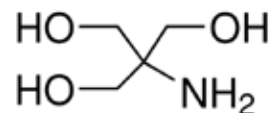


## Trizma Specification Comparison

Trizma® Base (Tris Base)

### Sigma-Aldrich Trizma Base Physical Properties

<b>Synonyms</b>	2-Amino-2-(hydroxymethyl)-1,3-propanediol				
	THAM				
	Tris base				
	Tris(hydroxymethyl)aminomethane				
Trometamol					
<b>Molecular Formula</b>	NH <sub>2</sub> C(CH <sub>2</sub> OH) <sub>3</sub>	<b>Beilstein Registry</b>	741883	<b>Useful pH range</b>	7.0-9.0
<b>Molecular Weight</b>	121.14	<b>MDL Number</b>	MFCD00004679	<b>pKa ( at 20)</b>	8.20
<b>CAS Number</b>	77-86-1	<b>EG/EC Number</b>	201-064-4	<b>pKa (at 25)</b>	8.06
<b>Melting point</b>	168-172 °C	<b>Boiling point</b>	219-220 °C/10 mmHg	<b>pKa (at 37)</b>	7.72



### Sigma-Aldrich Trizma Base Specifications Comparison

	T1378	252859	T1503	T6687	T6791	93350	T6066	93362
<b>Grade</b>	Crystalline	ACS-reagent	Primary Standard and Buffer, Crystalline	USP	SigmaUltra	Analytical, Puriss P.A.	BPC, Cell Culture, EP, USP, USP/NF	BioChemika, BioUltra, Molecular Biology
<b>Purity</b>	≥99%	≥99.8%	≥99.9%	≥99.0%	≥99.9%	≥99.7%	≥99.9%	≥99.8%
Reagent Testing								
<b>Enhanced Quality Profile Buffers</b>			X		X		X	
<b>230nm</b>						≤0.6		
<b>260nm</b>					≤ 0.025	≤0.05	≤0.06	≤0.10
<b>280nm</b>					≤ 0.020	≤0.04	≤ 0.06	≤0.08
<b>290nm</b>	≤0.4	≤0.2	≤0.05				≤ 0.05	
<b>430nm</b>						≤0.01		
<b>IR</b>		X						
<b>Identity</b>				X				
<b>Identity A</b>							X	
<b>Identity B</b>							X	
<b>Identity C</b>							X	
<b>Identity EP</b>							X	
<b>Identity USP</b>							X	
<b>Karl Fischer</b>	≤0.5%		≤0.2%				≤0.2%	
<b>LOD</b>				≤1.0%	≤0.5%		≤0.5%	≤0.5%
<b>Insoluble Matter</b>		≤0.005%			≤0.005%			Filter test
<b>Residue on Ignition</b>				≤0.1%	≤0.01%	≤0.01%	≤0.1%	≤0.01%
<b>Titration</b>		≤2% H <sub>2</sub> O						

Life Science Testing								
	T1378	252859	T1503	T6687	T6791	93350	T6066	93362
<b>Endotoxin</b>							≤1 eu/mg	
<b>SPC</b>							≤100 cfu/g	
<b>Cell test</b>							x	
<b>RNAse</b>							x	x
<b>DNase</b>							x	x
<b>Nickase</b>							x	
<b>Protease</b>							x	x
<b>Phosphatase</b>								x
<b>Suitability Electrophoresis</b>							x	
Trace Elemental Analysis								
	T1378	252859	T1503	T6687	T6791	93350	T6066	93362
<b>Sodium(Na)</b>					≤0.0050%	≤0.0050%		≤0.0050%
<b>Chloride(Cl)</b>					≤0.0050%	≤0.0005%		≤0.0020%
<b>Sulfate(SO4)</b>					≤0.0050%	≤0.0005%		≤0.0005%
<b>Aluminum(Al)</b>					≤0.0005%			≤0.0005%
<b>Arsenic(As)</b>					≤0.00001%			≤0.00001%
<b>Barium(Ba)</b>					≤0.0005%			≤0.0005%
<b>Bismuth(Bi)</b>					≤0.0005%			≤0.0005%
<b>Calcium(Ca)</b>					≤0.0010%	≤0.0010%		≤0.0010%
<b>Cadmium(Cd)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Cobalt(Co)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Chromium(Cr)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Copper(Cu)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Iron(Fe)</b>		≤0.0005%			≤0.0005%	≤0.0005%	≤0.0001%	≤0.0005%
<b>Potassium(K)</b>					≤0.0050%	≤0.0050%		≤0.0050%
<b>Lithium(Li)</b>					≤0.0005%			≤0.0005%
<b>Magnesium (Mg)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Manganese (Mn)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Molybdenum (Mo)</b>					≤0.0005%			≤0.0005%
<b>Nickel(Ni)</b>					≤0.0005%	≤0.0005%		≤0.0005%
<b>Lead(Pb)</b>	≤0.0005%	≤0.0005%	≤0.0002%		≤0.0005%	≤0.0005%	≤0.0002%	≤0.0005%
<b>Strontium(Sr)</b>					≤0.0005%			≤0.0005%
<b>Zinc(Zn)</b>					≤0.00005%	≤0.0005%		≤0.0005%
<b>Related substances</b>							x	
<b>Heavy Metals</b>				≤0.001%				
<b>Chlorides</b>							≤0.0100%	

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