

## TRIS HYDROCHLORIDE

BIOTECH, HIGH ASSAY, LBLE, GMP

CAS #: 1185-53-1

Formula:  $C_4H_{11}NO_3HCl$

F.W.: 157.60 g/mol

THCL-4251

BIO PHARMA GRADE

ANALYSIS		SPECIFICATIONS
Absorbance (1M)	260 nm	$\leq 0.06$ a.u.
	280 nm	$\leq 0.06$ a.u.
	400 nm	$\leq 0.01$ a.u.
Appearance and Color		White Crystalline Powder to Needle-Like Crystals
Assay, Dried Basis		$\geq 99.0\%$
Bioburden		$\leq 100$ CFU/g
Endotoxin		$\leq 2.5$ EU/g
Enzymes	DNase	None Detected
	Protease	None Detected
	RNase	None Detected
Identification, Chloride		Passes Test
Identification, IR		Conforms to Reference Standard
Insoluble Matter		$\leq 0.005\%$
Loss on Drying		$\leq 0.5\%$
Melting Range		147 – 152 °C
pH (1% solution)		4.0 – 5.0
pH (0.5M)		3.5 – 5.0
Trace Metals	Arsenic (As)	$\leq 5$ ppm
	Calcium (Ca)	$\leq 1$ ppm
	Copper (Cu)	$\leq 1$ ppm
	Iron (Fe)	$\leq 1$ ppm
	Lead (Pb)	$\leq 1$ ppm
	Magnesium (Mg)	$\leq 5$ ppm
	Manganese (Mn)	$\leq 1$ ppm
	Zinc (Zn)	$\leq 1$ ppm
Water, KF		$\leq 1.0\%$

Country of Origin: USA

### Intended for Use in Biopharmaceutical & Biotechnological Applications and Products

This is an ultra-high purity, GMP, Reagent grade of Tris Hydrochloride, purified under full cGMP conditions. It is suitable for critical applications where high assay, GMP material is required. Tris Hydrochloride is considered a Good's buffer because it has a low UV absorptivity, minimum reactivity, stable pH and is highly soluble in water.

### General Product Description

- Appears as a white crystalline product
- Manufactured under an ICH-Q7 Quality Managed cGMP System
- Manufactured in an enzyme free, hormone free and animal free environment
- No known major food allergens (as defined by FDA and WHO)
- The final product and its raw materials are not derived from nor come into contact with animal parts, animal products, and/or animal byproducts/derivatives.
- Is not subject to genetic modification
- Synonyms: Tris Hydrochloride (HCl), 2-Amino-2-(Hydroxymethyl)-1,3-Propanediol Hydrochloride, Tris (Hydroxymethyl) Aminomethane Hydrochloride
- Visit the product page on our website ([www.biospectra.us](http://www.biospectra.us)) for additional information, supporting regulatory documents, and CofAs.

### Storage and Shipping Conditions

Refer to SDS.

### Standard Shelf Life Policy

Each Certificate of Analysis will contain a 2-year retest/recertification date supported by a 3-year ICH Q1 Stability Study (if one is completed).

### Package Sizes

100g, 500g, 1kg, 5kg, 10kg, 25kg, 50kg

### Standard Lead Time

1-2 weeks