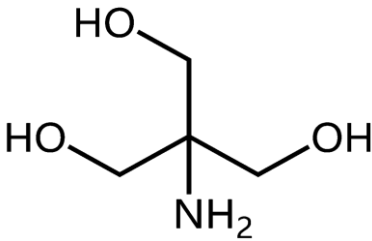


CERTIFICATE OF ANALYSIS

Product Name:	Tris(hydroxymethyl)aminomethane	
CAS No.	77-86-1	Structure 
Batch No.	20211127-1	
Manufacturing Date	November 27, 2021	
Test Date	November 27, 2021	
Expiry Date	November 26, 2023	
Standard	In-House	
Analytical Results		
Items	Specifications	Results
Appearance	White crystalline powder	Conforms
IR spectrum	Conforms to reference	Conforms
Melting Point	168.0-172.0°C	170.5-171.7°C
Solubility (40% aq.)	Clear,colorless solution	Conforms
Heavy Metals	≤5ppm	Conforms
Water Content	≤0.6%	0.30%
PH value (5% aq.)	10.0-11.5	10.09
Iron ion [Fe³⁺]	≤1ppm	Conforms
Sulfate [SO₄²⁻]	≤10ppm	Conforms
Chloride [Cl⁻]	≤3ppm	Conforms
Ultraviolet absorbance/290nm (40% aq.)	≤0.2	0.133
Ultraviolet absorbance/400nm (40% aq.)	≤0.02	0.010
Assay	≥99.5%	100.50%
Storage	Room temperature	
Conclusion	Conforms to In-house standard	

Inspector: Carlifor Wu

Verifier: Jack He

