Figure 1. Comparison of Medium 1 and Medium 2 in shake flasks using anti-GDF-8 cells.

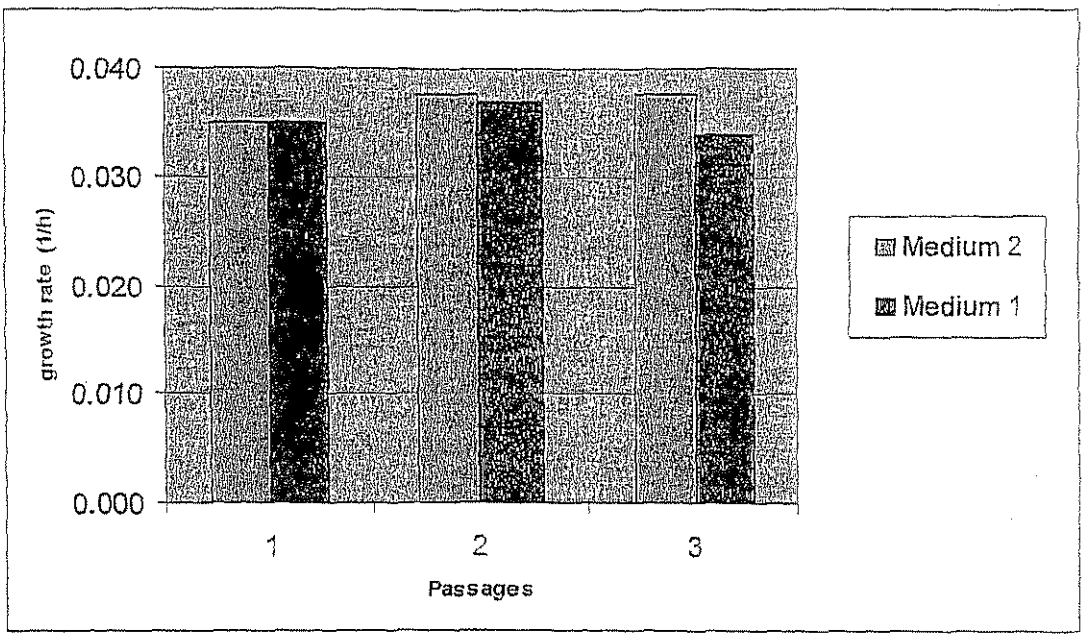


Figure 2. Cell growth and viability of anti-GDF-8 cells in Medium 1.

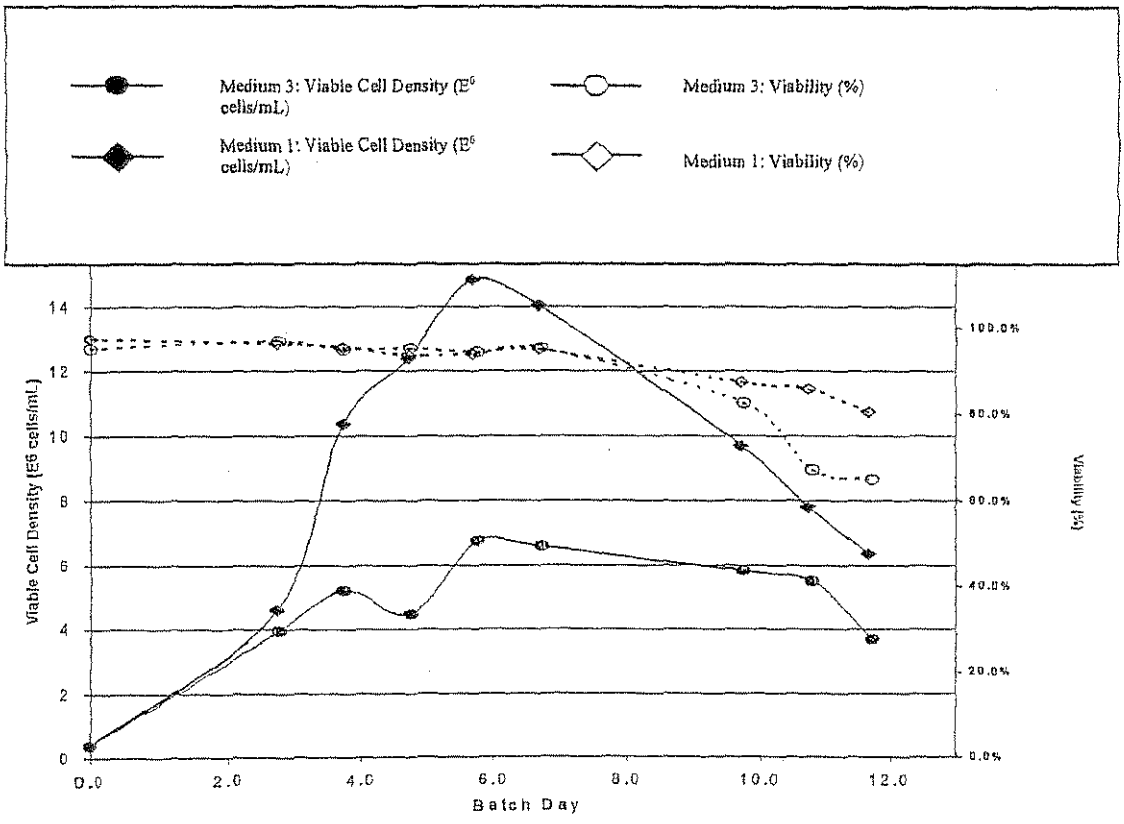


Figure 3. Cell growth of anti-GDF-8 cell cultures in control and no glutamine feed culture conditions.

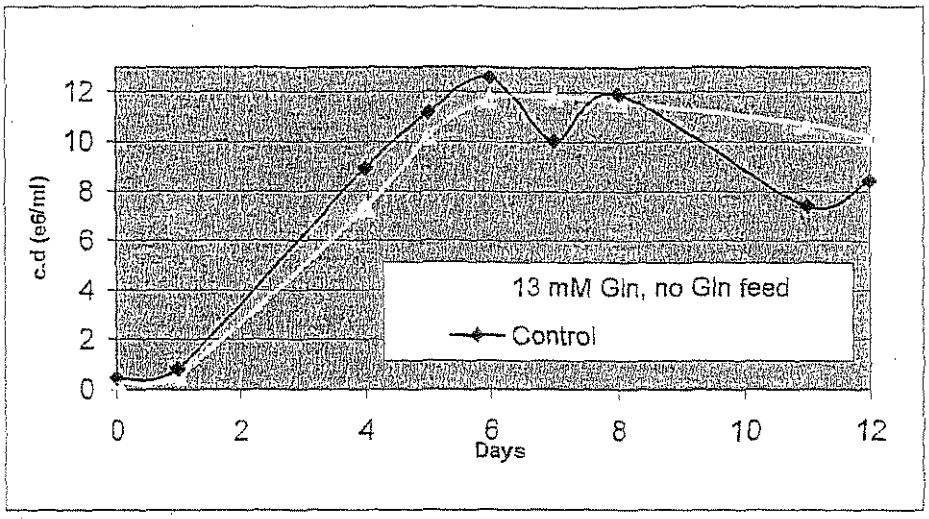


Figure 4. Cell viability of anti-GDF-8 cell cultures in control and no glutamine feed culture conditions.

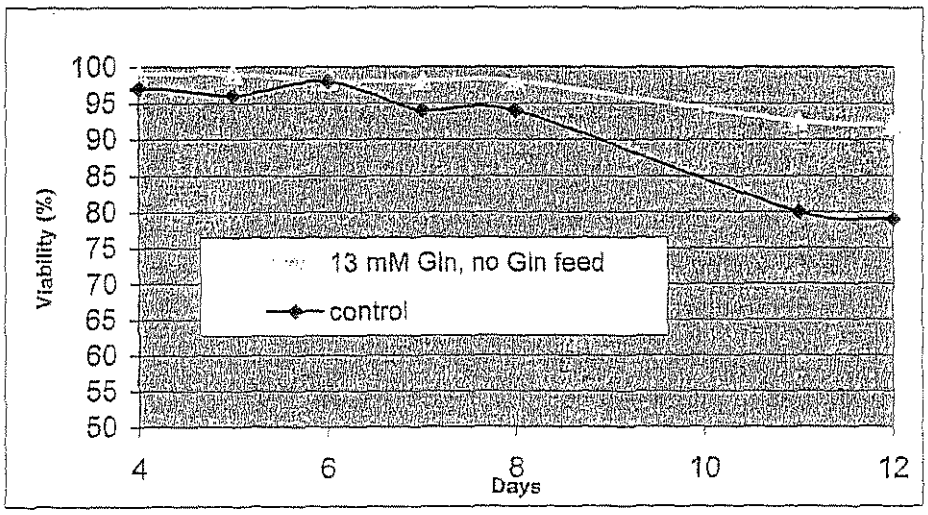


Figure 5. Ammonium levels of anti-GDF-8 cell cultures in control and no glutamine feed culture conditions.

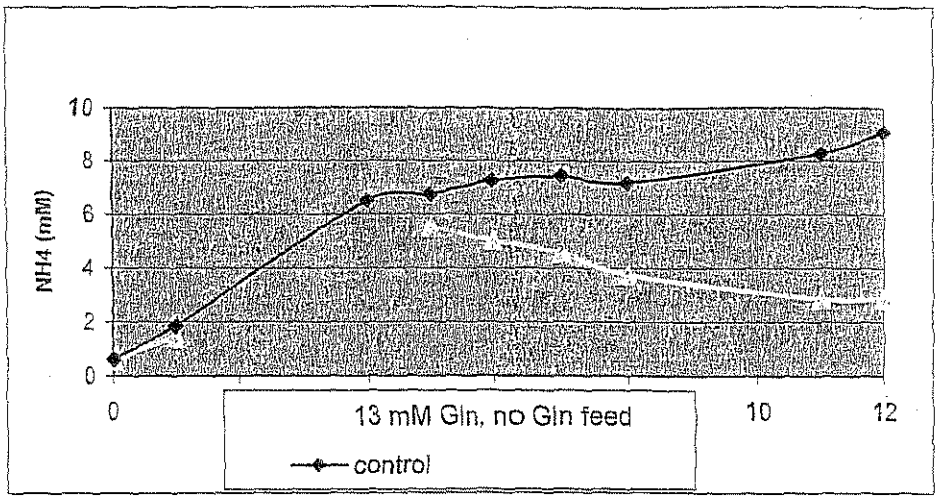


Figure 6. Lactate levels of anti-GDF-8 cell cultures in control and no glutamine feed culture conditions.

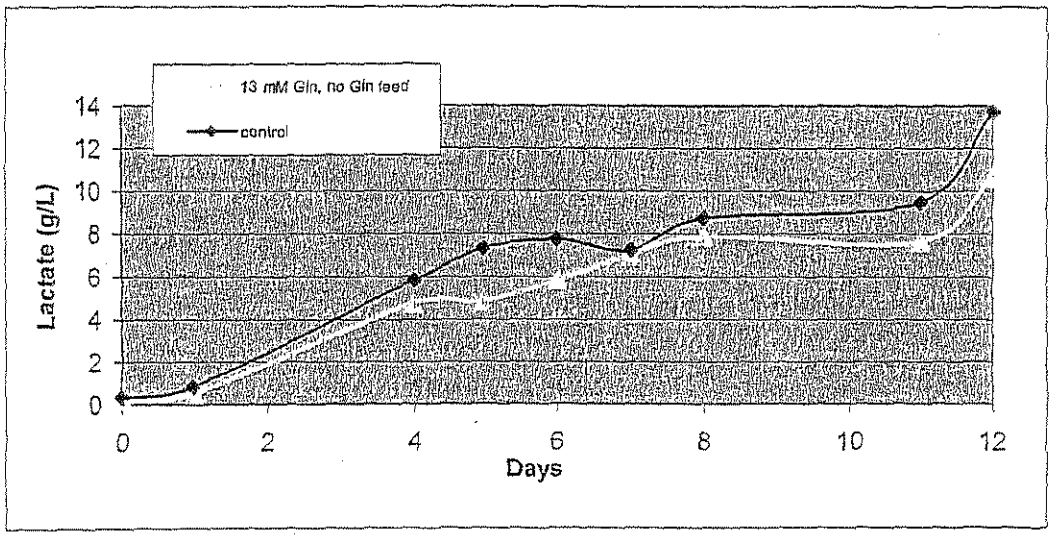


Figure 7. Anti-GDF-8 titer in control and no glutamine feed culture conditions.

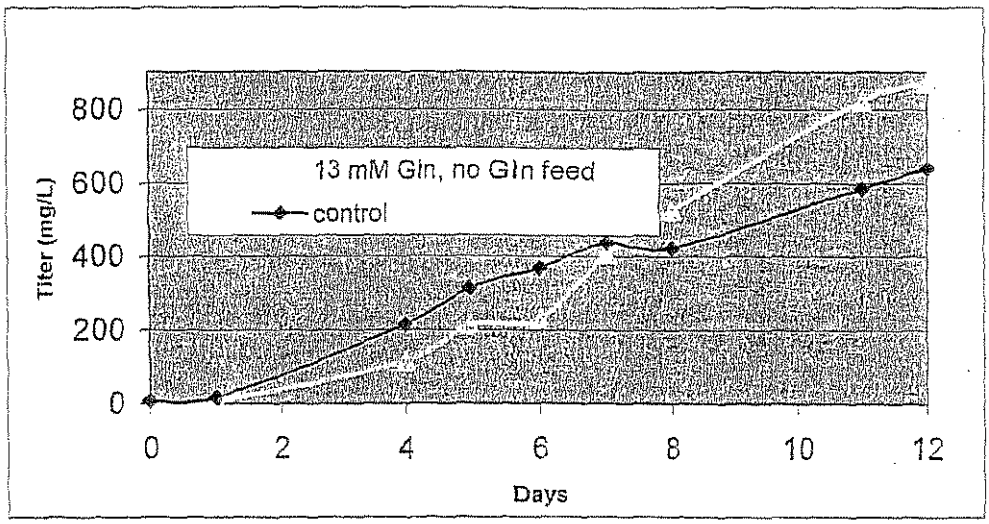


Figure 8. Cell density of anti-GDF-8 cell cultures in control and glutamine-starved feed culture conditions.

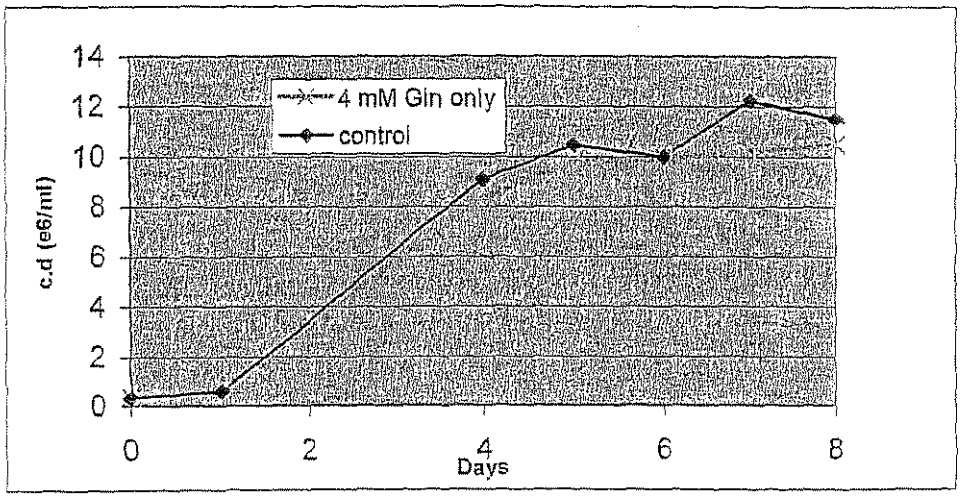


Figure 9. Cell viability of anti-GDF-8 cell cultures in control and glutamine-starved feed culture conditions.

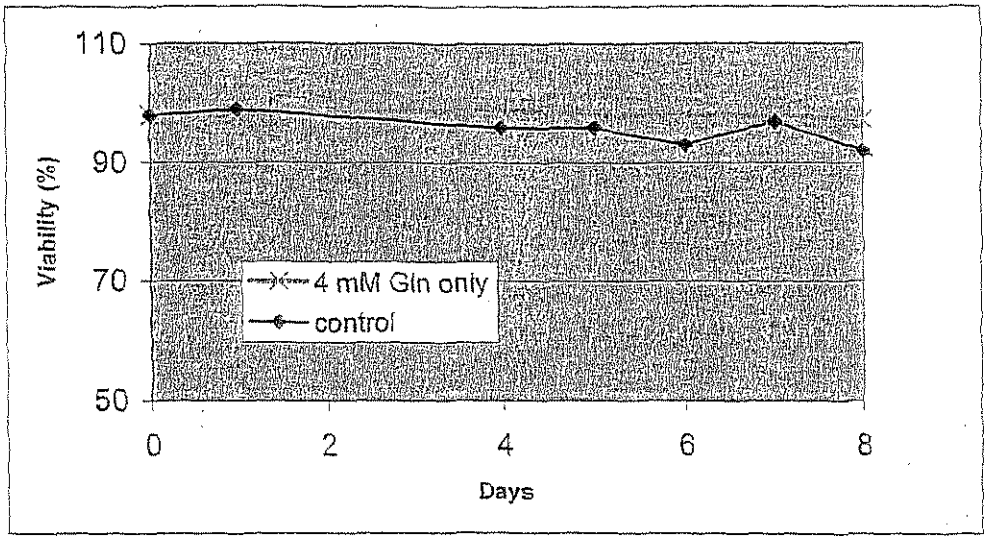


Figure 10. Ammonium levels of anti-GDF-8 cell cultures in control and glutamine-starved culture conditions.

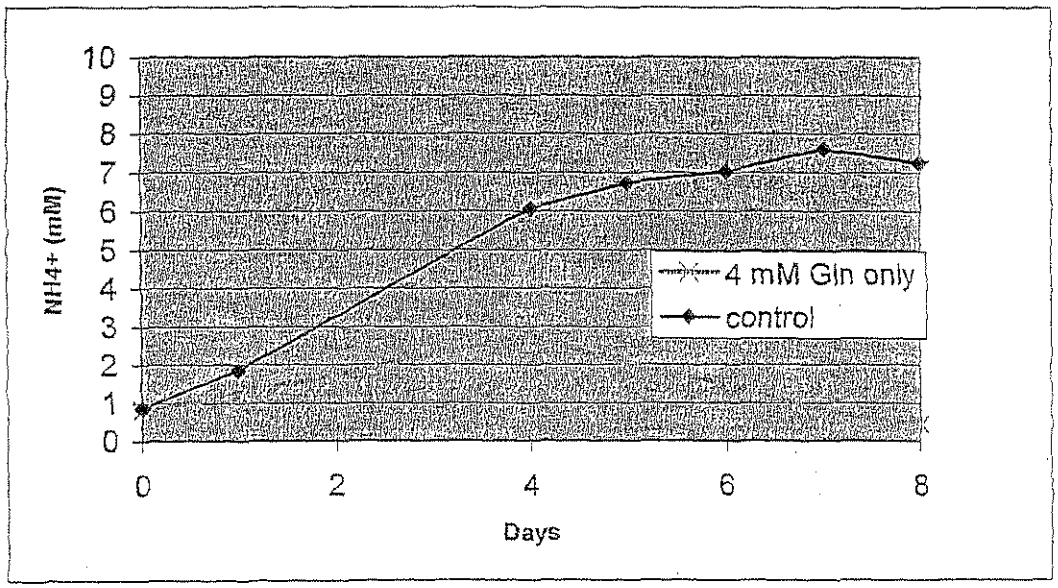


Figure 11. Lactate levels of anti-GDF-8 cell cultures in control and glutamine-starved culture conditions.

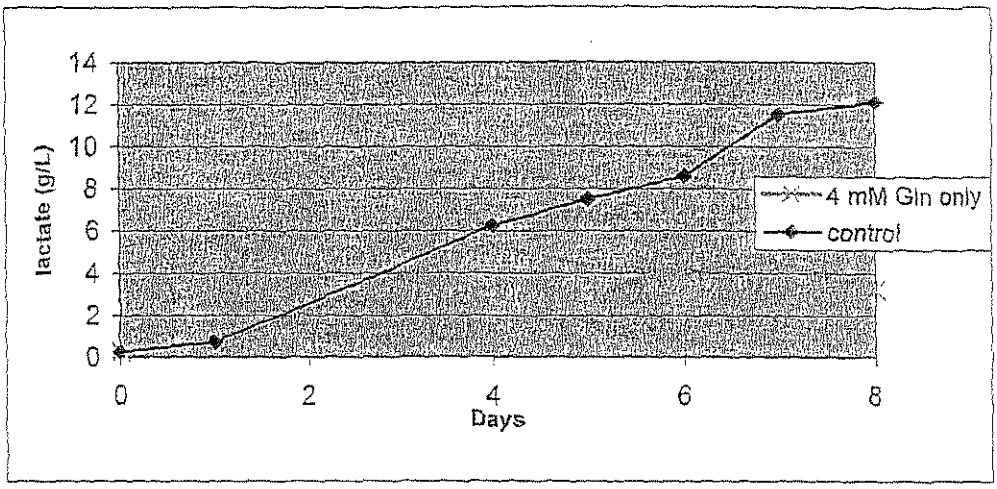


Figure 12. Anti-GDF-8 titer in control and glutamine-starved culture conditions.

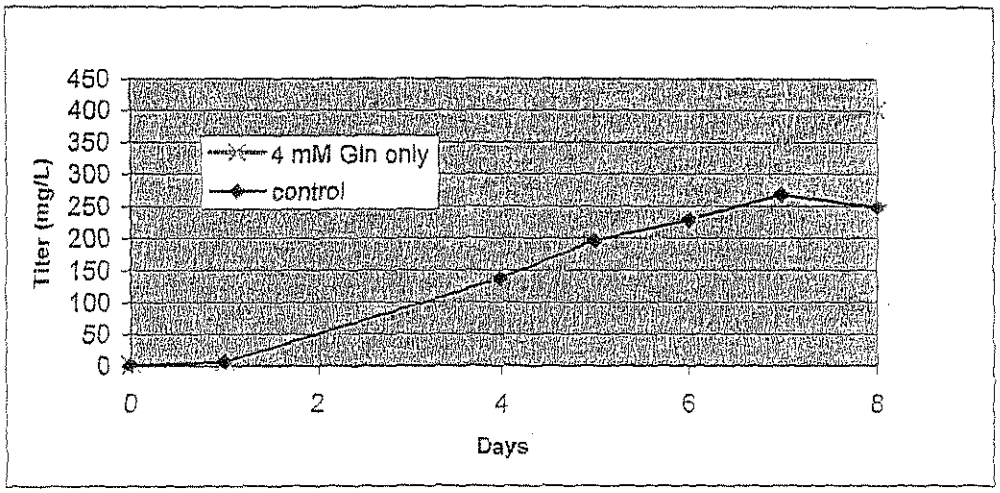


Figure 13. Iron dose response of anti-GDF-8 cells in Medium 1 and Medium 2.

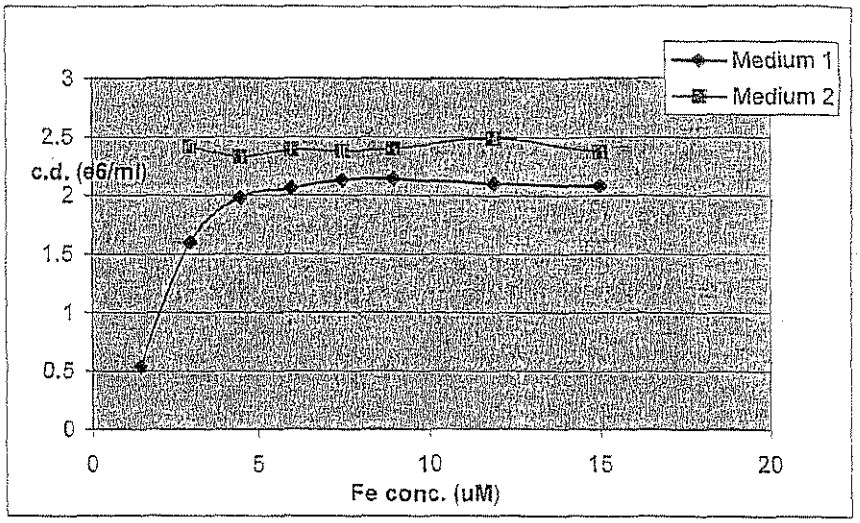


Figure 14. Cell density of Glutamate and Glutamine fed cultures.

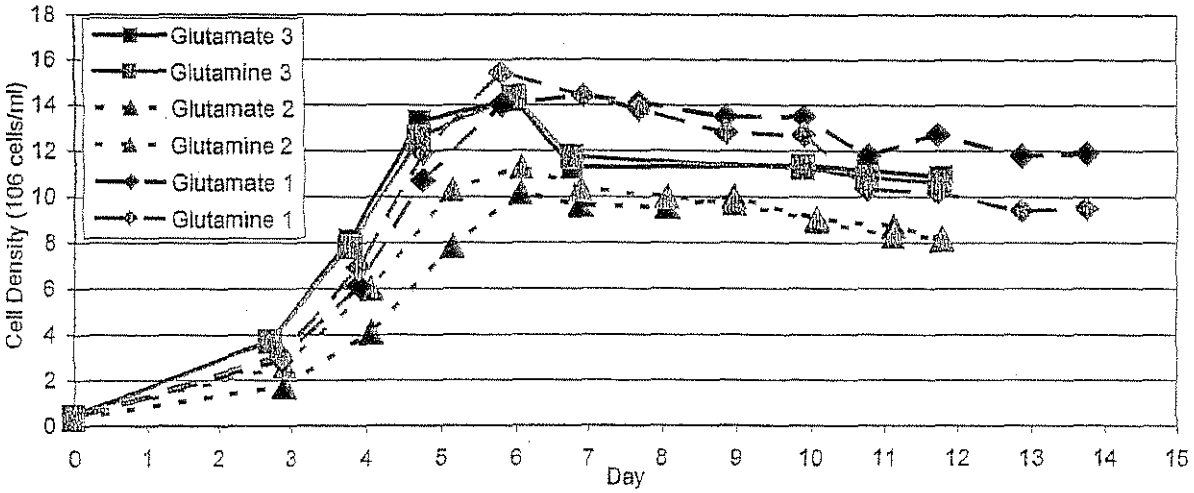


Figure 15. Cell viability of Glutamate and Glutamine fed cultures.

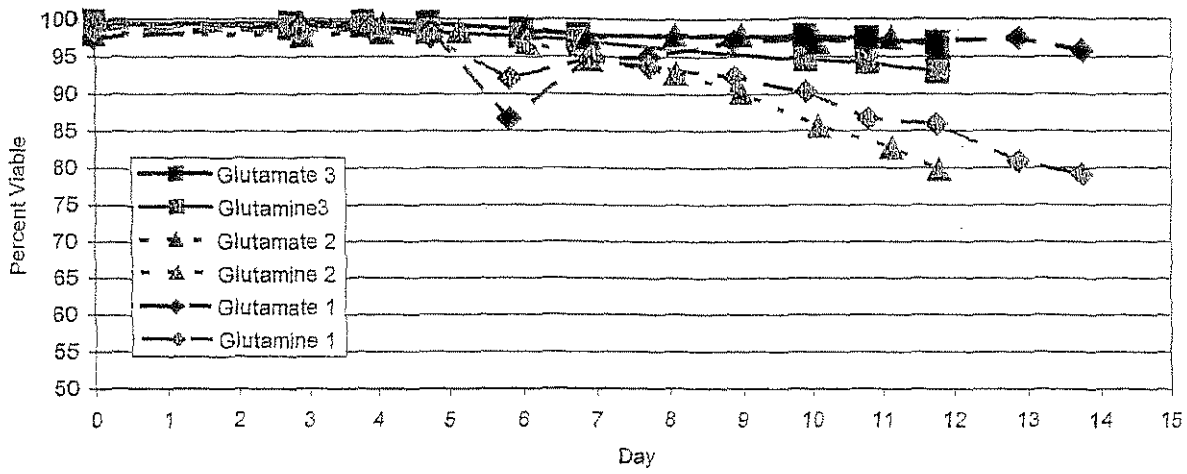


Figure 16. Anti-Lewis Y titer in Glutamate and Glutamine fed cultures.

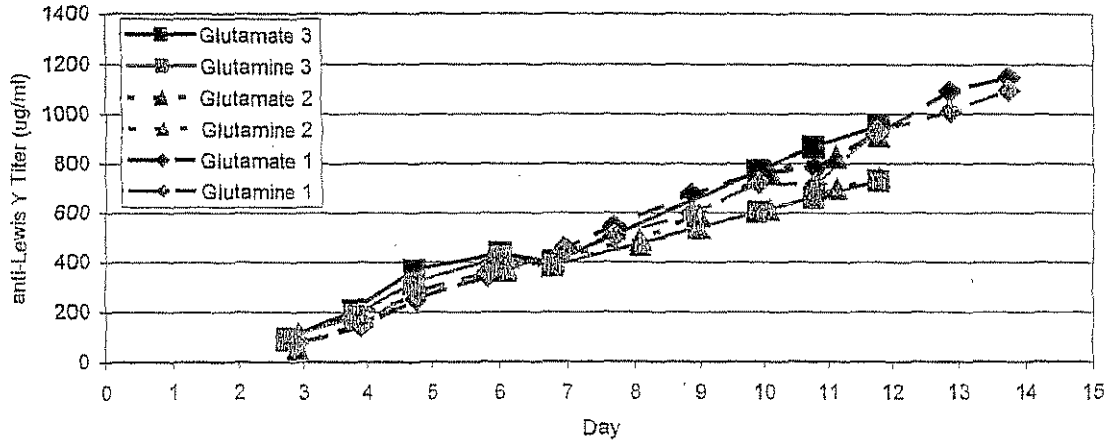


Figure 17. Lactate levels in Glutamate and Glutamine fed cultures.

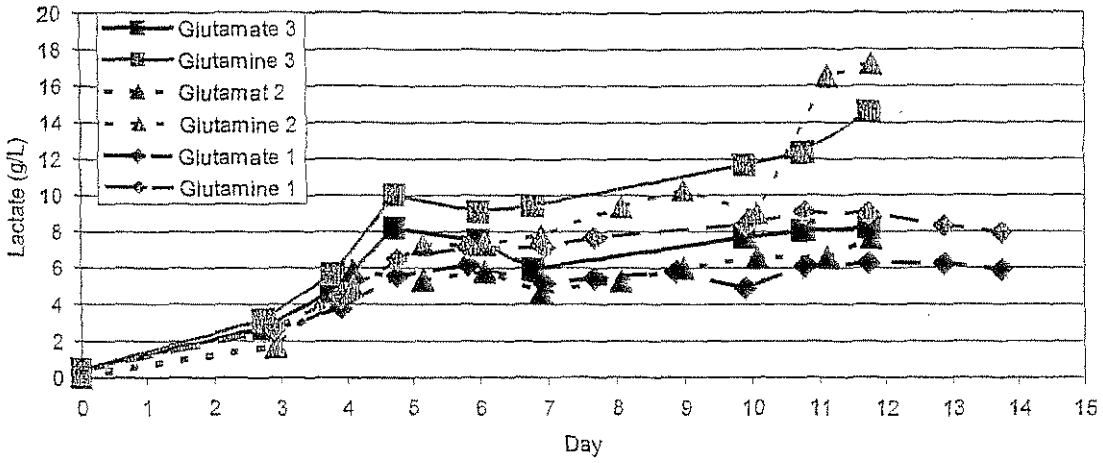


Figure 18. Ammonium levels in Glutamate and Glutamine fed cultures.

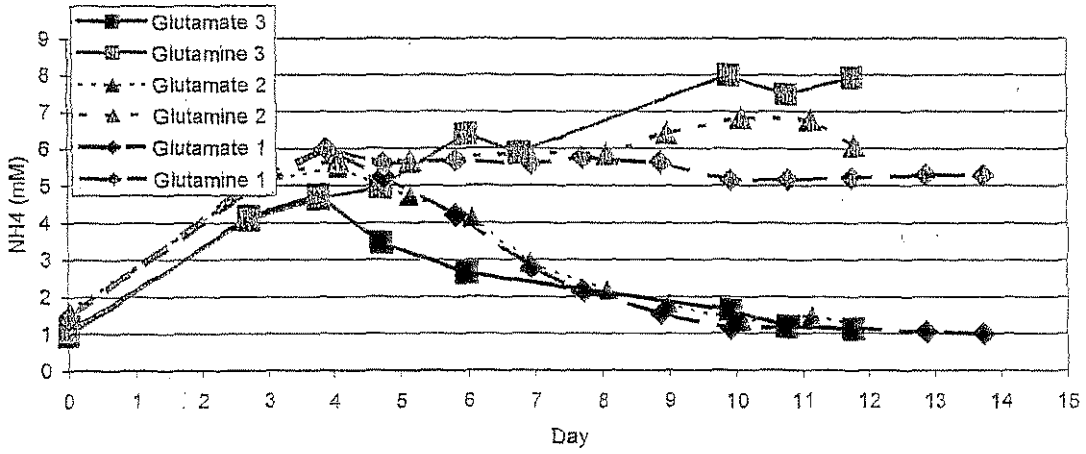


Figure 19. Osmolarity of Glutamate and Glutamine fed cultures.

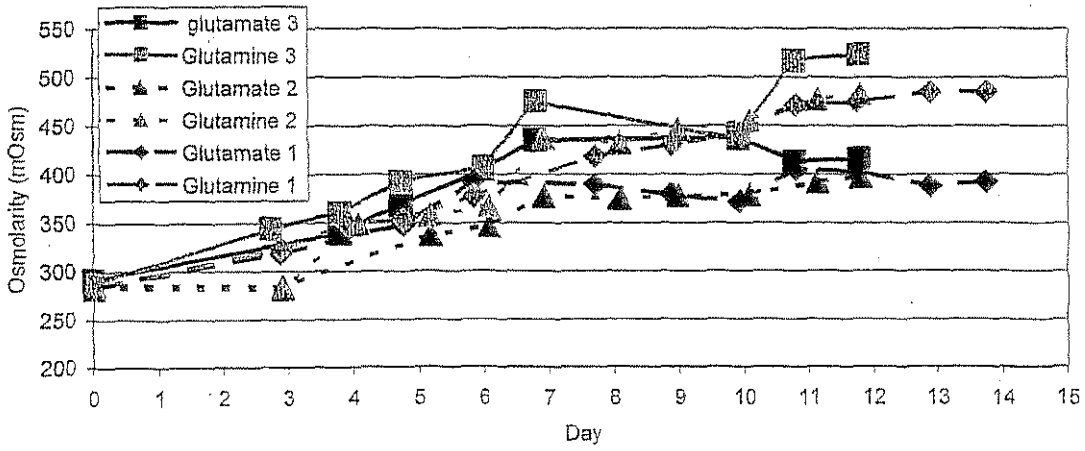


Figure 20. Cell Density. Each plot is the average of two shake flasks grown using the same conditions.

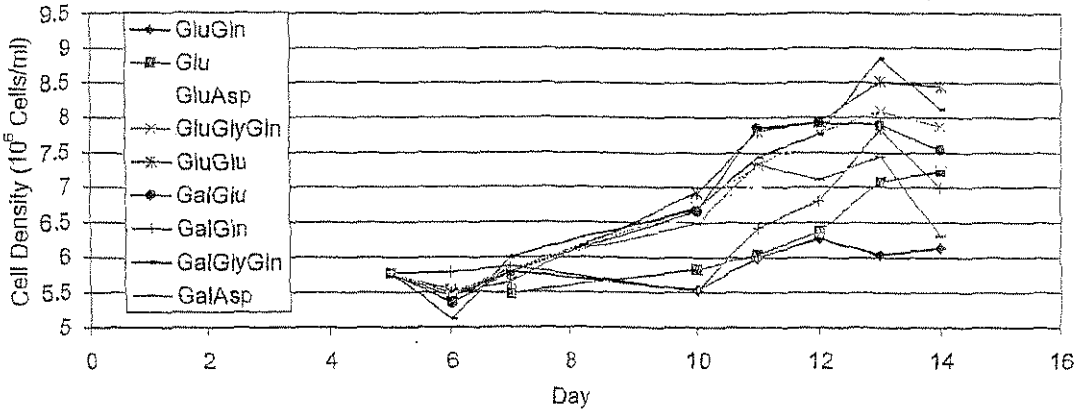


Figure 21. Cell Viability. Each plot is the average of two shake flasks grown using the same conditions.

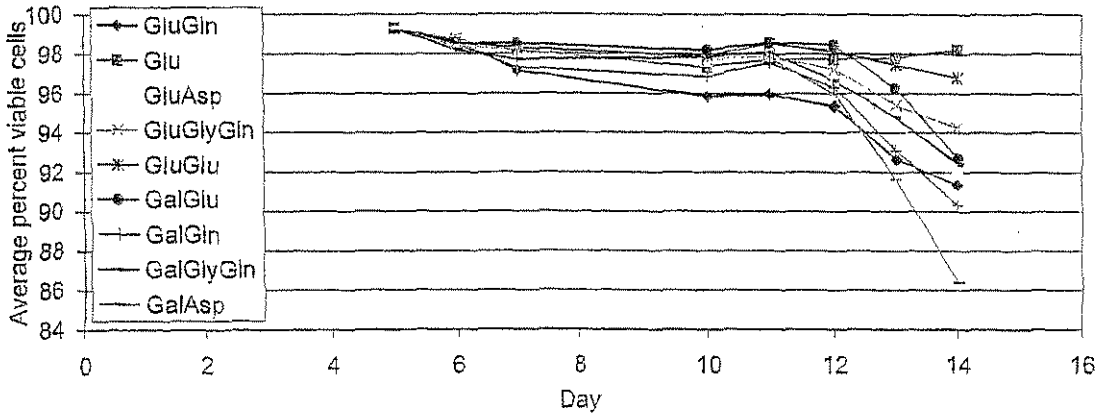


Figure 22. Average Titer. Each plot is the average of two shake flasks grown using the same conditions.

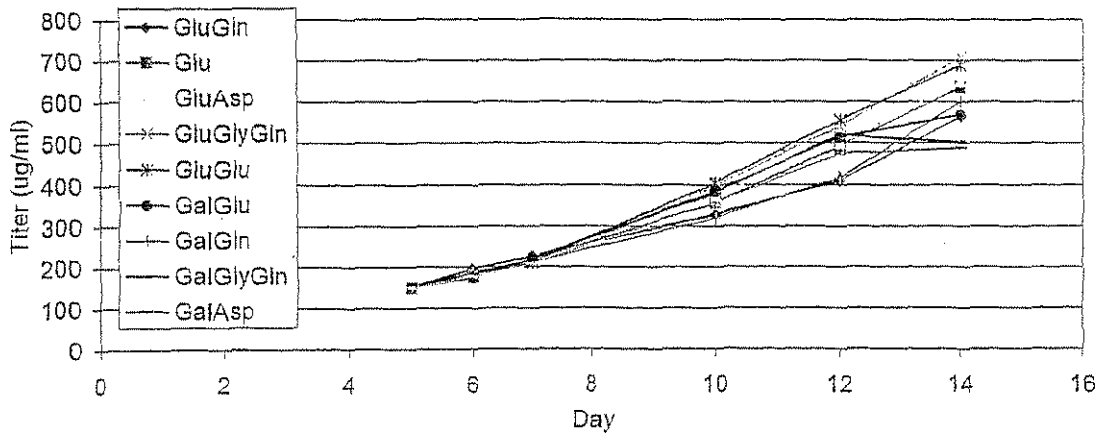


Figure 23. Ammonium levels. Each plot is the average of two shake flasks grown using the same conditions.

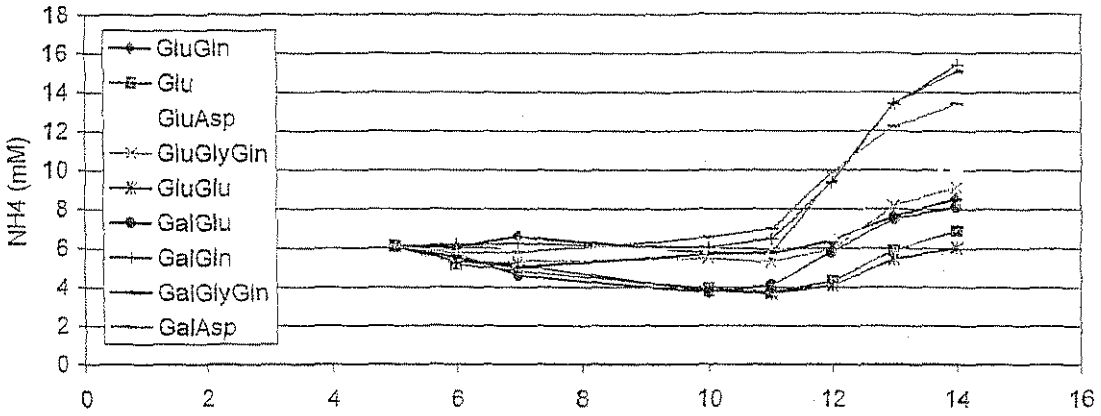


Figure 24. Impeller Jump

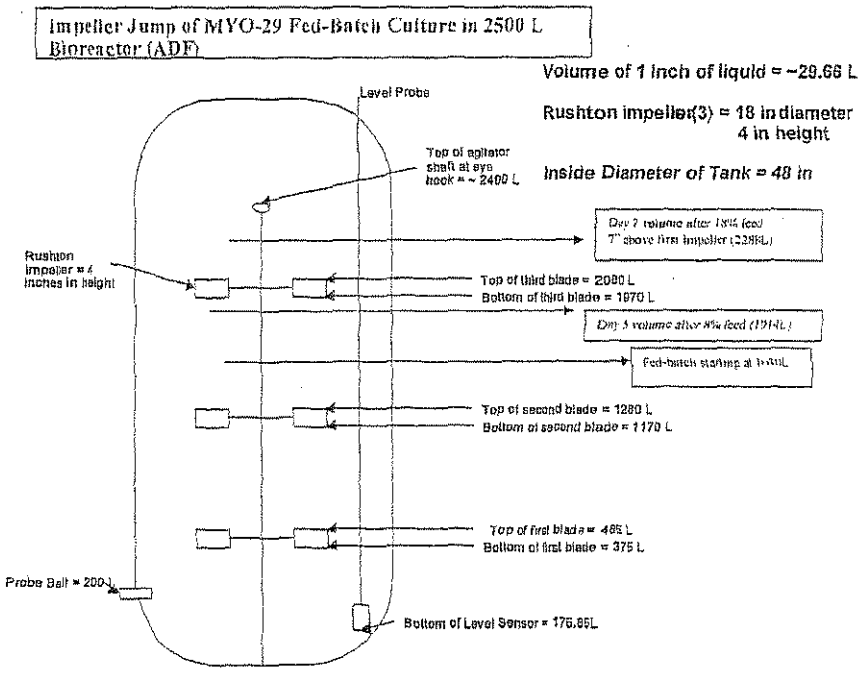


Figure 25. Cell growth of anti-GDF-8 cells under various experimental conditions.

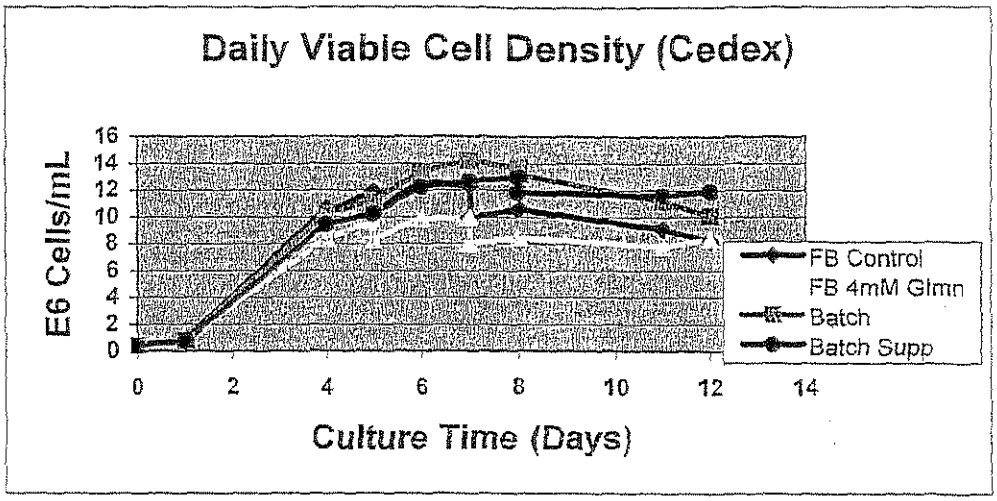


Figure 26. Viability of anti-GDF-8 cells under various experimental conditions.

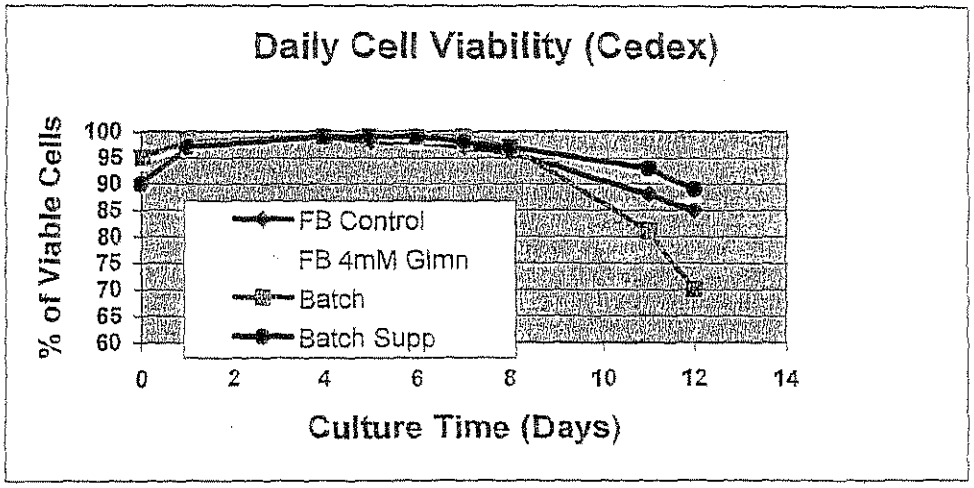


Figure 27. Anti-GDF-8 titer under various experimental conditions.

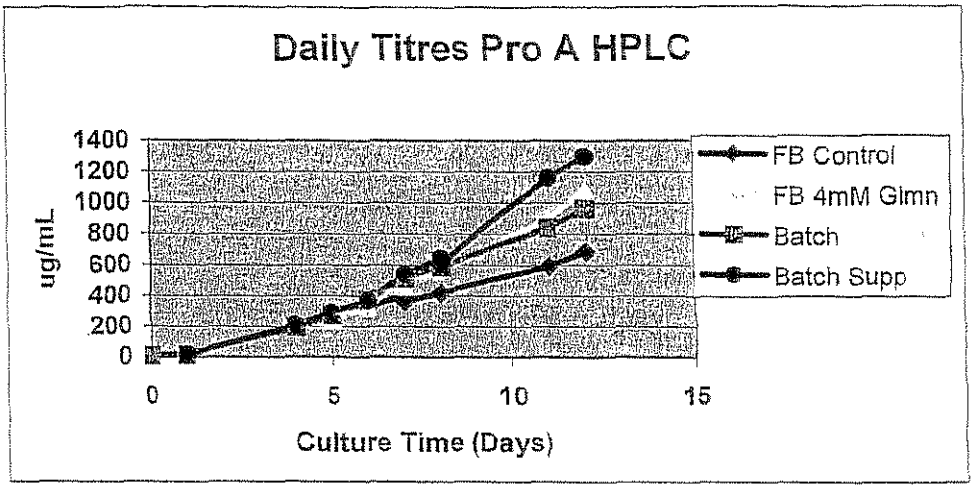


Figure 28. Lactate levels of anti-GDF-8 cultures under various experimental conditions.

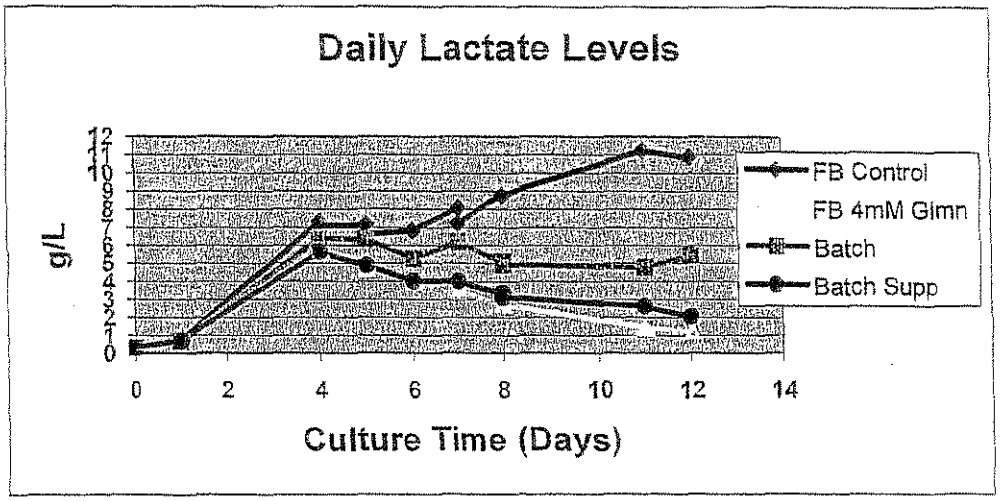


Figure 29. Ammonium levels of anti-GDF-8 cultures under various experimental conditions.

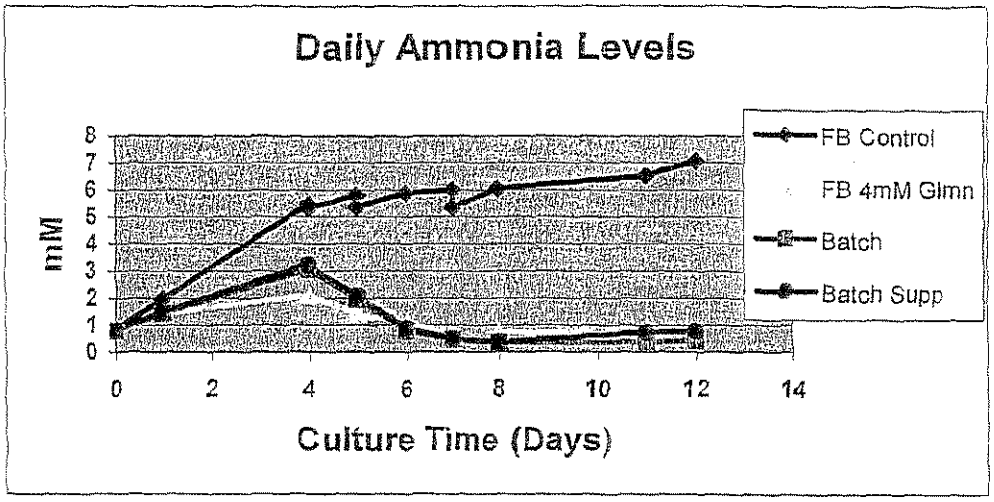


Figure 30. Cell growth of anti-GDF-8 cells under various experimental conditions.

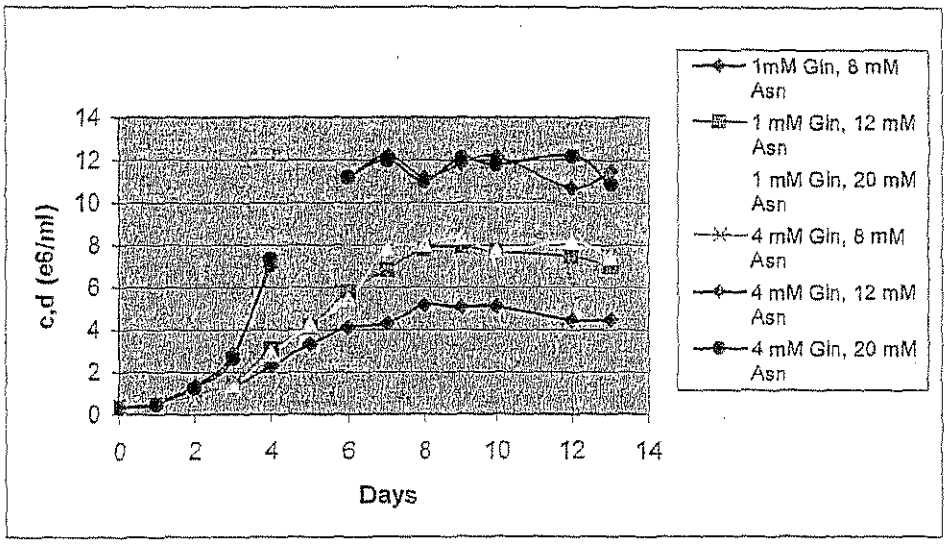


Figure 31. Anti-GDF-8 titer under various experimental conditions.

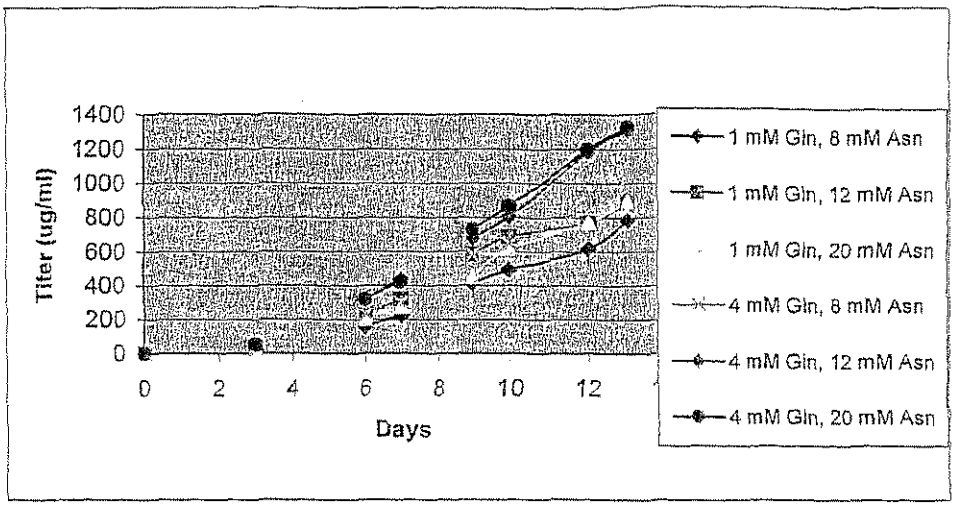


Figure 32. Lactate levels of anti-GDF-8 cultures under various experimental conditions.

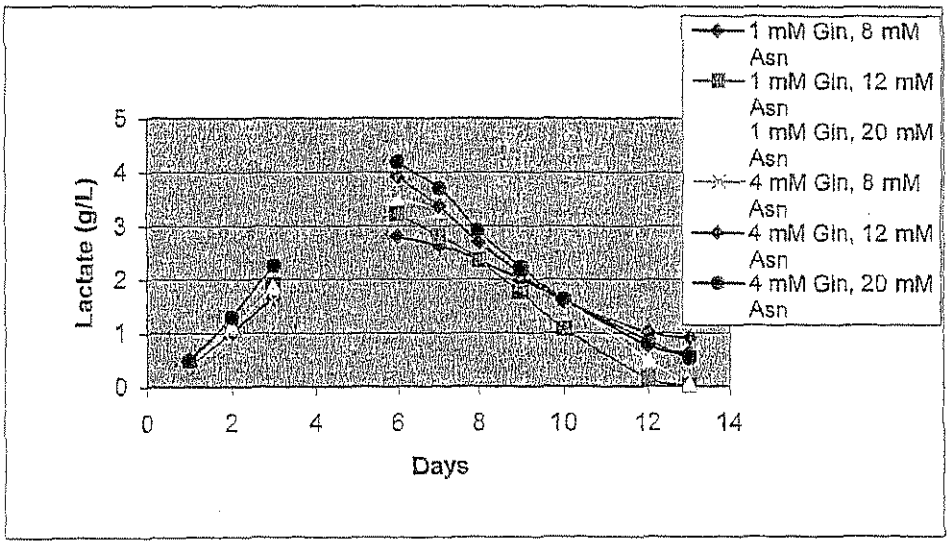


Figure 33. Ammonium levels of anti-GDF-8 cultures under various experimental conditions.

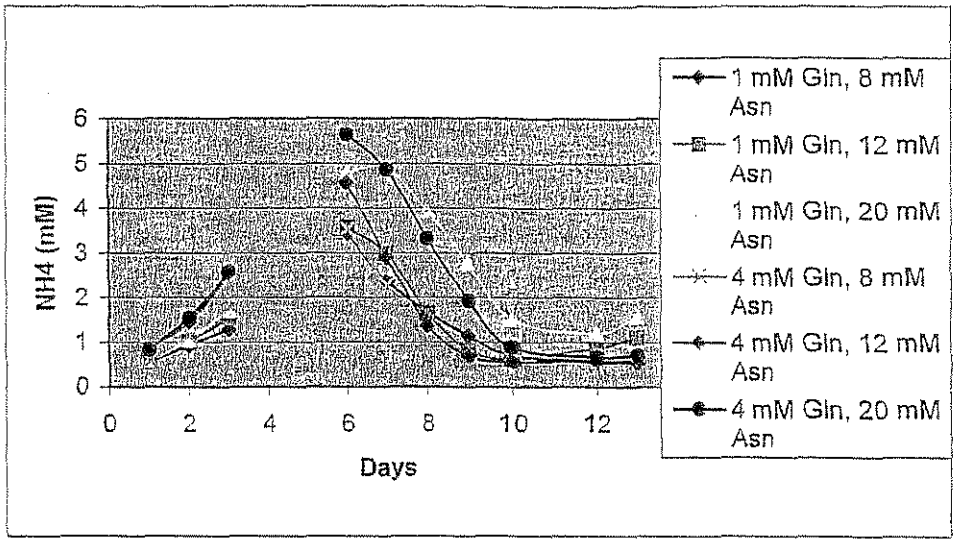


Figure 34. Cell growth of anti-GDF-8 cells in modified Medium 9 containing various levels of glutamine and asparagine.

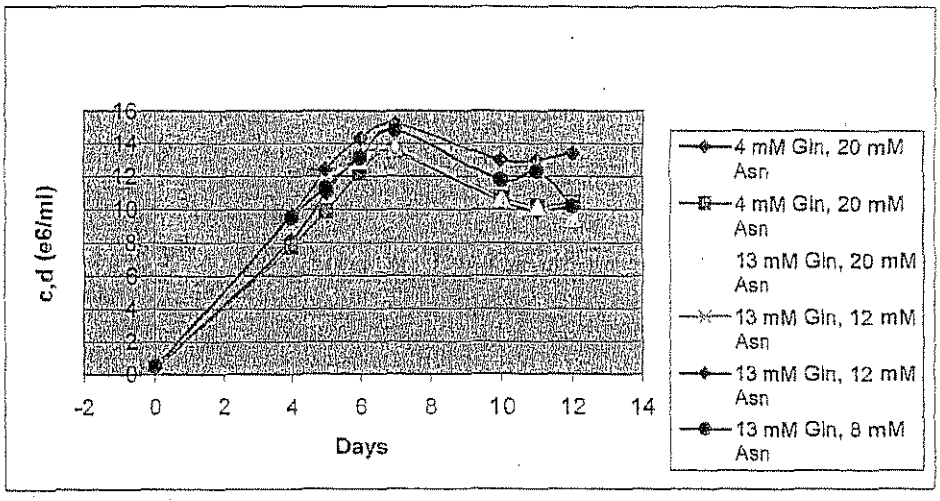


Figure 35. Cell viability of anti-GDF-8 cells in modified Medium 9 containing various levels of glutamine and asparagine.

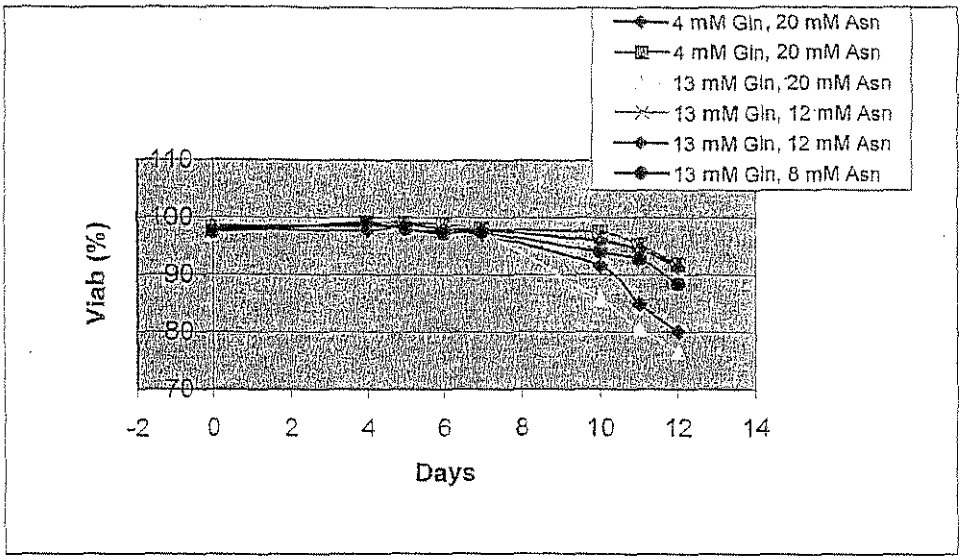
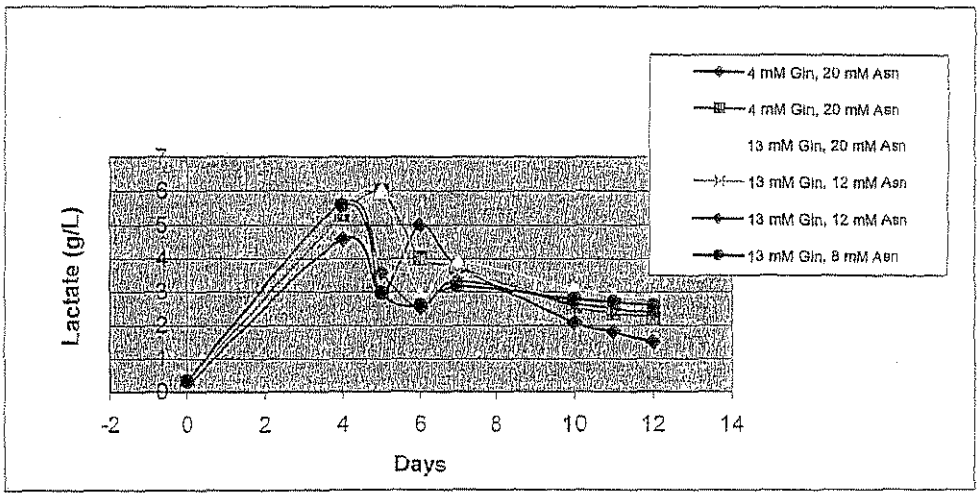


Figure 36. Lactate levels of anti-GDF-8 cultures in modified Medium 9 containing various levels of glutamine and asparagine.



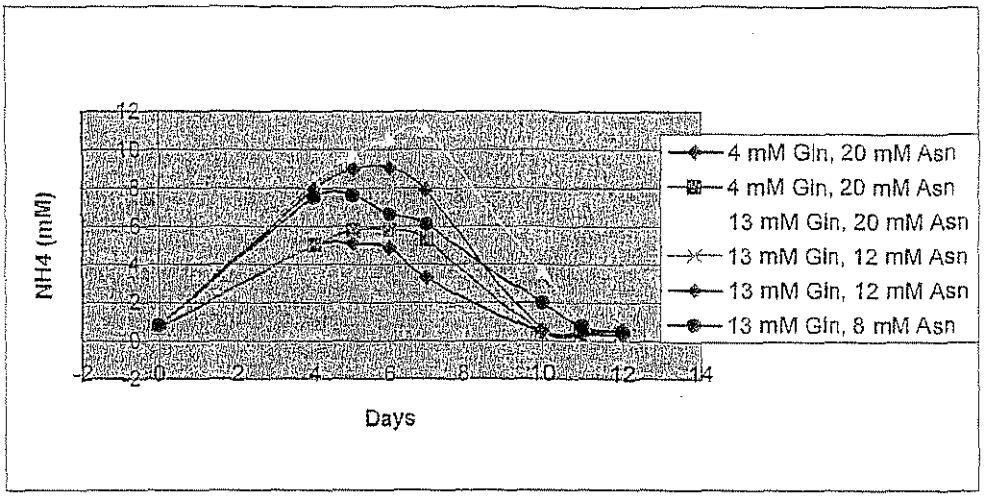


Figure 38. Glutamine levels of anti-GDF-8 cultures in modified Medium 9 containing various levels of glutamine and asparagine.

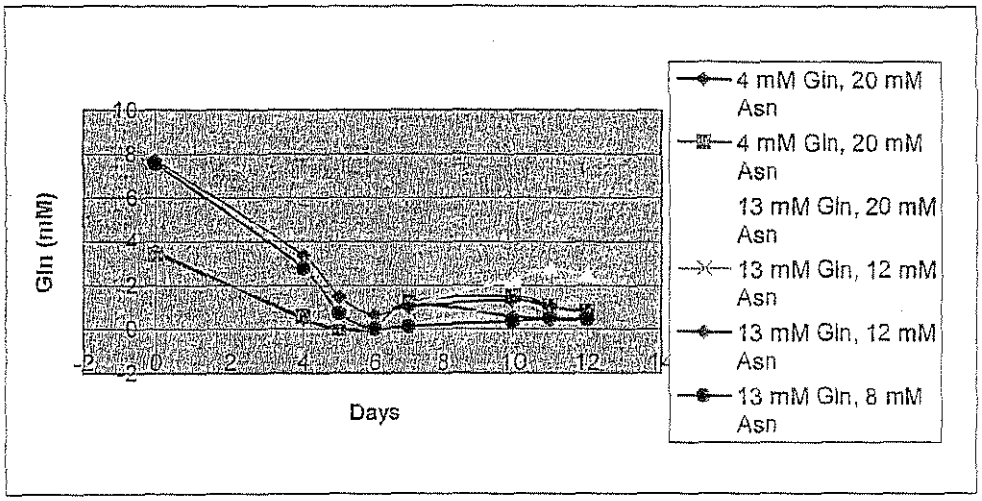


Figure 39. Anti-GDF-8 titer in modified Medium 9 containing various levels of glutamine and asparagine.

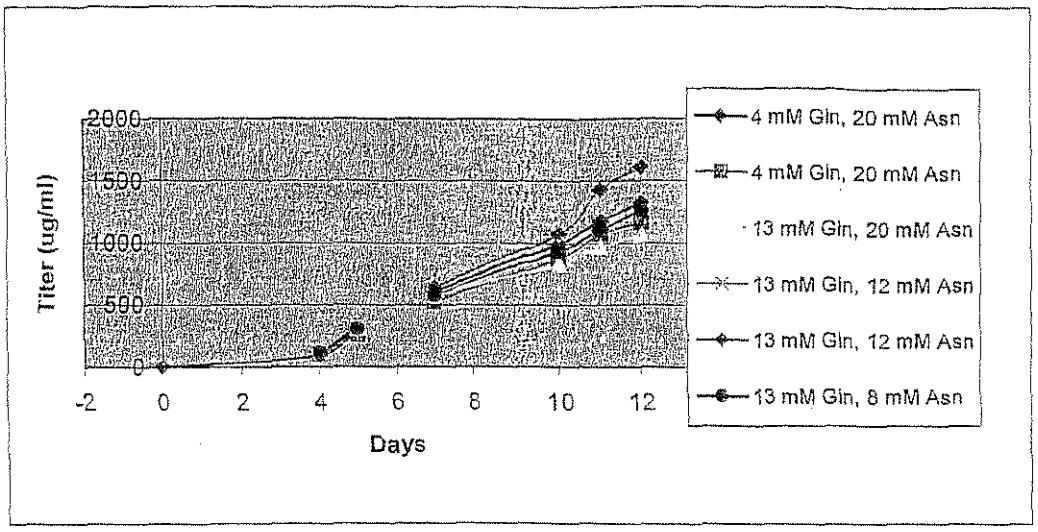


Figure 40. Osmolarity of anti-GDF-8 cultures in modified Medium 9 containing various levels of glutamine and asparagine.

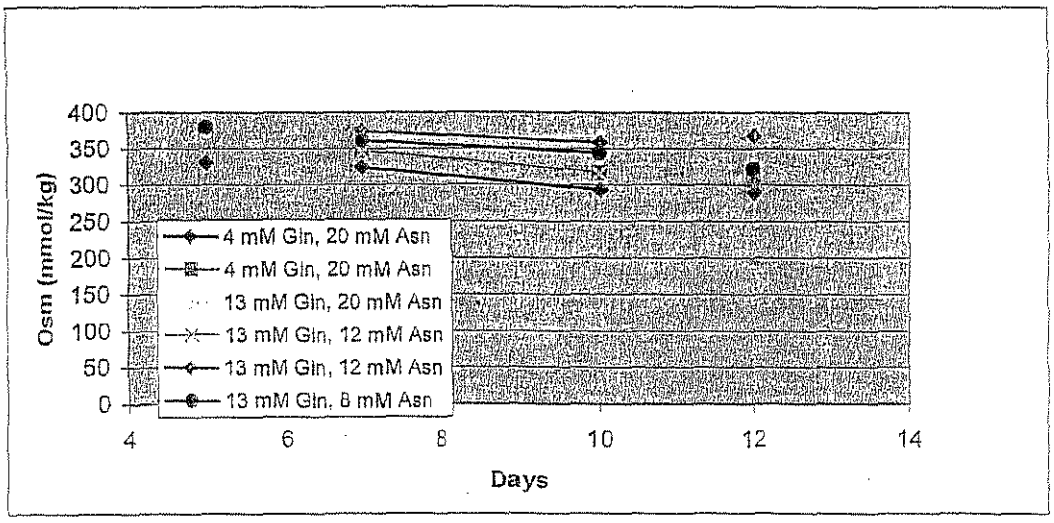


Figure 41. Cell growth of anti-GDF-8 cells in media containing various levels of asparagine and cysteine.

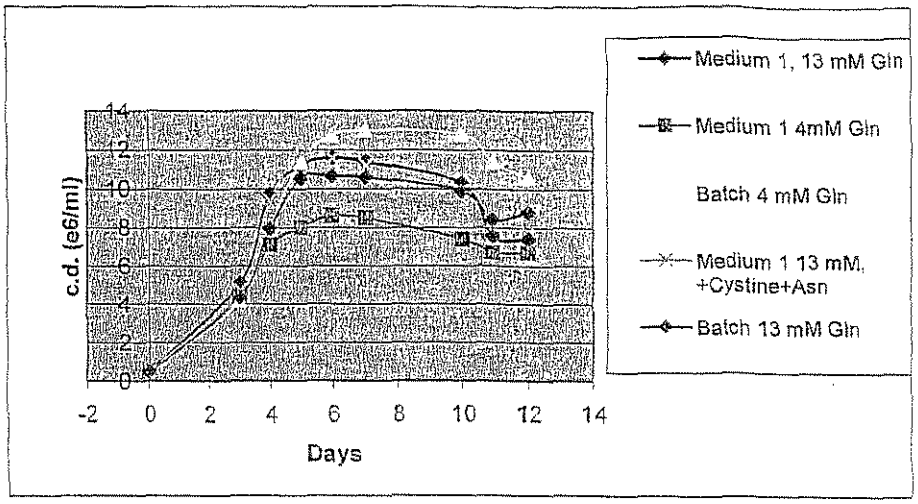


Figure 42. Lactate levels of anti-GDF-8 cultures in media containing various levels of asparagine and cysteine.

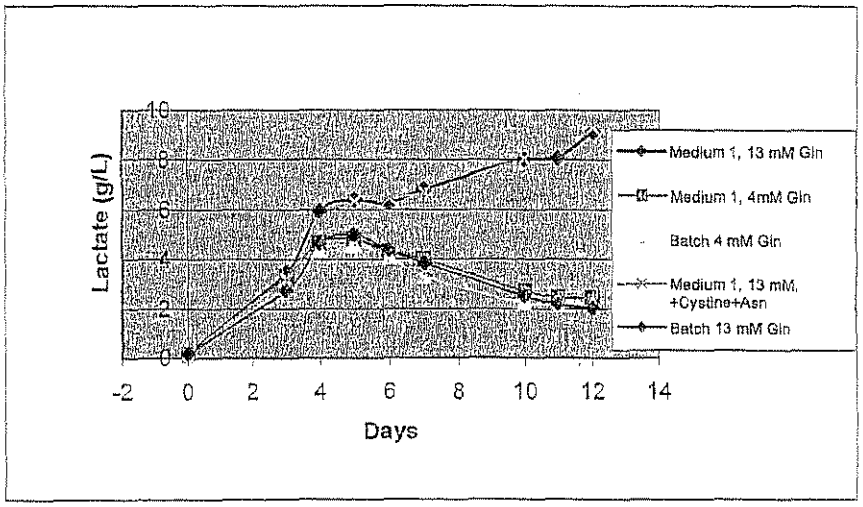


Figure 43. Ammonium levels of anti-GDF-8 cultures in media containing various levels of asparagine and cysteine.

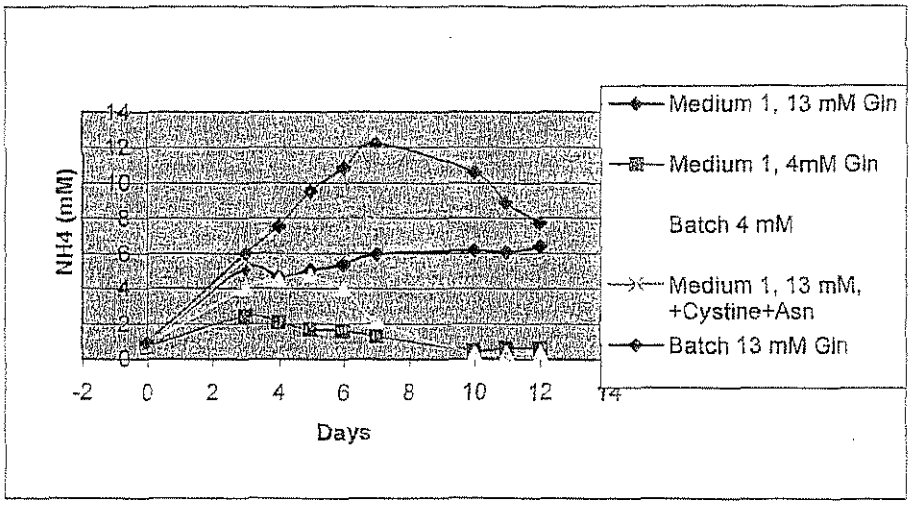


Figure 44. Glutamine levels of anti-GDF-8 cultures in media containing various levels of asparagine and cysteine.

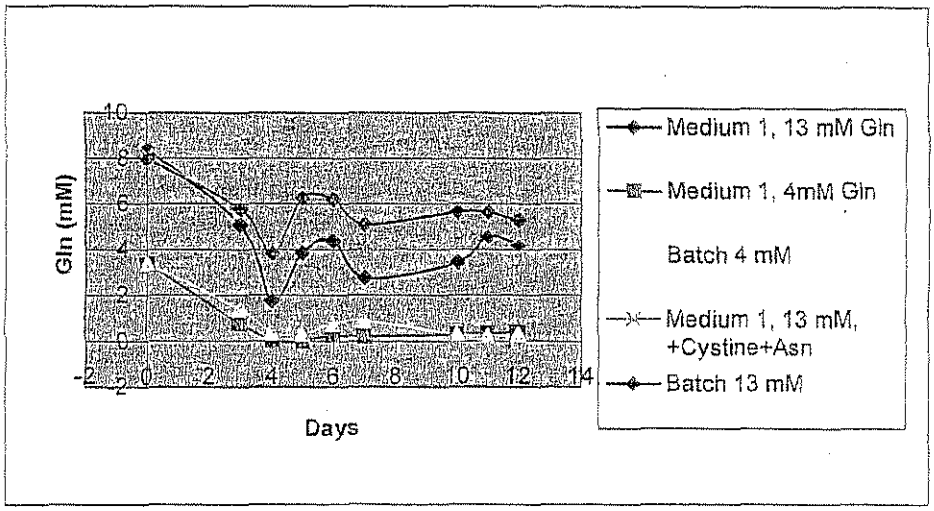


Figure 45. Glutamate levels of anti-GDF-8 cultures in media containing various levels of asparagine and cysteine.

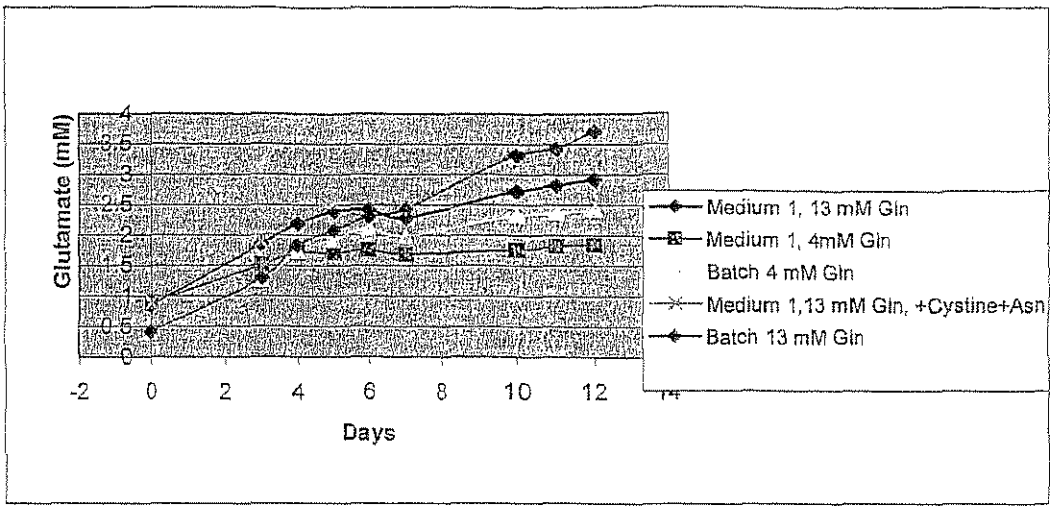


Figure 46. Anti-GDF-8 titer in media containing various levels of asparagine and cysteine.

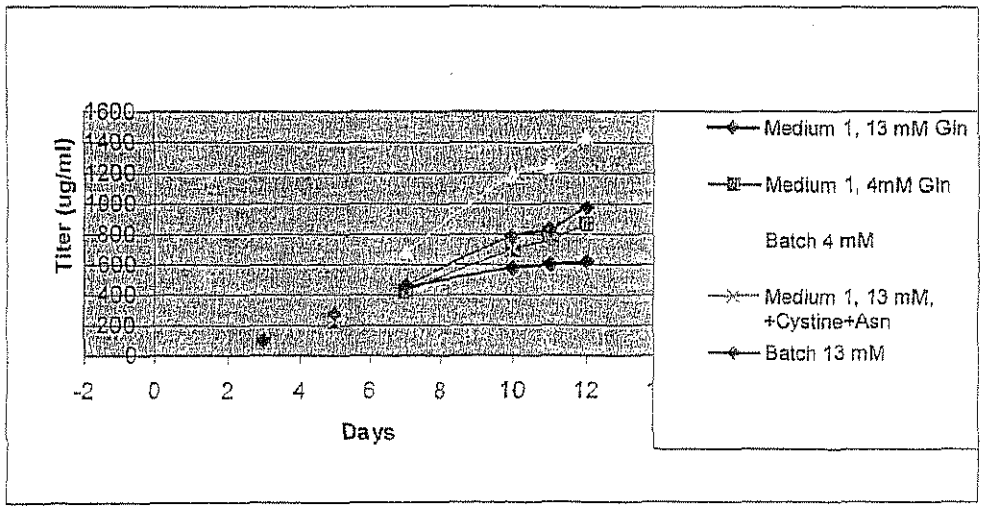


Figure 47. Osmolarity of anti-GDF-8 cultures in media containing various levels of asparagine and cysteine.

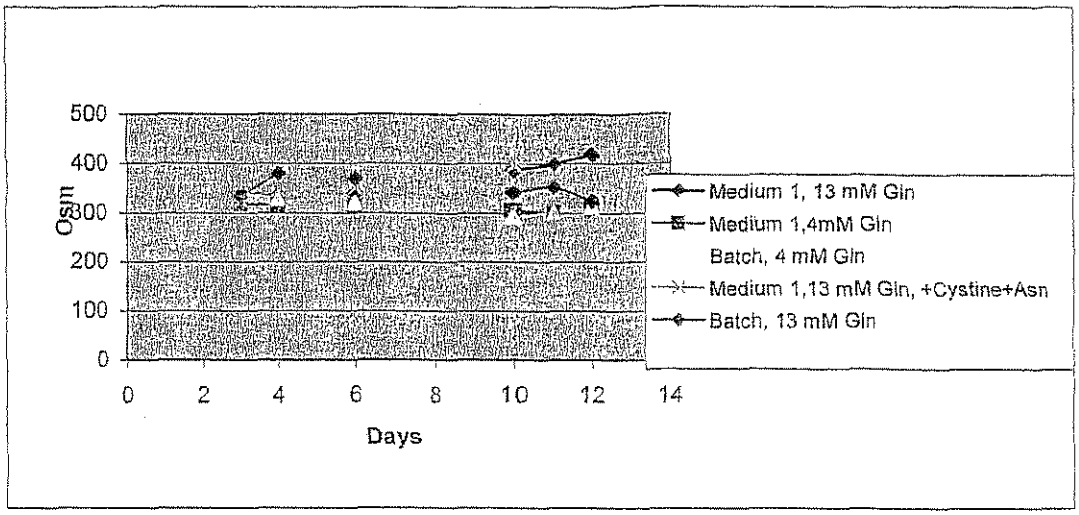


Figure 48. Cell growth of anti-GDF-8 cells in media containing various levels of amino acids and vitamins.

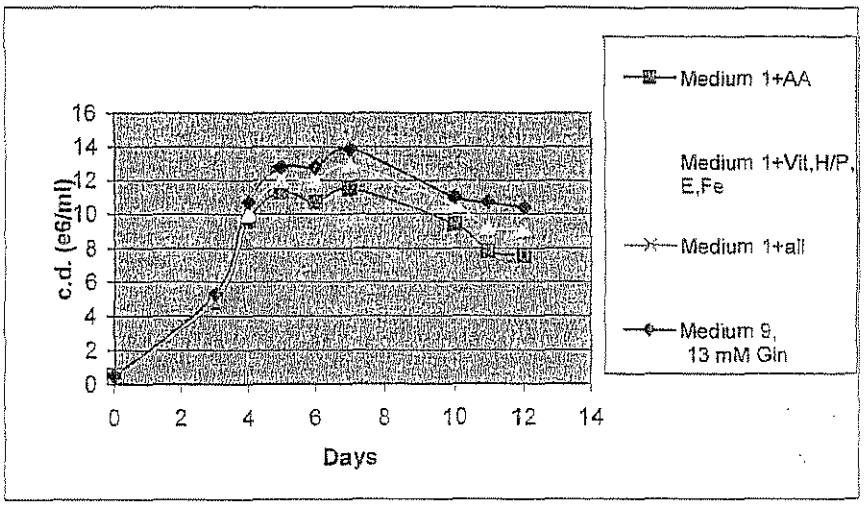


Figure 49. Lactate levels of anti-GDF-8 cultures in media containing various levels of amino acids and vitamins.

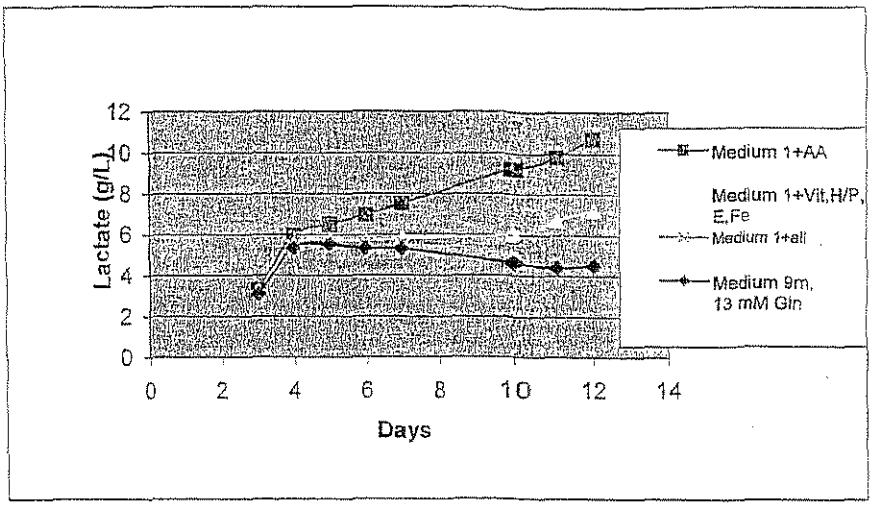


Figure 50. Ammonium levels of anti-GDF-8 cultures in media containing various levels of amino acids and vitamins.

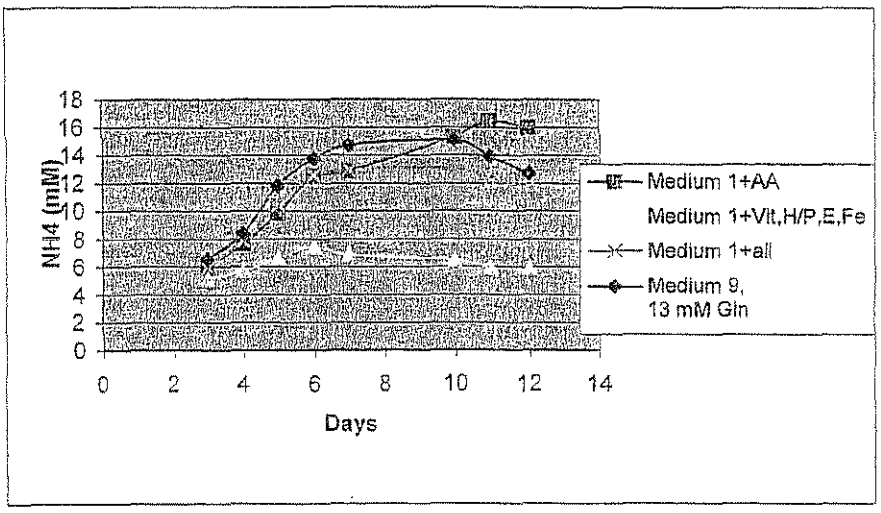


Figure 51. Glutamine levels of anti-GDF-8 cultures in media containing various levels of amino acids and vitamins.

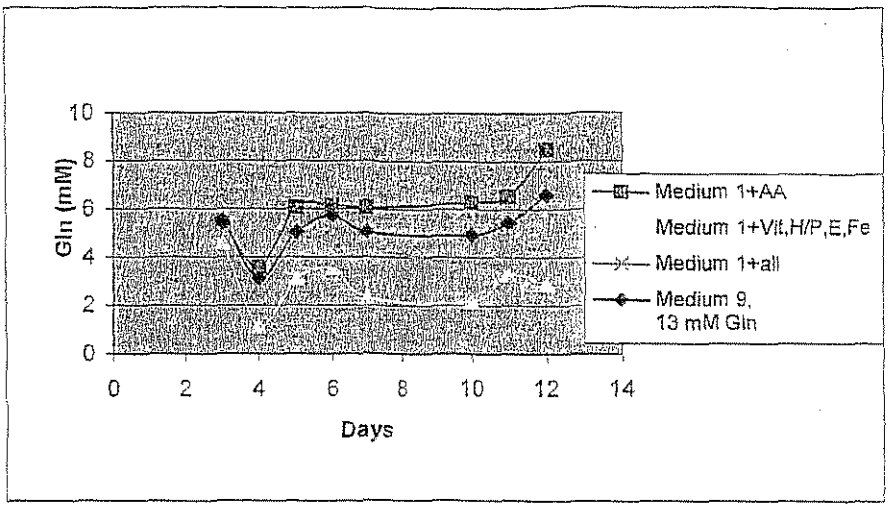


Figure 52. anti-GDF-8 titer in media containing various levels of amino acids and vitamins.

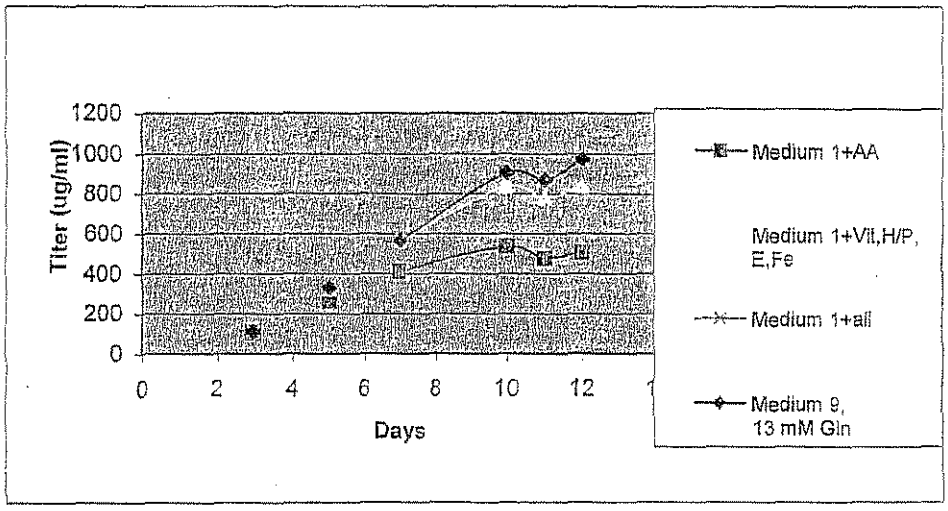


Figure 53. Cell growth of anti-GDF-8 cells in media containing various levels of vitamins, trace elements E and iron.

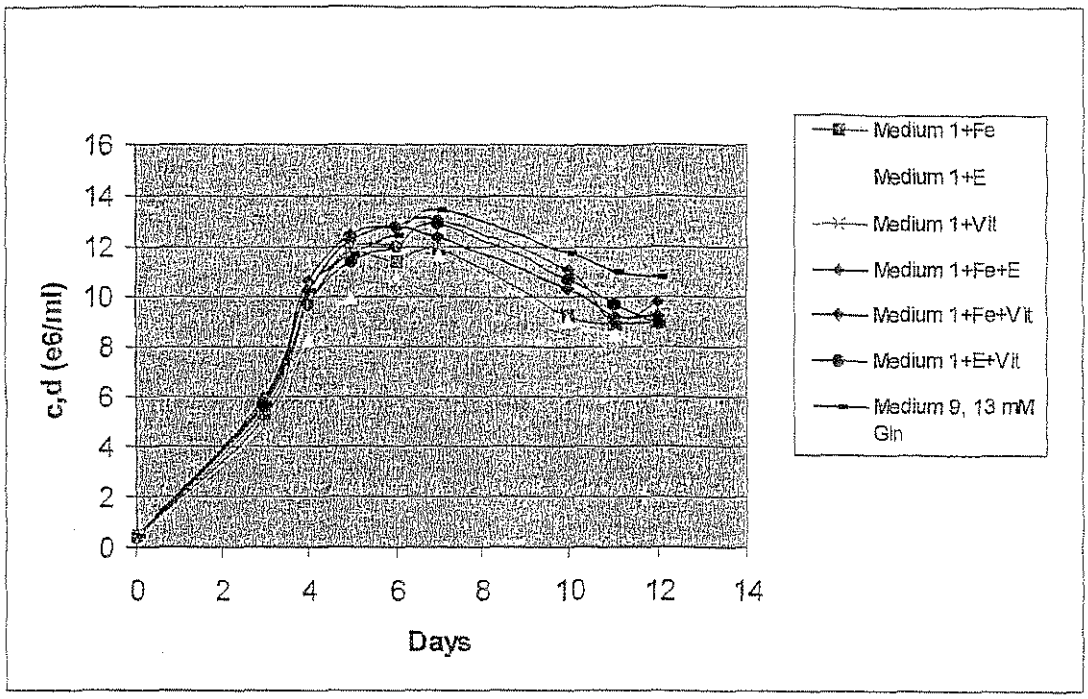


Figure 54. Lactate levels of anti-GDF-8 cultures in media containing various levels of vitamins, trace elements E and iron.

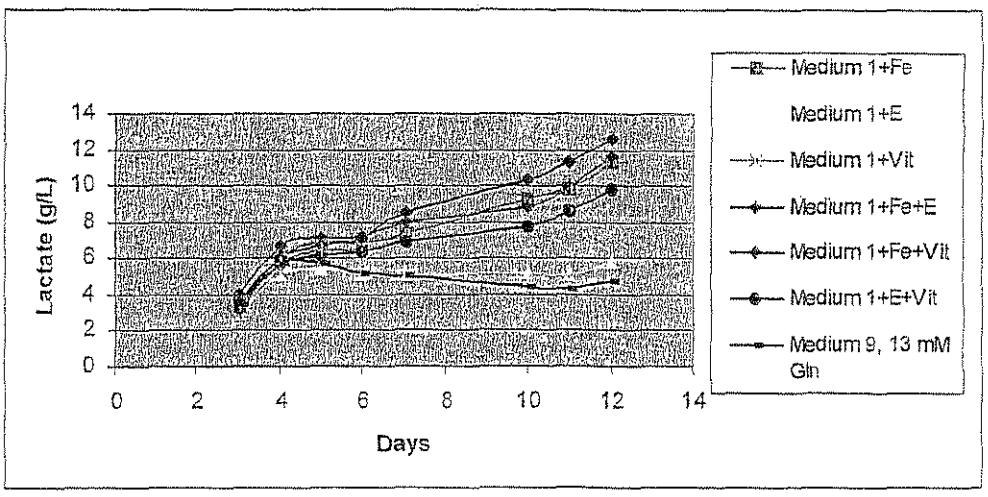


Figure 55. Ammonium levels of anti-GDF-8 cultures in media containing various levels of vitamins, trace elements E and iron.

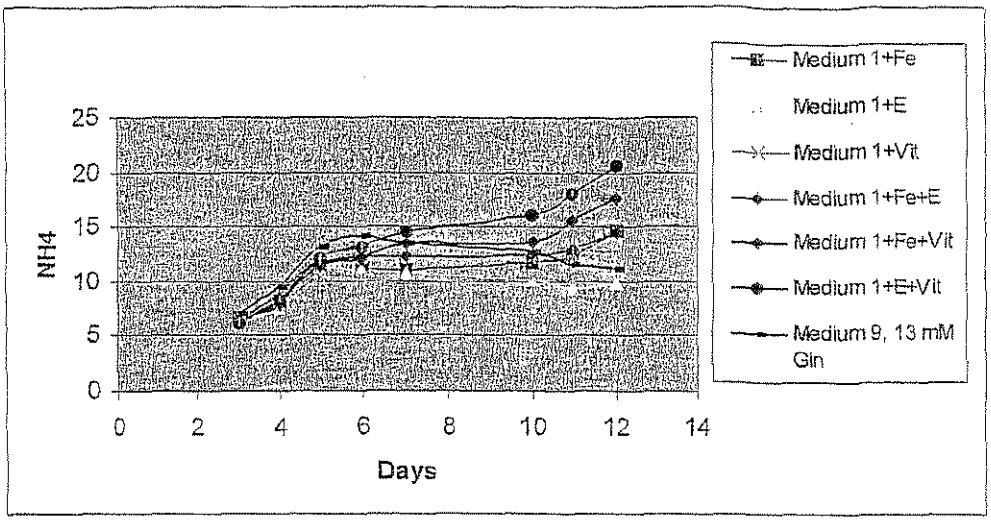


Figure 56. Anti-GDF-8 titer in media containing various levels of vitamins, trace elements E and iron.

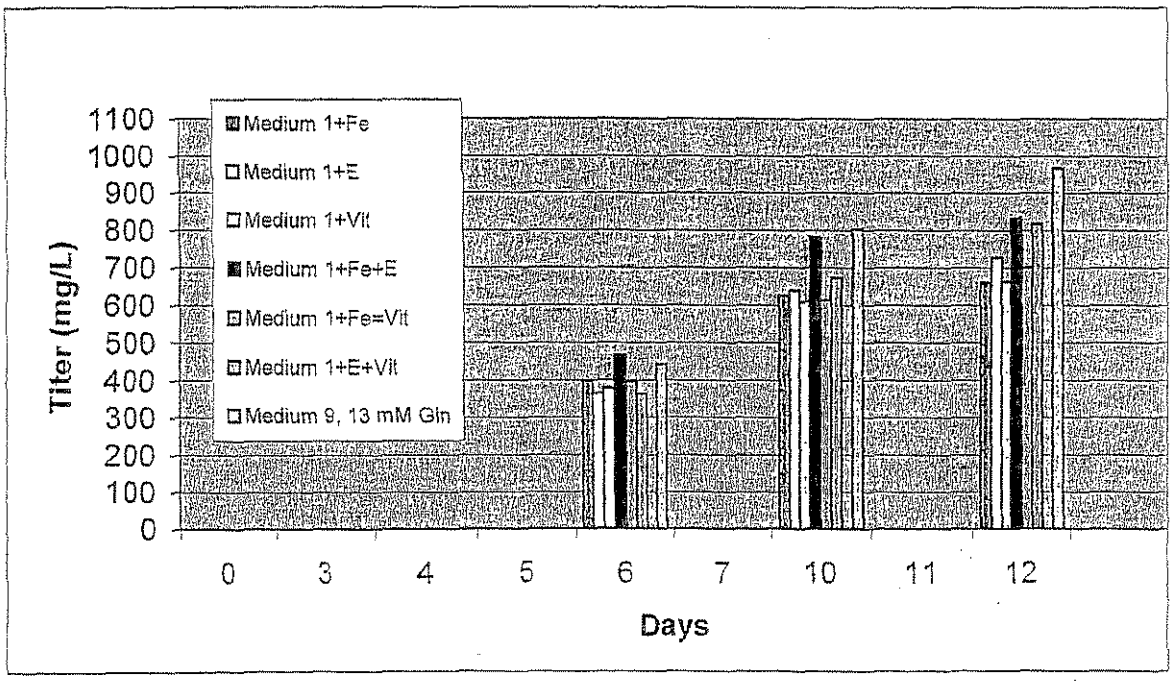


Figure 57. Cell growth of anti-GDF-8 cells in Mediums 1, 3 and 9.

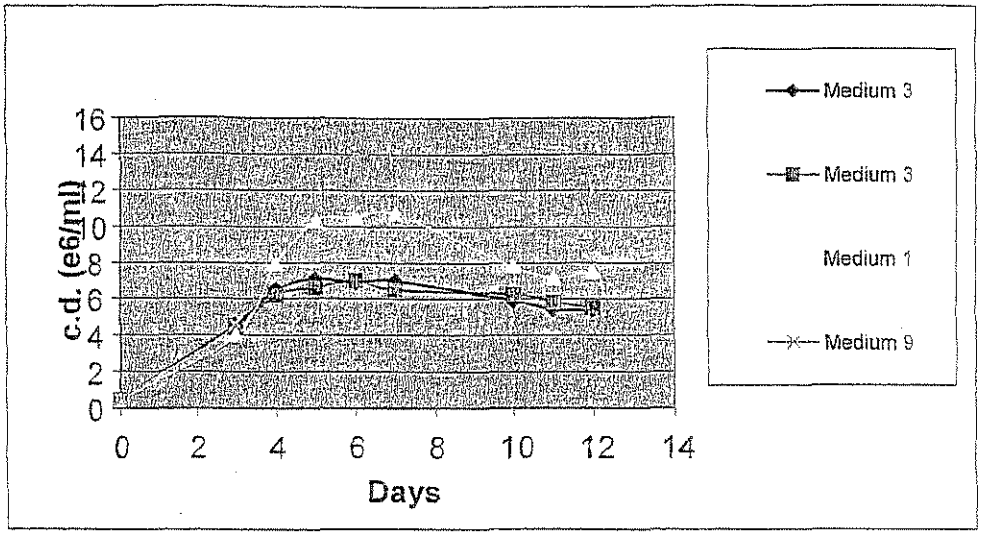


Figure 58. Anti-GDF-8 titer in Mediums 1, 3 and 9.

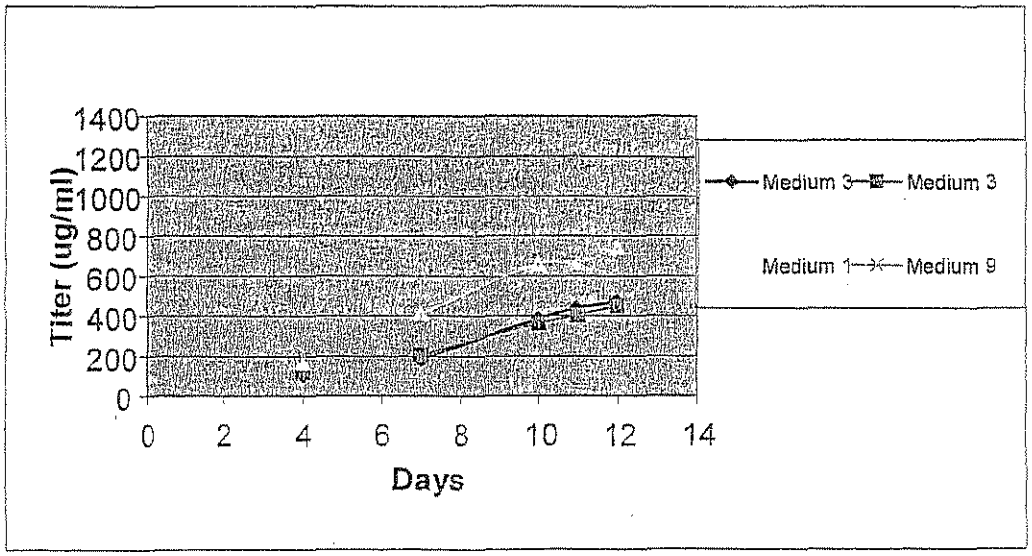
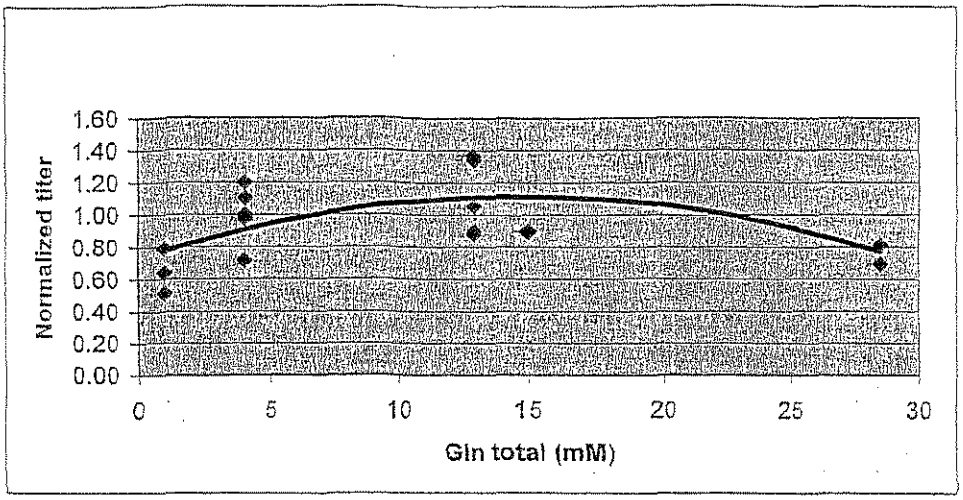


Figure 59. Extrapolated anti-GDF-8 titers for various levels of glutamine alone and total combined glutamine and asparagine.



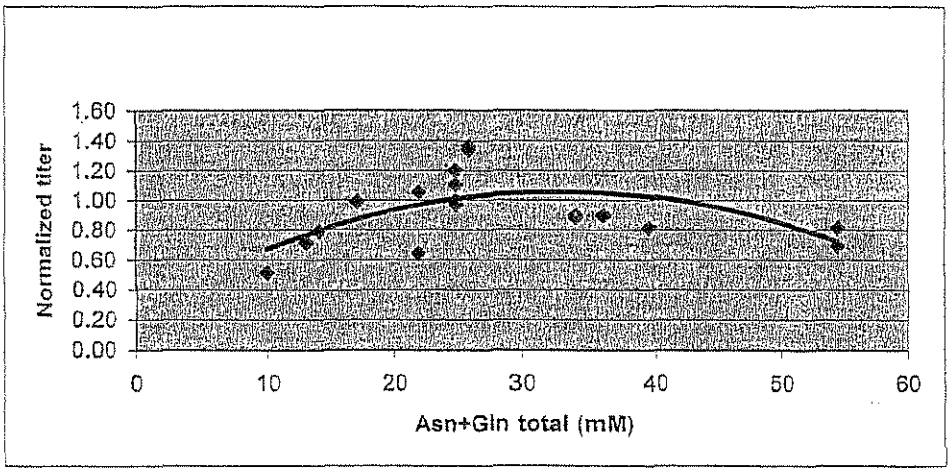


Figure 60. Growth of anti-ABeta cells under various media conditions tested.

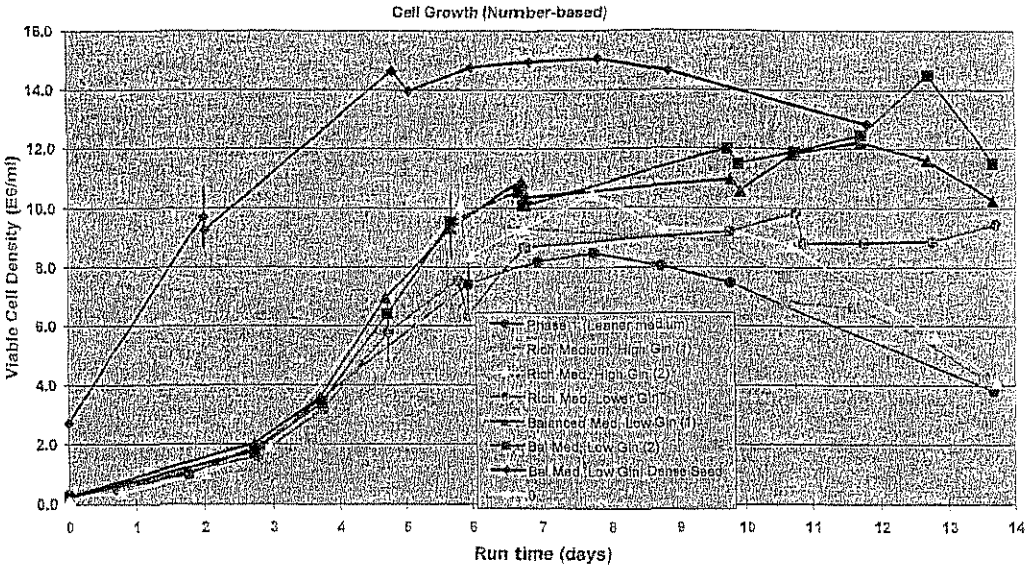


Figure 61. Viability of anti-ABeta cells under various media conditions tested.

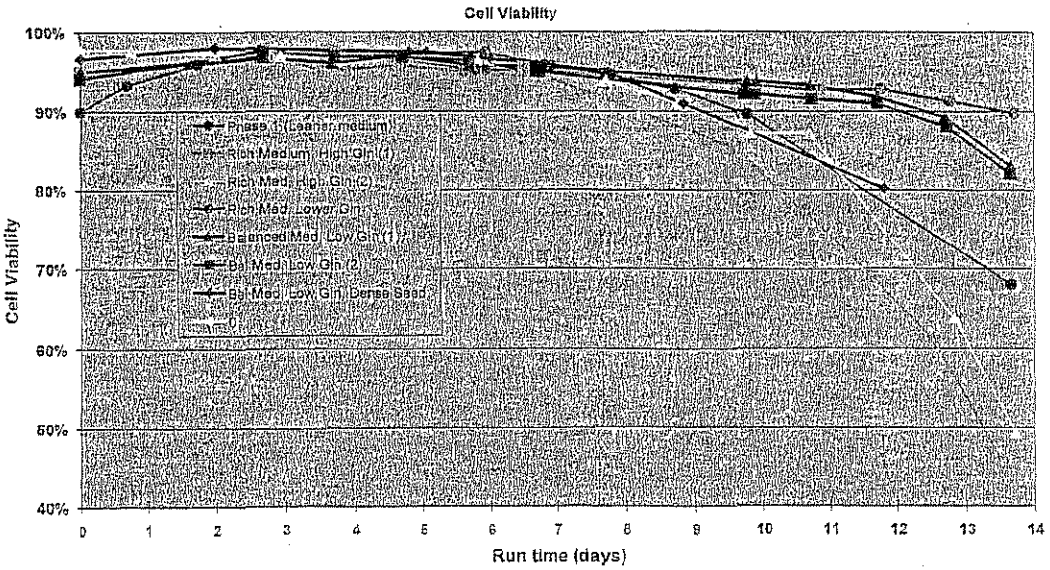


Figure 62. Lactate levels of anti-ABeta cultures under various media conditions tested.

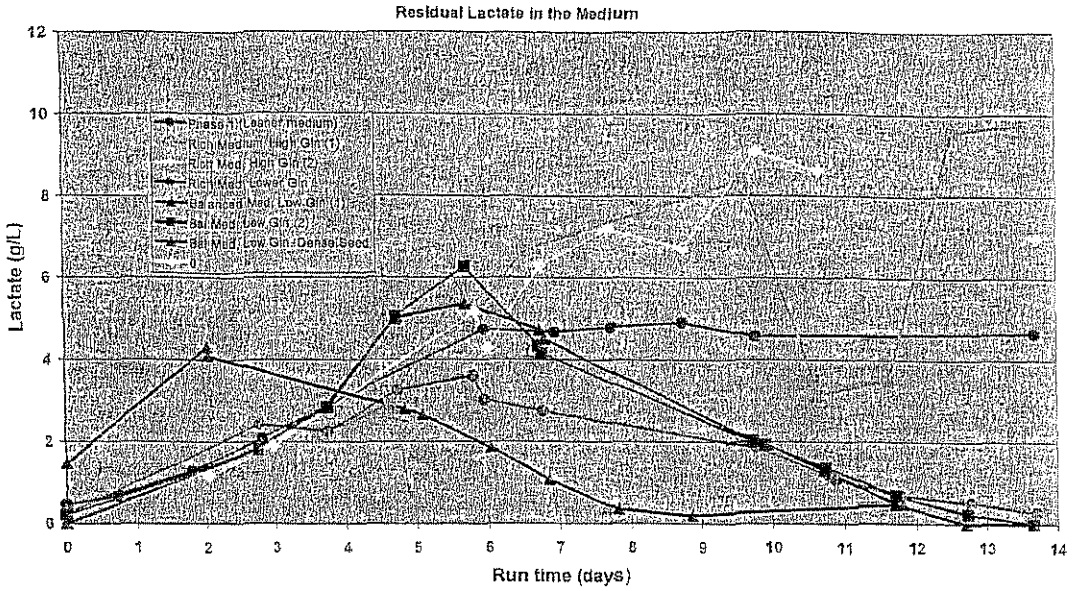


Figure 63. Ammonium levels of anti-ABeta cultures under various media conditions tested.

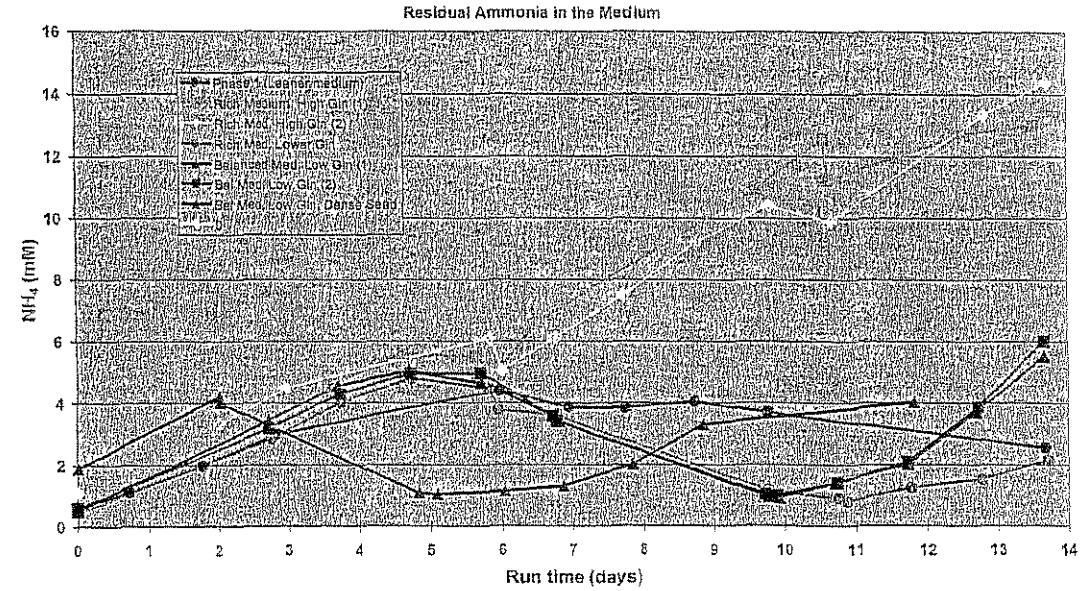


Figure 64. Anti-ABeta titer in various media conditions tested.

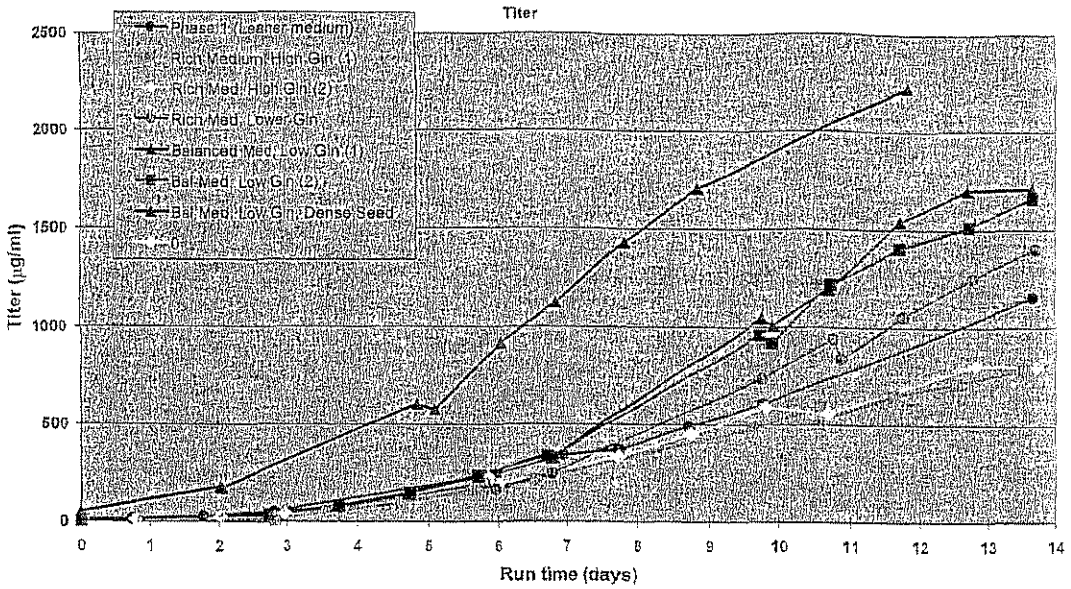


Figure 65. Osmolarity of anti-ABeta cultures under various media conditions tested.

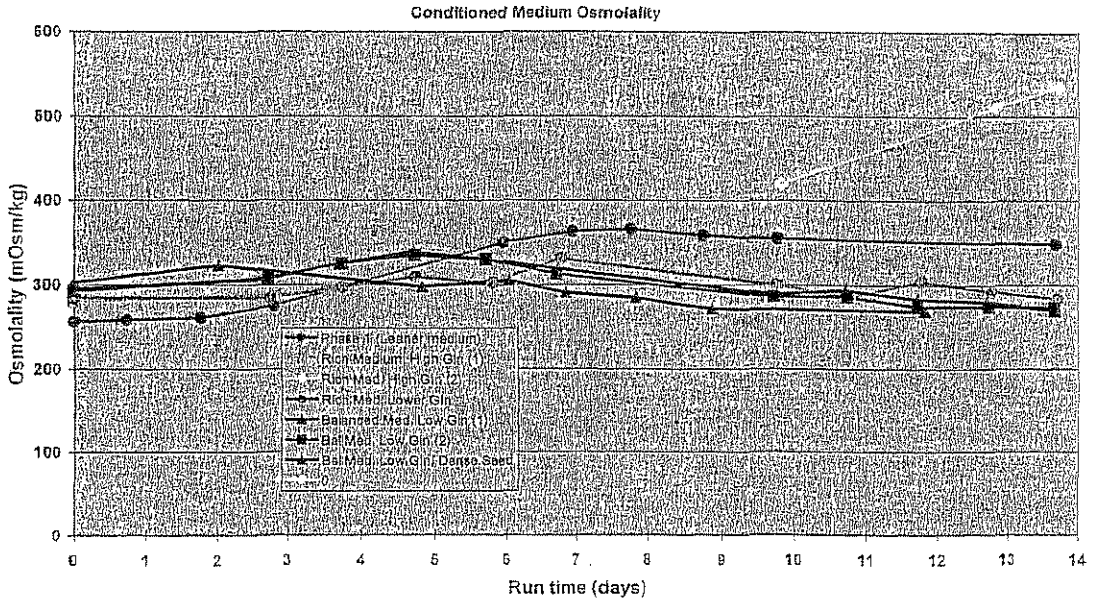


Figure 66. Growth of cells expressing TNFR-Ig under various experimental conditions.

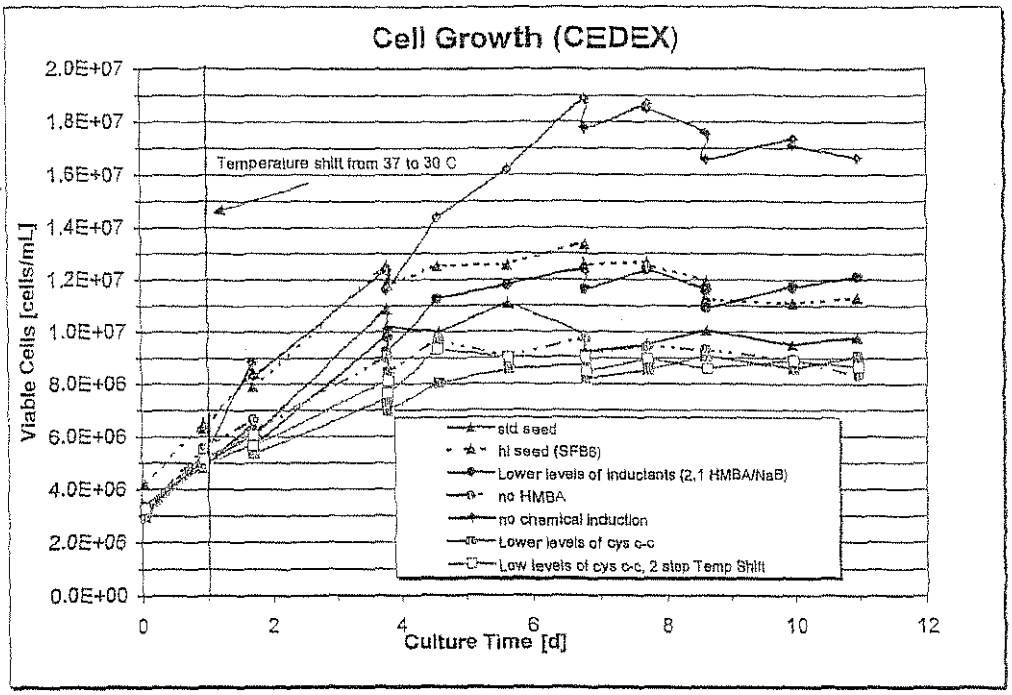


Figure 67. Viability of cells expressing TNFR-Ig under various experimental conditions.

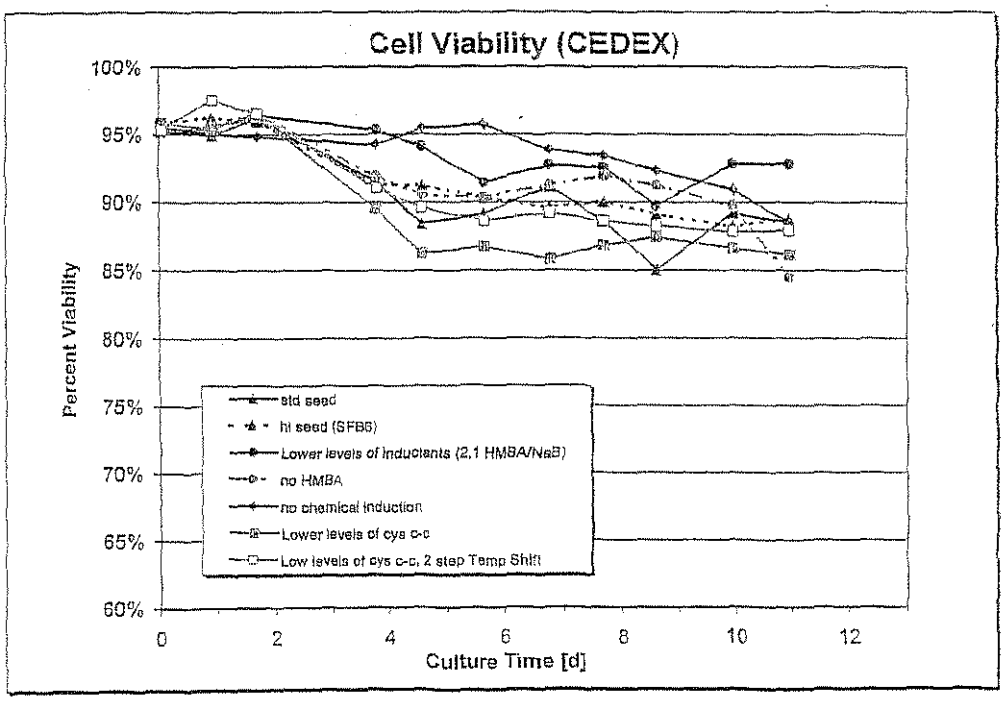


Figure 68. Residual glucose in cultures of cells expressing TNFR-Ig under various experimental conditions.

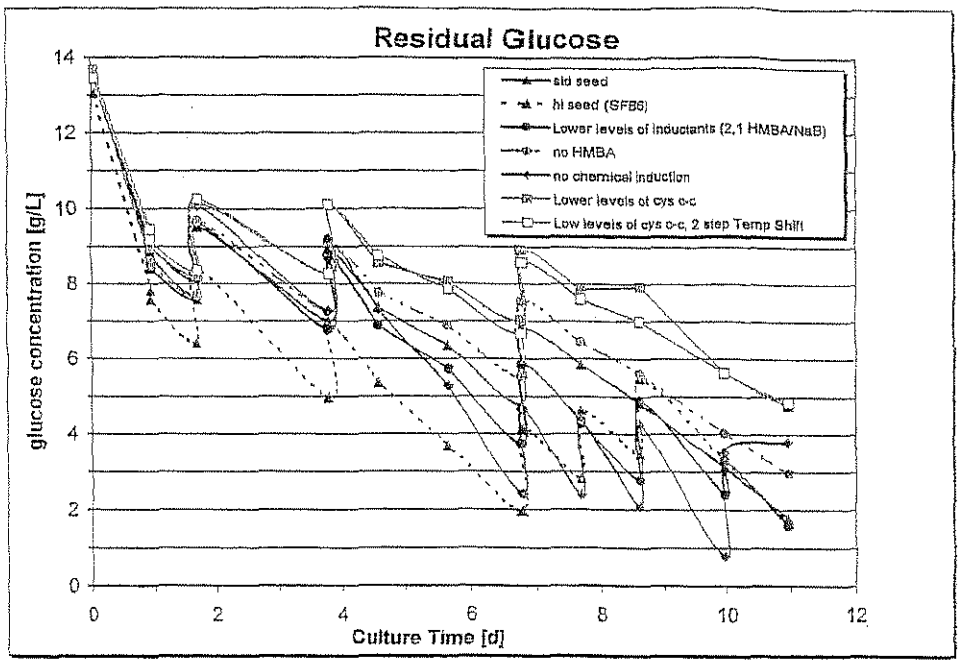


Figure 69. Glutamine levels in cultures of cells expressing TNFR-Ig under various experimental conditions.

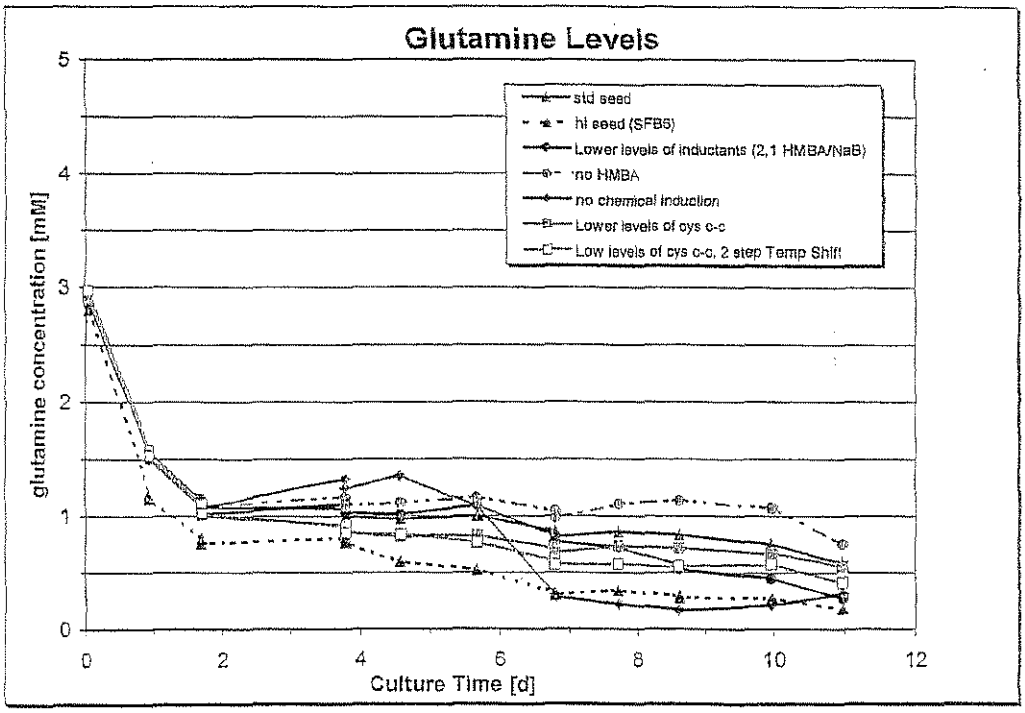


Figure 70. Lactate concentration in cultures of cells expressing TNFR-Ig under various experimental conditions.

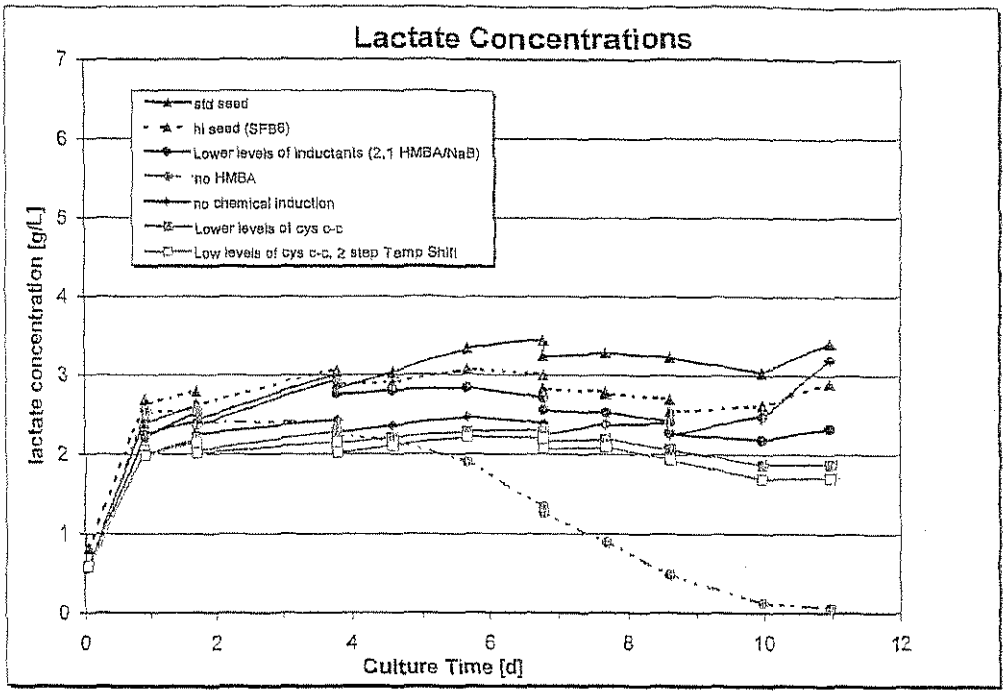


Figure 71. Ammonium levels in cultures of cells expressing TNFR-Ig under various experimental conditions.

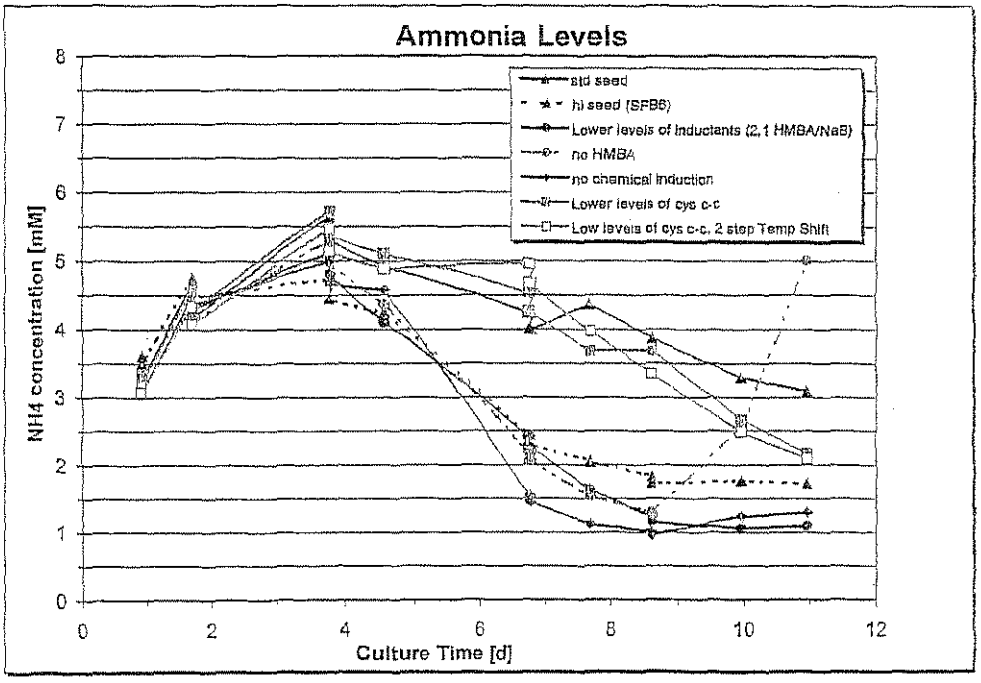


Figure 72. TNFR-Ig relative titer under various experimental conditions.

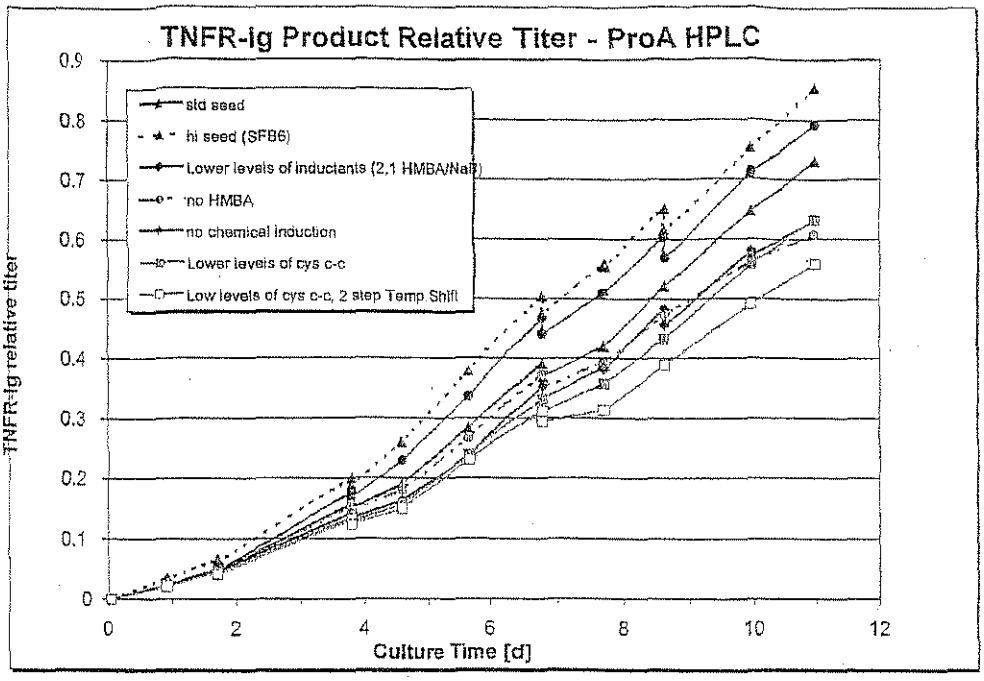


Figure 73. Cell Densities of Anti-GDF-8 Cells Grown in 6000 L and 1 L Bioreactors.

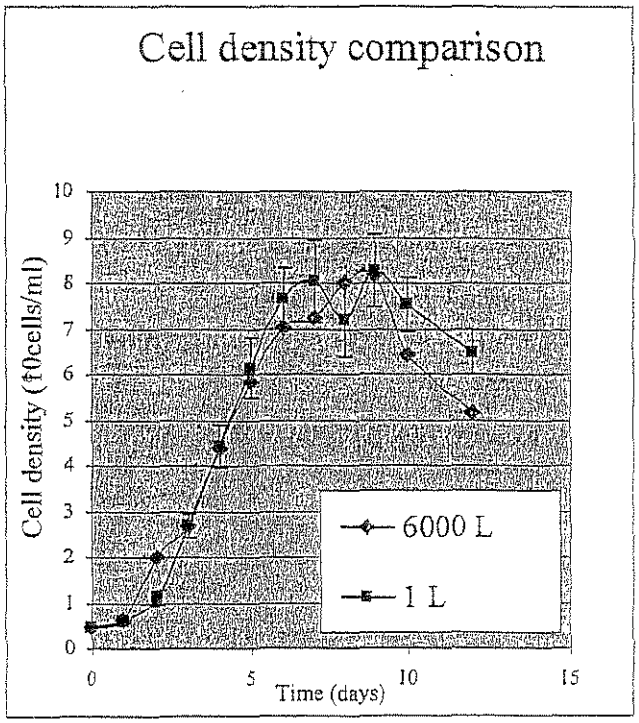


Figure 74. Titers of Anti-GDF-8 Cells Grown in 6000 L and 1 L Bioreactors.

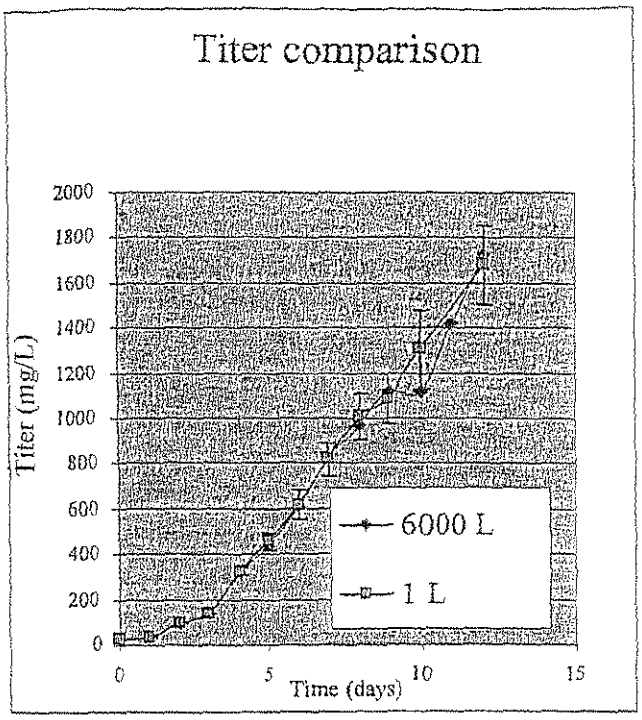


Figure 75. Lactate Levels of Anti-GDF-8 Cells Grown in 6000 L and 1 L Bioreactors.

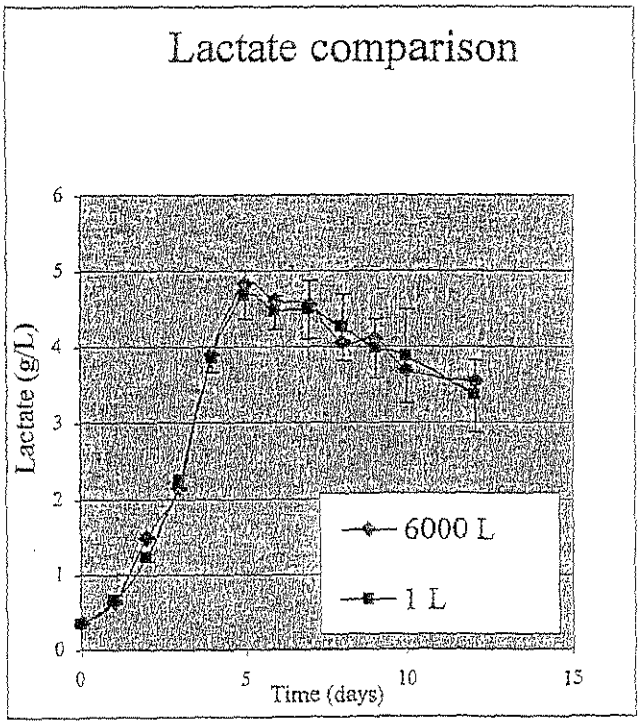
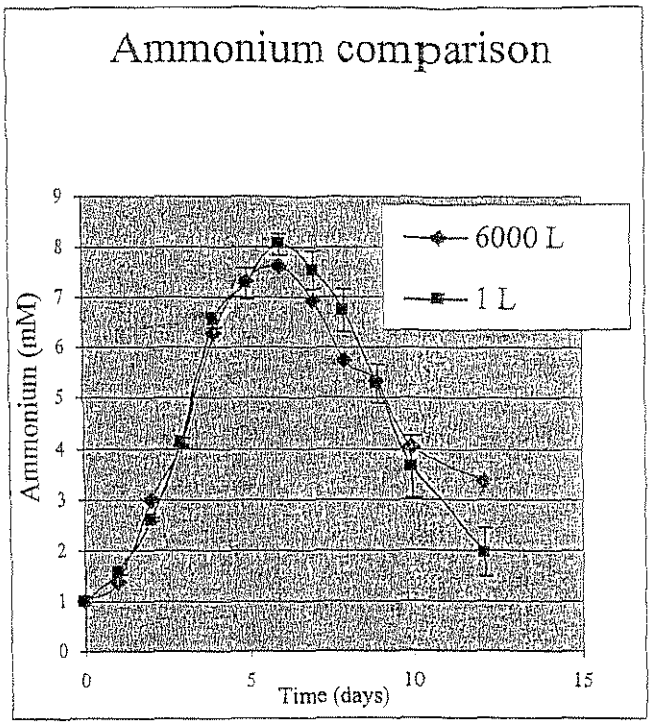


Figure 76. Ammonium Levels of Anti-GDF-8 Cells Grown in 6000 L and 1 L Bioreactors.


Ammonium comparison
Ammonium (mM)
0
1
2
3
4
5
6
7
8
9
0
5
10
15
Time (days)
6000 L
1 L