Stable L-Glutamine (100X)

#GTC03.0100 (100ml)
(FOR RESEARCH ONLY)

Product: Filter sterilized 200mM Stable L-Glutamine (L-alanyl-L-Glutamine). Essential amino acid to be used as a serum-free supplement in cell culture media.

Quantity: #GTC04.0100 comprises 100ml of 200mM Stable L-Glutamine

Applications: Cell Culture.

Appearance: Clear colourless solution.

Specifications:

pH:	6.5-7.5
Osmolality:	420-500m Osm/kg
Sterility:	sterile
Endotoxin:	<10 EU/ml

Storage: -20ºC for up to 2 years. Once the product has been thawed (and refrigerated), it should be used within 2 weeks. For longer storage, prepare aliquots and freeze at -20ºC. Avoid repeated freeze/thaw cycles.

Usage:

L-Glutamine is an essential amino acid that is required for cell culture. Unlike most other amino acids, L-glutamine is not stable in solution. Degradation rate depend on time, temperature, and pH. L-alanyl-L-Glutamine is a stabilized form of L-Glutamine with improved stability and considerable reduction of spontaneous cytotoxic ammonia generation. An additional benefit in comparison with free L-Glutamine is the extension of cell culture time, potentially reducing the number of times cells must be passaged. The optimal concentration is dependent upon the cell type and medium used to culture those cells. The concentration of (stable) L-glutamine used in classical media ranges from 0.5mM in Ames' Medium to 10mM in MCDB Media 131, with the more typical concentrations between 2 and 6mM. DMEM/F12 (50:50) is often used as a starting formulation for media used with Chinese Hamster Ovary (CHO), cells. L-glutamine in DMEM/F12 Nutrient Mixture is 2.5mM. L-glutamine in Serum-Free/Protein Free Hybridoma Medium is 2.7mM. L-glutamine in DMEM, GMEM, IMDM and H-Y medium is 4mM. IMDM is often used as a starting formulation for proprietary hybridoma cell culture media. Hybridoma cells grow better in concentrations of L-glutamine that are above the average levels found in media.

In order to obtain a 2mM solution, dilute 1:100 (e.g., add 10ml to 990ml). Other final solutions should be prepared by the desired dilution (e.g., for a 4mM solution, dilute 200mM/4mM = 50 times).