

**CERTIFICATE OF ANALYSIS**

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek Global Certificate Number. CERT-0120633

Catalogue Number 17257  
 Lot Number B0158124  
 Description 4-(2-HYDROXYETHYL)-1-PIPERAZINEETHANESULFONIC ACID, 99% (HEPES)  
 CAS Number 7365-45-9  
 Quality Test/Release Date 29/Apr/2026  
 Suggested retest date 31/Aug/2028  
 Country of Origin Taiwan  
 Declaration of Origin Organic - non animal  
 No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.  
 BSE/TSE

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White crystalline powder or crystals
APPEARANCE OF SOLUTION	REPORT	IN CLEAR AND COLORLESS	CLEAR AND COLORLESS
ASSAY	%	>= 98.5	100.1
CHLORIDE	ppm	<= 50	<50
INFRARED SCAN	CONFORMS	IN CONFORMS	CONFORMS
LEAD (Pb)	ppm	<= 10	<10
LOSS ON DRYING @ 105 C	%	<= 1	1
OPTICAL ABS AT 260 NM (5% Aqueous sample solution)	ABS. UNITS	<= 0.08	<0.08
OPTICAL ABS AT 280 NM (5% Aqueous sample solution)	ABS. UNITS	<= 0.05	<0.05
SULFATE (SO4)	ppm	<= 200	<200
SULFATED ASH	%	<= 0.1	<0.1



Harout Sahagian  
QC Manager

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research use or further manufacturing. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.