

CERTIFICATE OF ANALYSIS

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

Catalogue Number	G31
Lot Number	254678
Description	GLYCERIN, USP/FCC
CAS Number	56-81-5
Quality Test/Release Date	30/Dec/2025
Suggested retest date	30/Dec/2027
Country of Origin	United States
Declaration of Origin	Plant
BSE/TSE	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.

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
FCC Grade - ASSAY	%	Inclusive Between 95.0 - 101.0	100.3
FCC Grade - CARBONIZABLE SUBSTANCES	PASS/FAIL	= PASS TEST	PASS TEST
FCC Grade - CHLORINATED COMPOUND	%	<= 0.003	<0.003
FCC Grade - COLOR	PASS/FAIL	= PASS TEST	PASS TEST
FCC Grade - FATTY ACIDS ESTERS	PASS/FAIL	= PASS TEST (LIMIT 0.1% AS BUTYRIC ACID)	PASS TEST (LIMIT 0.1% AS BUTYRIC ACID)
FCC Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
FCC Grade - IGNITION RESIDUE	%	<= 0.01	<0.01
FCC Grade - LEAD (Pb)	MG/KG	<= 1	<1
FCC Grade - SPECIFIC GRAVITY @ 25 C		>= 1.259	1.262
FCC Grade - WATER	%	<= 1.0	0.1
USP Grade - ASSAY	%	Inclusive Between 99.0 - 101.0	100.4
USP Grade - CHLORIDE	ppm	<= 10	<10
USP Grade - CHLORINE COMPOUNDS	ppm	<= 30	<30
USP Grade - COLOR	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - DIETHYLENE GLYCOL	%	<= 0.1	<0.10
USP Grade - ETHYLENE GLYCOL	%	<= 0.1	<0.10
USP Grade - FATTY ACID ESTERS	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - IDENTIFICATION A	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - IDENTIFICATION C	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - IGNITION RESIDUE	%	<= 0.01	<0.01
USP Grade - RESIDUAL SOLVENTS	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - SPECIFIC GRAVITY @ 25 C		>= 1.249	1.262
USP Grade - SULFATE (SO4)	ppm	<= 20	<20
USP Grade - USP INDIVIDUAL IMPURITY	%	<= 0.1	<0.1
USP Grade - USP PROTOCOL REQUIRED	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - USP TOTAL IMPURITY	%	<= 1.0	<1.0
USP Grade - WATER	%	<= 5.0	0.1

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.

Additional Information Glycerin does not contain potential allergens, including peanuts, milk, egg, wheat, gluten, or soybean. In addition, it does not contain melamine, phthalates or Bis-Phenol A. The glycerin is solely sourced from vegetable oils, which can include oil from GMO oilseeds. However, GMO genetic materials are not expected to be present in the refined glycerin made from the highly refined oils.



Ash Frey
Supervisor, Quality Control

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research use or further manufacturing. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

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