

CERTIFICATE OF ANALYSIS

Product : **HEPES**
(4-(2-Hydroxyethyl)-1-piperazineethanesulfonic acid)

Product number : H1504
Batch number : 015065
Date of analysis : 25-11-2019
Date of expiry : 30-11-2024

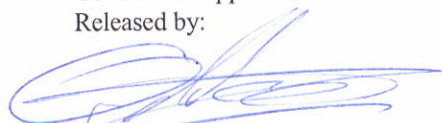
Packaging and storage : store at room temperature in a well closed container

	SPECIFICATION	RESULT	UNITS	REMARKS
Appearance	white coarse powder	complies		
Identification	conform	complies		IR-spectrum
Appearance of solution	clear and colourless	complies		5% in H ₂ O, 25°C
Moisture content	≤ 0.5	0.1	%	120 °C
UV-absorbance	≤ 0.05	0.006		250 nm
Chlorides	≤ 0.005	< 0.005	%	
Sulphates	≤ 0.01	< 0.01	%	
ICP analysis				
- aluminium	≤ 0.1	< 0.1	ppm	
- arsenic	≤ 0.1	< 0.1	ppm	
- barium	≤ 0.1	< 0.1	ppm	
- bismuth	≤ 0.1	< 0.1	ppm	
- cadmium	≤ 0.1	< 0.1	ppm	
- calcium	≤ 1	< 1	ppm	
- chromium	≤ 0.1	< 0.1	ppm	
- cobalt	≤ 0.1	< 0.1	ppm	
- copper	≤ 0.1	< 0.1	ppm	
- iron	≤ 0.1	< 0.1	ppm	
- lead	≤ 0.1	< 0.1	ppm	
- lithium	≤ 0.1	< 0.1	ppm	
- magnesium	≤ 0.1	< 0.1	ppm	
- manganese	≤ 0.1	< 0.1	ppm	
- molybdenum	≤ 0.1	< 0.1	ppm	
- nickel	≤ 0.1	< 0.1	ppm	
- potassium	≤ 1	< 1	ppm	
- sodium	≤ 1	< 1	ppm	
- strontium	≤ 0.1	< 0.1	ppm	
- zinc	≤ 0.1	< 0.1	ppm	
Residue on ignition	≤ 0.005	0.0025	%	
Assay	≥ 99.0	100.0	%	dried substance

This certificate of analysis is conform the results of the manufacturer.

Conclusion: approved

Released by:



Date: 04-12-2019

drs. Q. de Hoog, pharmacist
Department of Quality Control Duchefa B.V.

The buyer is responsible to test each batch to ensure the product is suitable for their specific purpose.

Duchefa Biochemie B.V.