

**Catalog Number:**

B90210

## 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. Solutions containing these derivatives can even be autoclaved without appreciable degradation of the product (30 minutes at 121 °C, results < 5% loss of the product).

GlutaminePlus is a stable L-glutamine substitute that contains 200 mM L-alanyl-L-glutamine in 0.85% saline direct substitute for regular L-glutamine in your cell culture medium. Use the same concentration of GlutaminePlus in your medium as normally required for regular L-glutamine. Since the GlutaminePlus product provides long-term stability of the L-glutamine in solution, your culture media may be stored at 2-8 °C for extended periods without loss of this essential amino acid.

## STORAGE AND HANDLING

The GlutaminePlus Solution is supplied in gamma irradiated, sterile PETG or PETE bottles. We recommend that the GlutaminePlus Solution be stored refrigerated at a temperature of 2-8 °C. However, these products may also be stored frozen at -5 °C to -20 °C without degradation. Always use aseptic techniques when handling the GlutaminePlus Solution.

## 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.