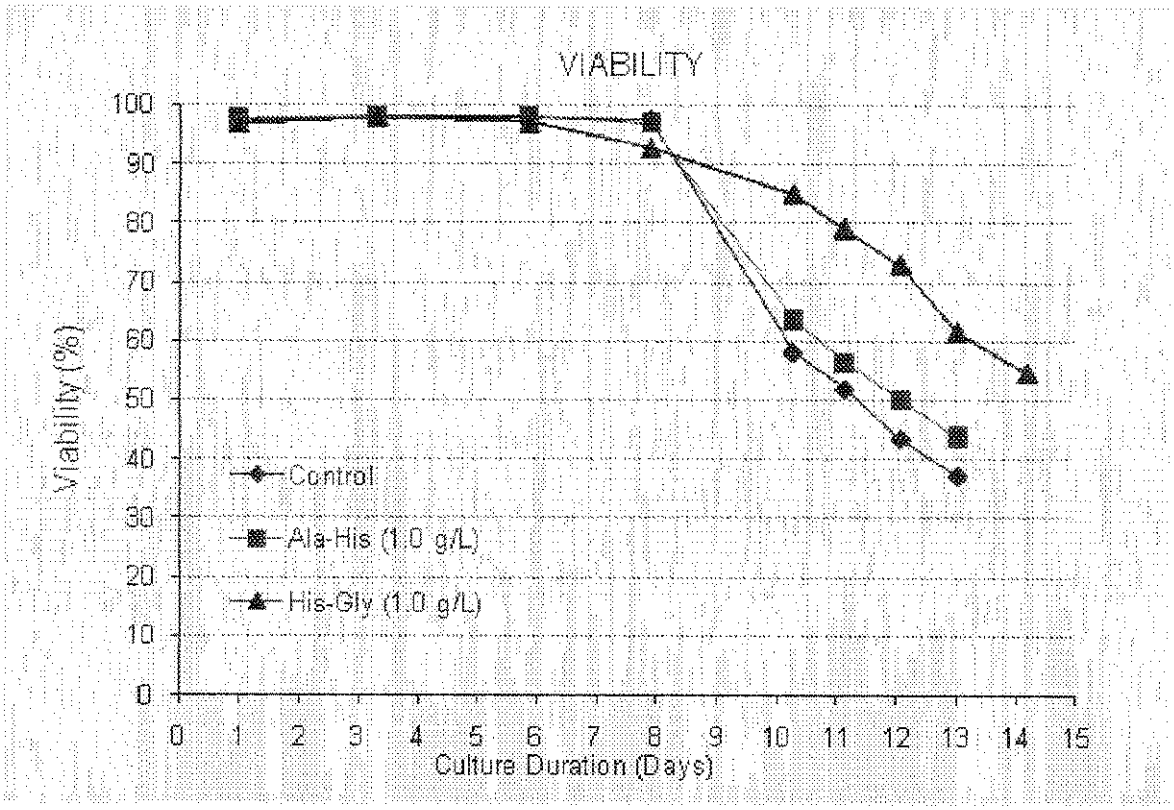


Figure 8A

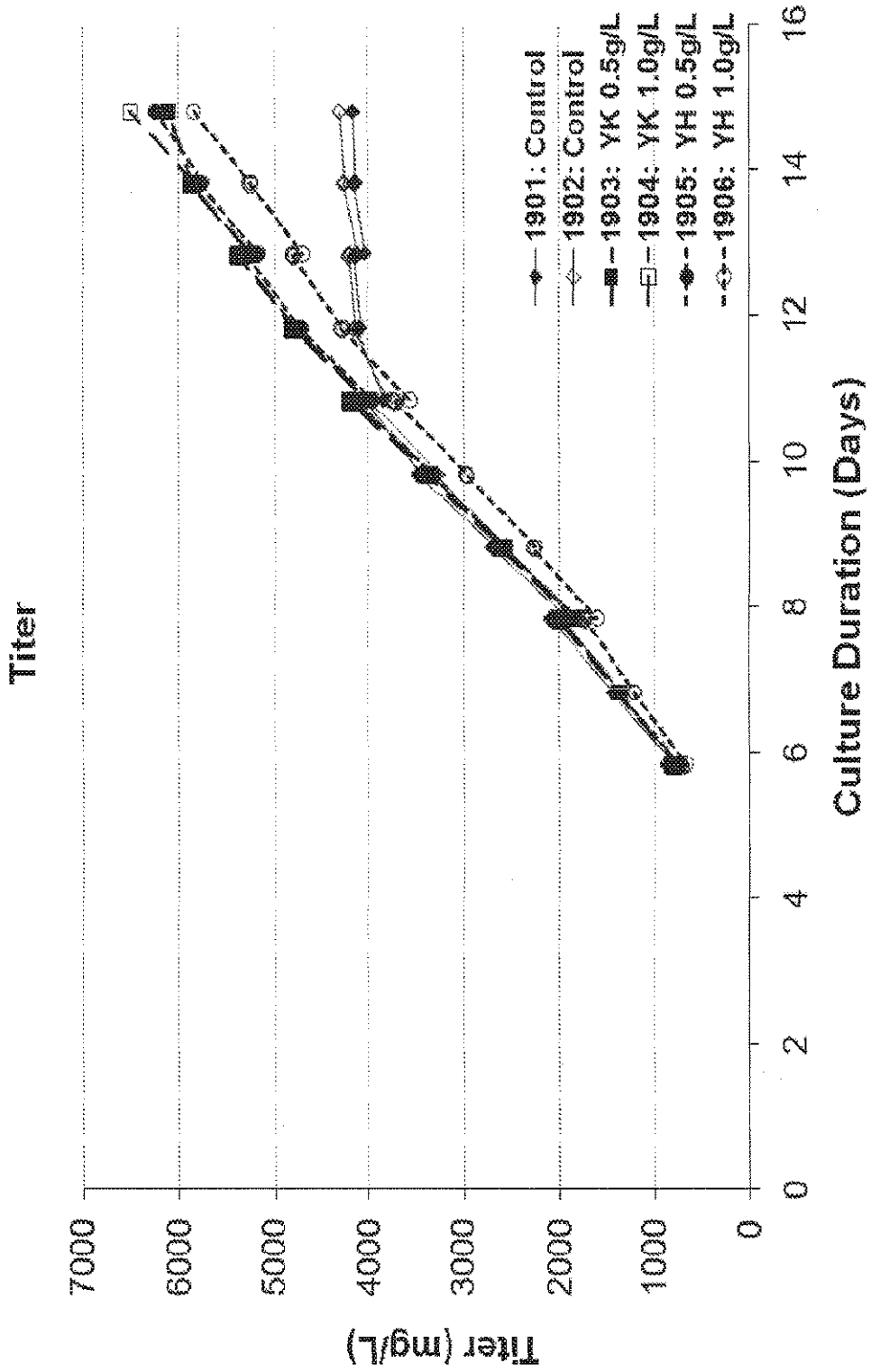

Titer
Titer (mg/L)
7000
6000
5000
4000
3000
2000
1000
0
0
2
4
6
8
10
12
14
16
Culture Duration (Days)
1901: Control
1902: Control
1903: YK 0.5g/L
1904: YK 1.0g/L
1905: YH 0.5g/L
1906: YH 1.0g/L

Figure 8B

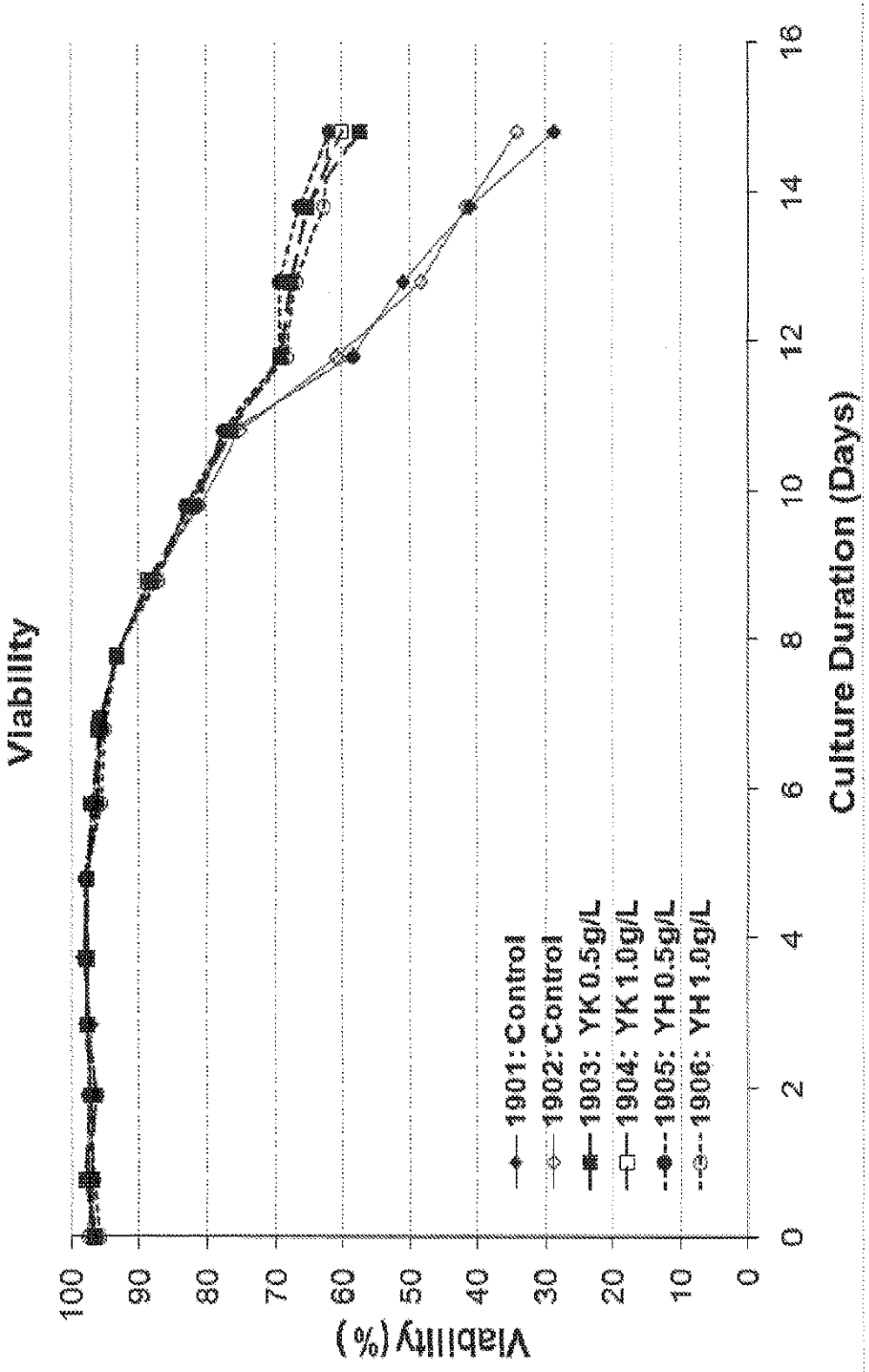

Viability
Viability (%)
Culture Duration (Days)
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
1901: Control
1902: Control
1903: YK 0.5g/L
1904: YK 1.0g/L
1905: YH 0.5g/L
1906: YH 1.0g/L

Figure 9A - Lactate profile in 2-L bioreactors with CHO cell line C: effect of Tyr-Lys (YK) and Tyr-His (YH) dipeptide addition.

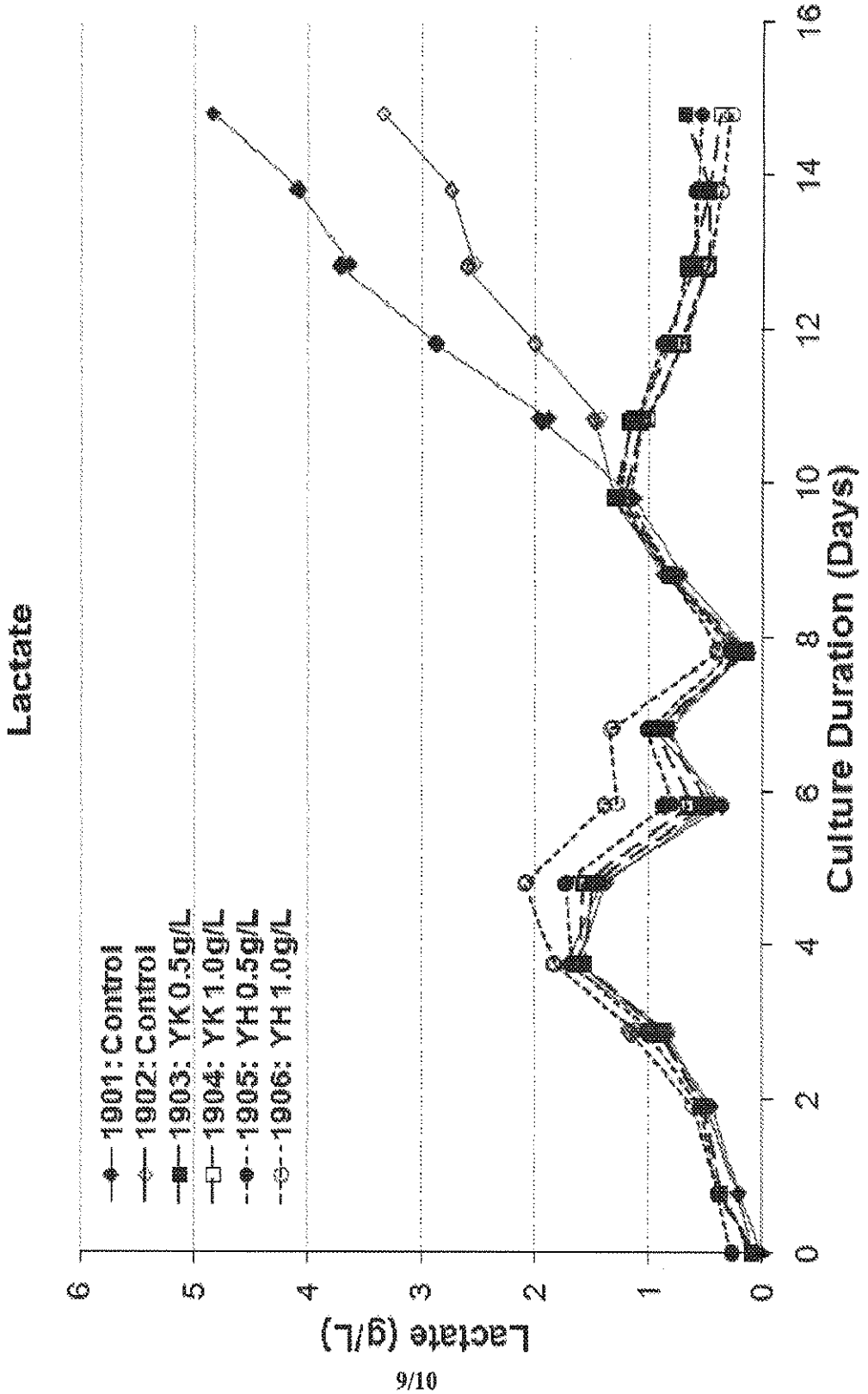


Figure 9B - Sodium (Na+) profile in 2-L bioreactors with CHO cell line C: Reduced levels of Na^+ in Tyr-Lys (YK) and Tyr-His (YH) supplemented.

