

Excipient ICH-Q7 GMP Manufactured Product

Synthetic Glycerin, USP, EP, JP and Ch.P., Parenteral Grade, GMP Excipient Grade

INTENDED FOR USE AS A PARENTERAL EXCIPIENT

Synthetic Parenteral Glycerin (Glycerol) is a fully synthetic, parenteral grade, suitable for use in insulin manufacturing and other critical cGMP manufacturing applications and pharmaceutical preparations.

Lead Time: Please Inquire Minimum Order Quantity: Please Inquire

Formula: C₃ H₈ O₃ **F.W.:** 92.1 g/mol **CAS #:** 56-81-5

BIO EXCIPIENT GRADE | Product Code: GLYS-3150

 $\rm C_{_3}H_{_8}O_{_3}\bullet F.W.$ 92.1 g/mol. • CAS# 56-81-5

These are general specifications. BioSpectra will customize our products to meet your quality based requirements.

USP Compendia

ANALYSIS SPI		ECIFICATIONS
Assay (Dried Basis)		99.0 to 101.0%
Chloride		≤ 10ppm
Color		Passes Test
Fatty acid and Esters		Passes Test
Identification	Identification A IR Identification B Diethylene glycol Identification B ethylene glycol Identification C by GC	Conforms with reference standard ≤ 0.025% ¹ ≤ 0.025% ¹ Passes Test
Limit of Chlorinate Compounds		≤ 30ppm of Cl
Related Compounds	Any Individual Impurity Total Impurities	≤ 0.1% ≤ 0.5%¹
Residue of Ignition		≤ 0.01%
Specific gravity (at 25.0°C)		≥ 1.249
Sulfate		≤ 20ppm
Water Content		≤ 2.0% ¹



¹stringent specification

Synthetic Glycerin GLYS-3150

	ANALYSIS	SPECIFICATIONS
Aldehydes		≤ 10ppm
Acidity or alkalinity		Passes Test
Appearance		Clear, colorless, or almost colorless viscous liquid
Appearance of solution		Solution is clear, colorless
Assay (Dried Basis)		99.0 to 101.0% ¹
Chlorides		≤ 10ppm
Esters		Passes Test
Halogenated compound	ds	≤ 35ppm
Identification	Identification A, Refractive Index Identification B, IR Identification C, Relative density	1.470 – 1.475 Conforms with reference standard 1.258 - 1.268
Related substances	Impurity A Any other Individual impurity Total impurities	≤ 0.025% ² ≤ 0.1% ≤ 0.5%
Sugars		Passes Test
Sulfated Ash		≤ 0.01%
Water		< 2.0%

AN	ALYSIS	SPECIFICATIONS	
Acidity or Alkalinity		Passes Test	
Acrolein, glucose, or other reducing substances		Passes Test	
Ammonium		Passes Test	
Appearance		Clear, colorless, or almost colorless viscous liquid	
Arsenic		≤ 0.3ppm ²	
Assay (Dried Basis)		99.0 to 101.0% ¹	
Calcium		Passes Test	
Chloride		≤ 10ppm	
Color		Passes Test	
Fatty Acids or Esters		Passes Test	
Heavy Metals		≤ 2ppm ²	
Identification, IR		Conforms with reference standard	
Readily carbonizable substances		Passes Test	
Related Substances	Diethylene glycol Ethylene glycol Any other individual impurity Total impurities	$\leq 0.025\%^2$ $\leq 0.025\%^2$ $\leq 0.1\%$ $\leq 0.5\%$	
Refractive Index @20°C		≥1.470	
Residue on Ignition		≤ 0.01%	
Specific Gravity @20°C		≥1.258	
Sulfate		≤ 20ppm	
Water		≤ 2.0%	

¹USP Specification ²Stringent specification

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Synthetic Glycerin GLYS-3150

ANALYSIS		SPECIFICATIONS	
Acidity or Alkalinity		Passes Test	
Aldehydes and Related S	ubstances	Passes Test	
Ammonium		Passes Test	
Appearance		Clear, colorless, or almost colorless viscous liquid	
Arsenic		≤ 0.3ppm	
Assay (Dried Basis)		99.0 to 101.0% ¹	
Bacterial Endotoxin		≤ 10 EU/g	
Calcium		Passes Test	
Chloride		≤ 6ppm	
Color		Passes Test	
Fatty acid and esters		Passes Test	
Halogenated Compounds		≤ 30ppm	
Heavy Metals		≤ 2ppm	
Identification A, IR		Conforms with reference standard	
Iron		≤ 0.5ppm	
Microbial Limit	Escherichia coli TAMC TYMC	Absent/per g ≤ 100CFU/g ² ≤ 100CFU/g	
Readily carbonizable sub	stances	Passes Test	
Refractive Index		1.470 -1.475	
Relative Density		1.258 – 1.268	
Related Substances	Diethylene glycol Ethylene glycol 1,2-Propylene glycol Any other individual impurity Total impurities	$ \le 0.025\% \\ \le 0.025\% \\ \le 0.1\% \\ \le 0.1\% \\ \le 0.1\% \\ \le 0.5\% $	
Residue of Ignition		≤ 2mg	
Specific gravity (at 25.0°C)		≥ 1.249	
Sugars		Passes Test	
Sulfates		≤ 20ppm	
Water		≤ 2.0%	

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ANALYSIS	SPECIFICATIONS	
Dihydroxyacetone	≤ 5ppm	
Formaldehyde	≤ 5ppm	
Glyceraldehyde	≤ 5ppm	
Hydroxyacetone	≤ 5ppm	
Methanol	≤ 3000ppm	
Total Bioburden	≤ 100CFU/g	

Synthetic Glycerin GLYS-3150

BI©SPECTRA Key Compliance Attributes of BioSpectra Grades	Bio Excipient Grade ICH-Q7 Compliant Manufactured
Suitable for Research and Diagnostic	✓
Each Batch 100% Analyzed	✓
Management of Change	✓
Validated Analytical Methods	✓
Compendial Testing	✓
Trace Metals Analyzed	✓
Stability Testing Program	✓
BioSpectra Supply Chain Audit Trail	✓
Product Origin Statement	✓
Customer Quality Audits	✓
Validated Manufacturing Process	✓
US Manufactured at BioSpectra	✓
IPEC cGMP Compliant Manufactured	✓
Customized Additional Specifications	✓
Multi-Compendial Testing	✓
Low Bioburden Low Endotoxin (LBLE)	✓
Enzyme Tested	✓
Suitable for use as Excipient	✓
Microbial / Endotoxin Tested	✓
Manufactured in FDA Registered Facility	√
Customized Manufacturing Schedule	
Custom Regulatory Packet	✓
Accelerated Stability Video Conference access to BioSpectra Sites	· ·
Complete access to BioSpectra Sites	· · ·
Access to Supply Chain Information	· · · · · · · · · · · · · · · · · · ·
ICH-Q7 Qualified Utilities	✓
ICH-Q7 Compliant Manufactured	✓
Type IV Drug Master File	✓

✓ indicates an attribute or level of compliance which is granted or available based on the purchase of the product grade.

Bio Excipient Grade: Intended for use as ICH-Q7 Compliant Excipient

LBLE: LBLE applies when product specifications include requirements for Bioburden Testing (TAMC/TYMC and/or Endotoxin).

LBLE stands for Low Bioburden, Low Endotoxin non-sterile products suitable for further use in parenteral manufacturing and other sterile applications.

General Product Description:

Synthetic Glycerin is produced at our cGMP platform in India and then shipped to and fully retested and packaged at our sites in Rensselaer, NY and Bangor PA, USA.

- Synthetic Glycerin is a Clear Liquid product.
- Molecular Formula: C₃ H₈ O₃
- Molecular Weight: 92.09 g/mol
- CAS Number: 56-81-5
- There are no known major food allergens (as defined by FDA and WHO) in the manufacture of this product.
- Synthetic Glycerin GLYS-3150 at BioSpectra and its raw materials are not derived from or come in contact with animal parts, products, and/or byproducts.
- Synthetic Gycerin is synthesized at our cGMP platform in India and any raw materials used in the manufacture of Synthetic Glycerin at BioSpectra are not subject to genetic modification.
- Synthetic Gycerin is further purified at our site in Canada, Dextran Products apart of the BioSpectra Organization.
- Synonyms: Glycerol, Glycerolum, Glicerol, Glyzerin, 1,2,3-Propantriol, Glycerinester, Pfl.

GMP Compliance:

Bio Excipient Grade Synthetic Glycerin, GLYS-3150 is suitable for use as an excipient. It is manufactured in accordance with the ICH-Q7 Good Manufacturing Practice Guide. This grade of Synthetic Glycerin is not suitable to be used as an Active Pharmaceutical Ingredient, Drug Product or Household Item.

Retest Date:

The recommended retest period for Synthetic Glycerin is two years from the date of manufacture.

Storage and Shipping Conditions:

Ship and store in ambient temperature.

Package Sizes:

6x1L, 4x 3.78L, 10L, 200L and 1000 liter

(Please contact us for more specific information about your package size and Chain of Custody.)

Country of Origin:

India

