

## 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** 

H O C C O H

Formula:  $C_3 H_8 O_3$ 

**F.W.:** 92.1 g/mol

**CAS #:** 56-81-5

#### **BIO EXCIPIENT GRADE | Product Code: GLYS-3150**

C<sub>3</sub>H<sub>8</sub>O<sub>3</sub> • 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 SP		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 CI
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



<sup>&</sup>lt;sup>1</sup>stringent 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% <sup>1</sup>	
Chlorides		≤ 10ppm	
Esters		Passes Test	
Halogenated compound	s	≤ 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%	

<sup>1</sup>USP Specification <sup>2</sup>Stringent specification

ANALYSIS		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		≤ 0.3ppm²	
Assay (Dried Basis)		99.0 to 101.0% <sup>1</sup>	
Calcium Passes Test		Passes Test	
Chloride		≤ 10ppm	
Color		Passes Test	
Fatty Acids or Esters		Passes Test	
Heavy Metals		≤ 2ppm²	
Identification, IR		Conforms with reference standard	
Readily carbonizable substance	ces	Passes Test	
Related Substances	Diethylene glycol Ethylene glycol Any other individual impurity Total impurities	≤ 0.025%² ≤ 0.025%² ≤ 0.1% ≤ 0.5%	
Refractive Index @20°C		≥1.470	
Residue on Ignition		≤ 0.01%	
Specific Gravity @20°C		≥1.258	
Sulfate		≤ 20ppm < 2.0%	
Water		≤ 2.0%	



# Synthetic Glycerin GLYS-3150

I	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/g² ≤ 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	≤ 0.025% ≤ 0.025% ≤ 0.1% ≤ 0.1% ≤ 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	<b>∀</b>
Video Conference access to BioSpectra Sites	<b>→</b>
Complete access to Product Traceability	<b>√</b>
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:  $C_3 H_8 O_3$
- 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

