



## Reduce the toxic build-up of ammonia with HiGlutaXL™

HiGlutaXL™ improves the cell yield and performance of cell culture systems by lowering ammonia concentrations. This is especially advantageous for sensitive cell culture systems whose growth is affected even at non toxic concentration of ammonia.

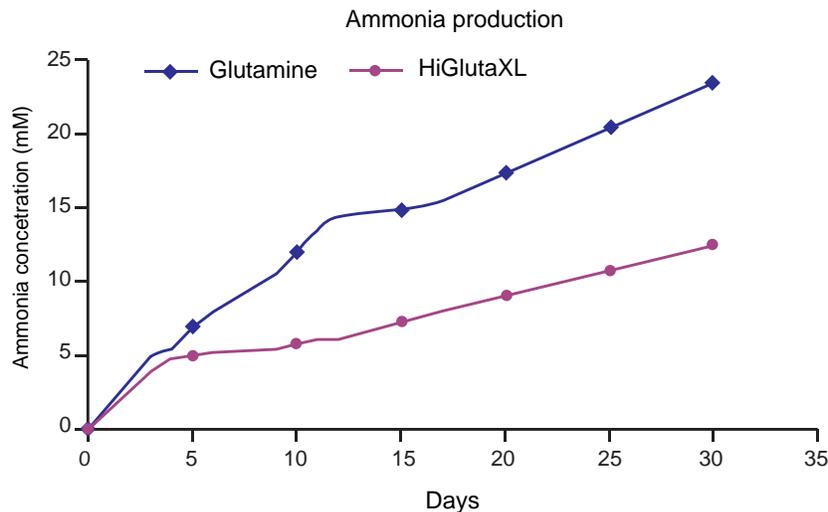


Fig. 1.2 Performance of RPMI 1640 medium supplemented with HiGlutaXL™ and L Glutamine

*Aliquots of medium containing HiGlutaXL™ and medium containing L-Glutamine were taken every 5 days for one month and studied for ammonia production. Levels of ammonia were determined by HPLC. Ammonia production was much lesser in medium containing HiGlutaXL™ as compared to medium containing L Glutamine*

## Give your cells a sustained supply of glutamine with HiGlutaXL™

Amino peptidases cleave L-Alanyl-L-Glutamine gradually releasing L-Glutamine and L-Alanine for use by the cells. The gradual release of glutamine obviates the need to supplement L-Glutamine frequently. Cells receive glutamine in a controlled and sustained manner resulting in efficient energy metabolism and higher cell yields.

## Improve your productivity with HiGlutaXL™

Improved cell viability and growth is observed when HiGlutaXL™ supplement is used instead of L-Glutamine. Although results may vary depending on the cell line, improved cell growth results in an increases in the production titers of the product of interest. Note: In a study done in a fed batch culture of 2L scale down model, feeding HiGlutaXL™ supplement increased the production of anti-CD20 Mab.

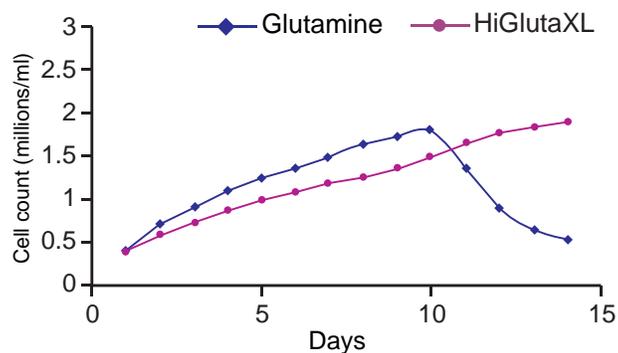


Fig. 1.3a Improved viable cell density was observed in a 2L fed batch culture when studied over a period of over 2 weeks.

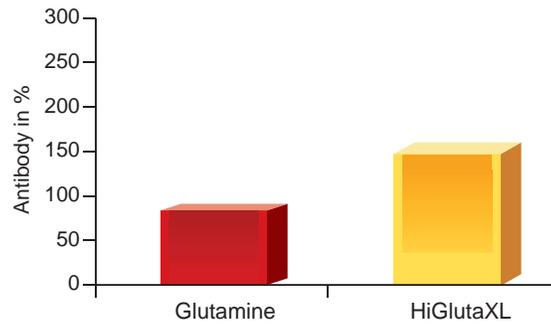


Fig: 1.3b Monoclonal antibody production was significantly more in medium containing L alanyl L glutamine.

### HiGlutaXL™ Supplement, a direct substitute

L-Alanyl L-Glutamine is available as a 200mM solution, TCL030 HiGlutaXL™ supplement. TCL030, HiGlutaXL™ supplement can be used as a direct substitute for L-Glutamine at equimolar concentrations in any cell culture media formulation.

### We have what you want.....

Considering the varied needs of our users, we have substituted L glutamine with L alanyl L glutamine in most of the commonly used media. We offer a wide range of HiGlutaXL™ media including DMEM, RPMI, MEM, Nutrient Mixtures, IMDM, DMEM/F12 etc. Also we can substitute L-glutamine with L-Alanyl L-Glutamine in any formulation which you desire as a customized formulation.

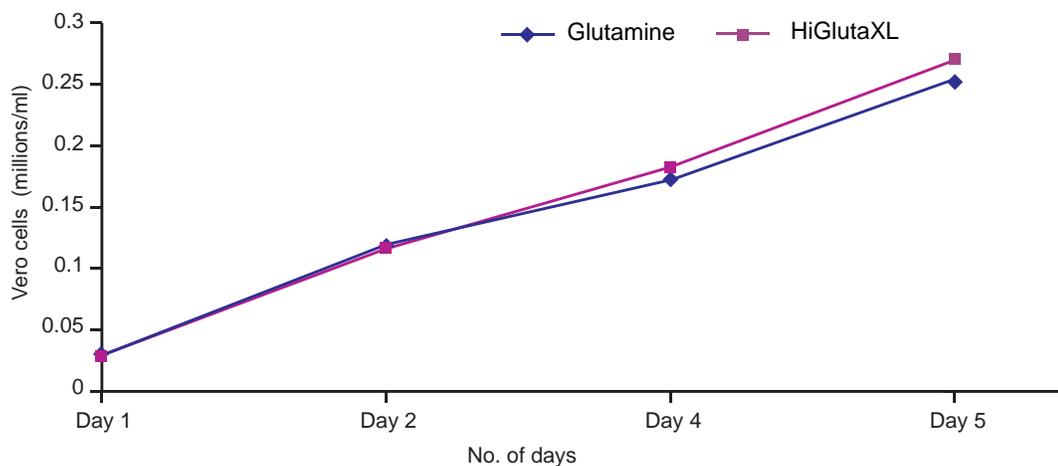


Fig 1.4: Comparative growth performance of Vero cells in MEM supplemented with HiGlutaXL™ Vs MEM supplemented with L-Glutamine.

HiGlutaXL™ MEM supplemented with 10% FBS (Fetal Bovine Serum) was compared to MEM with L-Glutamine and 10% FBS for growth promotion test. Vero cells were seeded in triplicate in a 24 well plate and incubated at 37°C with 5% CO<sub>2</sub> and 95% air over a 4 day passage cycle. Samples were taken daily and evaluated for cell density and morphology.



## Ordering Information:

Media Specifications	Codes
HiGlutaXL™ Dulbecco's Modified Eagle Medium, High Glucose w/ L-Alanyl-L-Glutamine, Sodium bicarbonate and Sodium pyruvate	AL007G
LoSera™ Dulbecco's Modified Eagle Medium, High Glucose w/ L-Alanyl-L-Glutamine, Sodium pyruvate and Sodium bicarbonate	RSL003G
HiGlutaXL™ Dulbecco's Modified Eagle Medium, High Glucose w/ L-Alanyl-L-Glutamine and Sodium bicarbonate w/o Sodium pyruvate	AL066G
HiGlutaXL™ Dulbecco's Modified Eagle Medium /Nutrient Mixture F-12 Ham (DMEM / F12, 1:1 mixture) w/ L-Alanyl-L-Glutamine, Sodium bicarbonate and Trace elements w/o HEPES buffer	AL127G
HiGlutaXL™ Dulbecco's Modified Eagle Medium / Nutrient Mixture F-12 Ham (DMEM / F12, 1:1 mixture) w/ L-Alanyl-L-Glutamine, HEPES buffer, Sodium bicarbonate and Trace elements.	AL139G
LoSera™ Dulbecco's Modified Eagle Medium/ Nutrient Mixture F-12 Ham (1:1) w/ L-Alanyl-L-Glutamine, HEPES buffer, Sodium bicarbonate and Trace elements	RSL006G
HiGlutaXL™ Iscove's Modified Dulbecco's Medium (IMDM) w/ L-Alanyl-L-Glutamine, 25mM HEPES buffer and Sodium bicarbonate.	AL070G
HiGlutaXL™ Leibovitz's L-15 Medium w/ L-Alanyl-L-Glutamine	AL011G
HiGlutaXL™ Minimum Essential Medium Eagle w/ L-Alanyl-L-Glutamine, Earle's salts and Sodium bicarbonate w/o NEAA	AL020G
LoSera™ Minimum Essential Medium Eagle w/ Earle's salts, L-Alanyl-L-Glutamine, NEAA and Sodium bicarbonate	RSL008G
HiGlutaXL™ Minimum Essential Medium Eagle w/ L- Alanyl-L-Glutamine, Earle's salts, NEAA and Sodium bicarbonate	AL047G
HiGlutaXL™ Minimum Essential Medium Eagle w/ L-Alanyl-L- Glutamine, Hank's salts and Sodium bicarbonate.	AL056G
HiGlutaXL™ Minimum Essential Medium, Alpha Modification w/ L-Alanyl-L-Glutamine, Deoxyribonucleosides and Ribonucleosides and Sodium bicarbonate.	AL080G
HiGlutaXL™ Minimum Essential Medium, Alpha Modification w/ L-Alanyl- L-Glutamine and Sodium bicarbonate w/o Deoxyribonucleosides and Ribonucleosides.	AL081G
HiGlutaXL™ Nutrient Mixture F-10 Ham w/ L-Alanyl-L-Glutamine and Sodium bicarbonate.	AL024G
HiGlutaXL™ Nutrient Mixture F-12 Ham w/ L-Alanyl-L-Glutamine and Sodium bicarbonate.	AL025G
HiGlutaXL™ RPMI-1640 w/ L-Alanyl-L-Glutamine and Sodium bicarbonate	AL028G
LoSera™ RPMI-1640 w/ L-Alanyl-L-Glutamine and Sodium bicarbonate	RSL011G
HiGlutaXL™ RPMI-1640 w/ L-Alanyl-L-Glutamine, 25 mM HEPES buffer and Sodium bicarbonate.	AL060G
HiGlutaXL™ RPMI -1640 w/ L-Alanyl-L-Glutamine, HEPES buffer, 60 mg per liter pencillin, 100 mg per liter streptomycin, 15% FBS and Sodium bicarbonate	AL751G

- Standard packing is 5 X 100ml, 2 X 500 ml, 6 X 500ml and 18 x 500ml.
- Customised Media available on request.
- Bulk packing available on request.



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