

Excipient

ICH-Q7 GMP Manufactured Product

TROMETHAMINE (TRIS), USP, EP, LBLE (Standard), GMP Excipient Grade

Low Bioburden, Low Endotoxin, Multicompendial, GMP Manufactured

INTENDED FOR USE AS AN EXCIPIENT

Tromethamine (Tris), is commonly used as a buffer and excipient in biological applications downstream in the manufacture of drug products. Tris is considered a "Good's" buffer because it has low UV absorptivity, minimal reactivity, stable pH and is soluble in water.

Lead Time: 3-months

Minimum Order Quantity: 500kg

 $HO \longrightarrow VOH$

CAS #: 77-86-1 **Formula:** C₄H₁₁NO₃ **Solubility in Water**@ **25°C (g/L):** 550 **F.W.:** 121.14 q/mol

pH @ 20°C (5% aq. Soln.): 10.0 - 11.5

Useful pH: 7.0 - 9.0 **pKa @ 20°C:** 8.3

BIO EXCIPIENT GRADE | Product Code: TRIS-3254 | Previously: TR3254

C₄H₁₁NO₃ • F.W. 121.14 g/mol • CAS# 77-86-1



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

ANALYSIS		SPECIFICATIONS	
Appearance and Color		White/Crystals	
Assay		99.0 – 101.0%	
Endotoxin		≤ 2.5 EU/g	
Identification A		Passes Test	
Identification B		Passes Test	
Identification C		Passes Test	
Loss on Drying		≤ 1.0%	
Melting Range		168 - 172°C	
pH (1 in 20)		10.0 – 11.5	
Residue on Ignition		≤ 0.1%	
Microbial Content	TAMC	≤ 500 CFU/g	
	TYMC	≤ 200 CFU/g	

ANALYSIS	SPECIFICATIONS	
Appearance of Solution	Passes Test	
Assay	99.0-100.5%	
Chloride (CI)	≤ 100 ppm	
Identification A	Passes Test	
Identification B	168 - 174°C	
Identification C	Passes Test	
Iron (Fe)	< 10ppm	
Loss on Drying at 105°C	≤0.5%	
рН	10.0 – 11.5	
Related Substances	≤ 1.0%	
Sulfated Ash	≤ 0.1%	



Quality Assurance / Regulatory Support / Quality Control

BIOSPECTRA 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 Product Traceability	✓
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.

Residual Solvents Statement:

Based on the manufacturing process and the controlled handling, storage and analysis of this product, this product complies with the requirements and specifications listed in the current USP method <467> Tables 1, 2, 3, or 4.



General Product Description:

- The manufacturing of Tromethamine TRIS-3254 is performed at BioSpectra's Stroudsburg, PA facility and is conducted in a dedicated processing area using only dedicated equipment.
- Tromethamine is a White Crystalline product
- Molecular Formula: C₄H₁₁NO₃
- Molecular Weight: 121.14 g/mol.
- CAS Number: 77-86-1
- There are no known major food allergens (as defined by FDA and WHO) in the manufacture of this product.
- Biospectra certifies that all Tromethamine TRIS-3254
 manufactured at BioSpectra and its raw materials are
 not derived from or come in contact with animal parts,
 products and/or byproducts. Tromethamine manufactured at
 BioSpectra and any raw materials used in the manufacture
 of Tromethamine at BioSpectra are not subject to genetic
 modification.
- Synonyms: Tris, Tromethamine, Tris (hydroxymethyl) aminomethane

GMP Compliance:

Bio Excipient Grade Tromethamine TRIS-3254 is suitable for use as an excipient. It is manufactured in accordance with the ICH-Q7 Good Manufacturing Practice Guide. This grade of Tromethamine is not suitable to be used as an Active Pharmaceutical Ingredient, Drug Product or Household Item.

Expiration:

The recommended expiration period for Tromethamine is three years from the date of manufacture.

Storage and Shipping Conditions:

Store in a cool, dry place. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Keep containers tightly closed.

Package Sizes:

10kg, 25kg and 50kg pails.

