

Corning® glutagro™ Supplement Frequently Asked Questions

CORNING



- 1. What is Corning® glutagro™ supplement and why is it better than L-glutamine?**

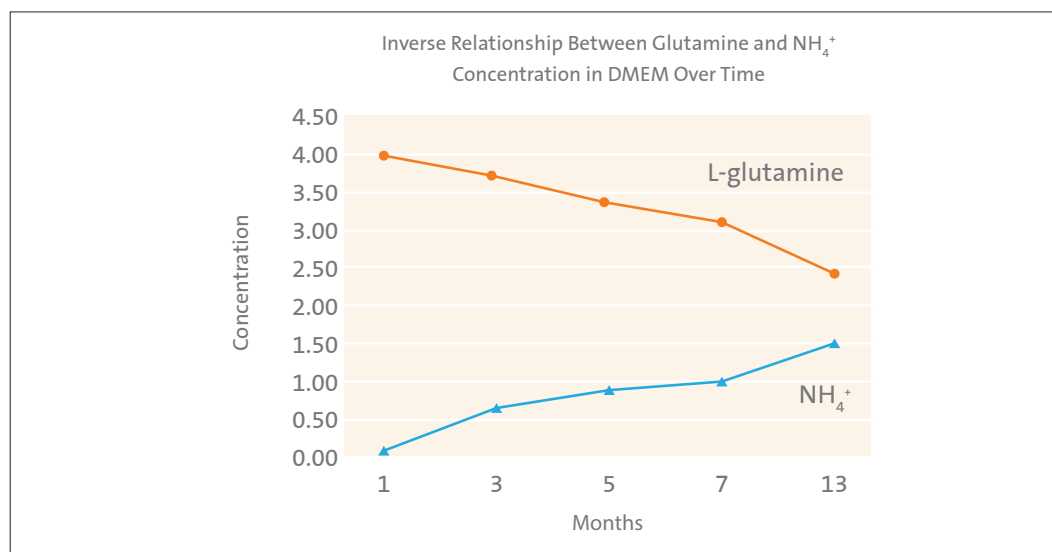
Corning glutagro supplement (Corning Cat. No. 40-215-CV) is composed of L-alanyl-L-glutamine, an alternative and more stable version of glutamine. Corning glutagro takes longer than L-glutamine to break down to ammonia, but it still provides the same support to cells in culture as L-glutamine.
- 2. Are there any disadvantages to using glutagro supplement in place of L-glutamine?**

Both the processing rate and the general suitability of glutagro supplement can vary by cell type. The initial processing rate of glutagro supplement depends on the ability of a given cell to import and process L-alanyl-L-glutamine to usable L-glutamine and the cell's ability to secrete the required protease. Moreover, cancerous cell lines may be exclusively reliant on L-glutamine over L-alanyl-L-glutamine in a phenomenon known as the Warburg effect, which has implications for the ability of glutagro supplement to perform as a supplement for these cells. Finally, the buildup of L-alanine resulting from the cleavage of L-alanyl-L-glutamine may negatively affect certain cell lines. A side-by-side comparison of L-glutamine supplemented media to media supplemented with Corning glutagro supplement is therefore recommended to observe any phenotypic differences. Overall, glutagro supplement is better than L-glutamine in contributing to media stability, cell viability, and cell yield.
- 3. What is the rate at which glutagro supplement is consumed by cells compared to L-glutamine?**

An initial lag in consumption is seen with glutagro supplement as opposed to L-glutamine. This is due to a peptidase-mediated conversion of the supplement to free L-alanine and L-glutamine, which is an additional step in processing this supplement. Once this conversion is complete, both glutagro supplement and L-glutamine are processed at equivalent rates.
- 4. How much longer does glutagro supplement last?**

Corning glutagro supplement has better stability because it is not subject to the same chemical degradation mechanisms as L-glutamine. glutagro supplement is expected to remain nearly 100% bioavailable until the classical media's expiration date.
- 5. How long does L-glutamine last in media before breaking down?**

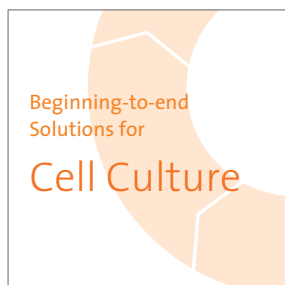
The half-life of L-glutamine varies by the physicochemical characteristics of the media itself. On average in classical formulations, the half-life of L-glutamine is 15 to 21 months. Data shows an inverse relationship between L-glutamine and ammonia levels in a standard DMEM formulation. This is also true for other media formulations such as RPMI 1640 (Corning Cat. No. 10-104-CV).



Ordering Information

Cat. No.	Description	Size	Qty/Pk
40-215-CV	Corning hybrigro SF™ with glutagro supplement	500 mL	1
25-015-CI	Corning glutagro, liquid 200 mM solution (with 8.5 g/L NaCl)	100 mL	1
10-101-CV	Dulbecco's Modification of Eagle's Medium, 1x with Corning glutagro supplement, 4.5 g/L glucose, sodium pyruvate and phenol red	500 mL	6
10-102-CV	Dulbecco's Modification of Eagle's Medium, 1x with Corning glutagro supplement, 4.5 g/L glucose, and phenol red, without sodium pyruvate	500 mL	6
10-103-CV	Dulbecco's Modification of Eagle's Medium/Ham's F-12 50/50 Mix with Corning glutagro supplement and phenol red	500 mL	6
10-104-CV	RPMI 1640, 1x with Corning glutagro supplement and phenol red	500 mL	6

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At Corning, cells are in our culture. In our continuous efforts to improve efficiencies and develop new tools and technologies for life science researchers, we have scientists working in Corning R&D labs across the globe, doing what you do every day. From seeding starter cultures to expanding cells for assays, our technical experts understand your challenges and your increased need for more reliable cells and cellular material.

It is this expertise, plus a 160-year history of Corning innovation and manufacturing excellence, that puts us in a unique position to offer a beginning-to-end portfolio of high-quality, reliable cell culture consumables.

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Mediatech, Inc.
A Corning Subsidiary
9345 Discovery Boulevard
Manassas, VA 20109
t 800.235.5476
t 703.471.5955
f 703.467.9851

www.corning.com/lifesciences/media

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