

Chem-Impex International, Inc.

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Certificate of Analysis

Catalogue Number	41767
Lot Number	002152-220519
Product	Glutathione reduced form γ -L-Glutamyl-L-cysteinylglycine
CAS Number	70-18-8
Molecular Formula	C ₁₀ H ₁₇ N ₃ O ₆ S
Molecular Weight	307.33

Appearance	White crystalline powder
Appearance of Solution	Clear and colorless solution
Solubility	Freely soluble in water, very slightly soluble in ethanol and in methylene chloride
Heavy Metals	< 10 ppm
Anion	Chlorides : < 200 ppm Sulphates : < 300 ppm
Cation	Ammonium (NH ₄) : < 200 ppm Iron (Fe) : < 10 ppm Arsenic (As) : < 1 ppm Cadmium (Cd) : < 1 ppm Lead (Pb) : < 3 ppm Mercury (Hg) : < 0.1 ppm
Optical Rotation	[α] _D ²⁰ = -15.9 °
Loss on Drying	0.3%
Bacterial Endotoxins	< 0.10 EU/mg
Related Substances	Any other unknown impurity : 0.08% Total unknown impurity : 0.12% Total impurities : 0.7%
Sulfated Ash	0.02%
Assay	99.3%
Grade	meets EP specifications
Storage	Store at 0 - 8 °C

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Additional Information

Impurity A (L-cysteinylglycine) : Not detected
Impurity B (Cysteine) : 0.05%
Impurity C (L-glutathione oxidised) : 0.1%
Impurity D(L- γ -glutamyl-L-cysteine) : 0.3%
Impurity E (Product of degradation) : 0.08%

Remarks

See material safety data sheet for additional information
For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier



Bala Kumar
Quality Control Manager