

Certificate of Analysis

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Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	G48	Quality Test / Release Date	06/16/2023
Lot Number	230482		
Description	GLYCINE USP		
Country of Origin	United States	Suggested Retest Date	Jun/2026
Chemical Origin	Organic - synthetic		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

USP Grade			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White crystalline granules or powder
ASSAY	%	Inclusive Between 98.5 - 101.5	100.3
CHLORIDE	%	<= 0.007	<0.007
DIGLYCINE	%	<= 0.1	<0.1
GLYCINE ANHYDRIDE	%	<= 0.1	<0.1
HEXAMETHYLENETETRAMINE	%	<= 0.1	<0.1
HYDROLYZABLE SUBSTANCES	PASS/FAIL	= PASS TEST	PASS TEST
IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
IGNITION RESIDUE	%	<= 0.1	0.02
IMINODIACETIC ACID	%	<= 0.1	<0.1
LOSS ON DRYING PER USP	%	<= 0.2	0.110
RESIDUAL SOLVENTS	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	%	<= 0.0065	<0.0065
TRIGLYCINE	%	<= 0.1	<0.1
USP TOTAL IMPURITY	%	<= 1.0	<1.0

Residual Solvents	Based on the manufacturing process no Class I, Class III, other (as defined in USP <467>) and non-classified solvents are used in the process. Only Methanol, a Class II Residual Solvent, is likely to be present. The level of Methanol is less than 200 ppm, which is well below the USP/ICH guideline limit of 3000 ppm.
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Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.