

Catalog Number:	Size:
R90210	100 g

PRODUCT DESCRIPTION

L-Glutamine is an essential amino acid required as an energy and carbon source by virtually all mammalian and insect cells in culture. L-Glutamine degrades through an intramolecular cyclization reaction forming as by-products, pyrrolidone carbonic acid and ammonia in equimolar concentrations. The rate of breakdown increases at warmer temperatures and in the presence of phosphate or bicarbonate.

Dipeptide derivatives of L-glutamine, such as L-alanyl-L-glutamine, prevent the intramolecular cyclization reaction associated with solutions of L-glutamine. The dipeptide derivatives are metabolized within the cells to yield L-glutamine and L-alanine. This results in a more stable solution, consistent delivery of L-glutamine to cells and avoiding a toxic buildup of ammonia in cell cultures. This feature can be especially important for ammonia-sensitive cell lines. These derivatives allow the formulation of cell culture media containing L-glutamine to be stored at 2-8 °C for extended periods.

GlutaminePlus is a stable L-glutamine substitute (L-alanyl-L-glutamine) offered in a powder form for general cell culture.

STORAGE AND HANDLING

We recommend that the GlutaminePlus powder be stored at a temperature of 15-30 °C.

PRECAUTION

When handling bio-hazardous materials such as human cells, safe laboratory procedures should be followed, and personal protective equipment should be worn.

LIMITATIONS

- FOR LABORATORY RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.
- The safety and efficacy of this product in diagnostic or other clinical uses has not been established.
- Results may vary due to variations among tissue/cells derived from different donors or sources.

PRODUCT INSTRUCTIONS

1. Prepare a stock solution from which working concentrations may easily be obtained. Determine the amount of GlutaminePlus powder and water necessary to make the stock solution; a 200 mM (29.2 g/L) solution is often a convenient choice due to its simple dilution to working concentrations.
2. Use 0.85% saline at ambient temperature (15-30 °C). To 90% final volume of saline, add the required quantity of GlutaminePlus powder while stirring. Stir until the powder is completely dissolved.
3. Add the required amount of 0.85% saline to bring the solution to final volume.
4. Immediately filter sterilize and dispense aseptically into a sterile collection vessel. Filters with an absolute pore size of 0.1-0.2 µm are most appropriate for this application. Dispense small aliquots into containers appropriate for freezing. This prevents the freeze-thaw process of large quantities when thawing for media supplementation or other use. A sterility test prior to use is recommended.
5. Store the GlutaminePlus solution refrigerated at 2-8 °C or frozen at -5 °C to -20 °C.