

Product Data Sheet

L-Alanyl-L-Glutamine Medium Supplement

Catalog Number: 0452 and 0453

Product Description

L-Alanyl-L-glutamine is a replacement for L-glutamine in cell culture media formulations. L-Glutamine is a key nutrient for cultured cells. However, glutamine is prone to spontaneous de-amination, which results in the accumulation of ammonia.¹ Ammonia is toxic to cells, lowering viability and affects protein synthesis and glycosylation.^{2,3,4} L-alanyl-L-glutamine is a dipeptide that stabilizes the terminal ammonium group on glutamine. Whereas deamination of glutamine has a half-life of about 1 week at 37°C, the alanyl-glutamine is stable for 3 months.

L-Alanyl-L-glutamine has been used as a medium supplement since the mid-1990's.⁵ It is a well tested and established replacement for glutamine in cell culture media products suitable for use with mammalian, insect, yeast, fungal and bacterial media formulations where extended shelf-life or excessive ammonium build-up is of a concern.

Ready-to-Use Liquid or Dehydrated Bulk Powder

L-Alanyl-L-glutamine is supplied as a ready-to-use concentrate.

- Convenient
- Eliminates prep time
- Just add sterile amino acids and supplements

For customers who want to prepare their own stock solutions or medium containing L-alanyl-L-glutamine from scratch, convenient package sizes of powdered product are available.

Custom Media

If you need a medium formulation without other amino acids or components, AthenaES™ specializes in low volume custom production of formulations of other cell culture media. To request a custom tissue culture, contact your local sales rep or go to www.athenaes.com/custom_media.php to submit an online request form.

Specifications and Storage

Formulation (liquid): 200 mM L-alanyl-L-glutamine, 0.85% NaCl, sterile

Storage **Liquid:** 4°C (ships ambient)

Powder: 20°C to 25°C (ships ambient)

Stability at 4°C **Liquid:** 2 years

Powder: 5 years

pH (liquid) 6.5 to 8.0



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Ordering Information

Cat. No.	Description	Size
0452	200 mM Sterile Solution	100 mL
0453-10	L-Alanyl-L-Glutamine	10 g
0453-25	L-Alanyl-L-Glutamine	25 g
0453-100	L-Alanyl-L-Glutamine	100 g

References

1. Tritsch GL, Moore GE (1962) Spontaneous decomposition of glutamine in cell culture media. *Exp Cell Res* 28:360-364.
2. Hassell T, Gleave S, Butler M (1991) Growth inhibition in cell culture. *Appl Biochem Biotechnol* 30:29-41.
3. Yang M, Butler M (2002) Effects of ammonia and glucosamine on the heterogeneity of erythropoietin glycoforms. *Biotechnol Prog* 18:129-138.
4. Yang M, Butler M (2000) Effects of ammonia on the glycosylation of human recombinant erythropoietin in culture. *Biotechnol Prog* 16:751-759.
5. Christie A, Butler M (1994) Growth and metabolism of a murine hybridoma in cultures containing glutamine-based dipeptides. *FOCUS™* 16:1, 9.