

PRODUCT DATA SHEET

GlutaminePlus™ (100X) **Stable L-Glutamine Dipeptide Solution**

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, 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 4°C for extended periods. Solutions containing these derivatives can even be autoclaved without appreciable degradation of the product (30 minutes at 121°C, results in <5% loss of the product).

The stable L-glutamine substitute (GlutaminePlus™) offered by Atlanta Biologicals contains 200mM L-alanyl-L-glutamine in 0.85% saline is for general cell culture.

Product Use

The stable L-glutamine dipeptide solution may be used as a 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°C-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°C to 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.

Shipping

The GlutaminePlus™ Solution is shipped ambient by second day air.

This product is manufactured for research and development purposes only. It is not intended for any human or animal diagnostic, therapeutic or other clinical uses. It is also not for agricultural, food, drug, cosmetic or household use. The use of these products must be supervised by a person technically qualified to handle potentially hazardous material.