

# CERTIFICATE OF ANALYSIS

Product Description L-GLUTAMINE, FCC GRADE  
Product Number G229  
Lot Number 11C0229020  
Storage Temperature Room Temperature  
Molecular Weight 146.14  
Formula  $C_5H_{10}N_2O_3$   
CAS Number 56-85-9

## Physiochemical Specifications:

TEST	SPECIFICATION	RESULTS
Solubility	Soluble in Water @ 10 mg/mL	Passes
pH	Under Development	3.6
Physical Appearance Color* Texture	PM-1 to RM-4 Fine to Coarse Powder, may form clumps	PM-4 White Fine Powder
Solution Appearance Clarity Color	Clear Colorless	Clear Colorless
Average Time to Dissolve	Within 3 min	Passes
Insolubles	None to Few, Small	Passes - Few
Purity	Minimum 98.5%	98.8%
Moisture (LOD)	For Information Only	0.09%

\* Product color based upon comparisons between sample and standardized color wheel (Benjamin Moore® Color Preview™).

## Biological Testing:

Test Concentration: 100.0 mg/L

TEST SPECIFICATION	PLANT CELL LINE	RESULTS
Supports and/or facilitates plant growth and/or shoot proliferation in two or more plant tissue cultured lines with no morphological aberrations to plants	Sugar Cane	Passes
	Strawberry	Passes

The material described in this certificate is synthetic. No animal- or plant-derived components were used in the manufacture of this product.

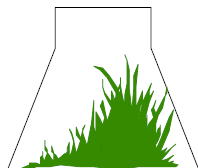
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Date of Release: 17-August-2018

Recommended Shelf Life Date: August 2023



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### **PhytoTechnology Laboratories®**

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