



Certificate of Analysis

1.00244.1000 Citric acid monohydrate for analysis EMSURE® ACS,ISO,Reag. Ph Eur
Batch K54619444

	Spec. Values		Batch Values	
Assay (acidimetric, calc. on anhydrous substance)	99.5 - 100.5	%	99.9	%
Identity (IR-spectrum)	passes test		passes test	
Appearance	white to almost white or colorless crystals		passes test	
Appearance of solution (200 g/l; water)	clear (≤ 3 NTU) and not more intense in color than reference solution Y ₇ , BY ₇ or GY ₇		passes test	
In water insoluble matter	≤ 50	ppm	≤ 50	ppm
Chloride (Cl)	≤ 5	ppm	≤ 5	ppm
Phosphate (PO ₄)	≤ 10	ppm	≤ 10	ppm
Sulfate (SO ₄)	≤ 20	ppm	≤ 20	ppm
Heavy metals (as Pb)	≤ 5	ppm	≤ 5	ppm
Al (Aluminium)	≤ 0.2	ppm	≤ 0.2	ppm
As (Arsenic)	≤ 1	ppm	≤ 1	ppm
Hg (Mercury)	≤ 1	ppm	≤ 1	ppm
Cu (Copper)	≤ 5	ppm	≤ 5	ppm
Fe (Iron)	≤ 3	ppm	≤ 3	ppm
Fe (Iron, acc. to Reag. Ph Eur)	suitable to use in the limit test for iron		passes test	
Pb (Lead)	≤ 0.5	ppm	≤ 0.5	ppm
Oxalates (as C ₂ H ₂ O ₄)	≤ 50	ppm	≤ 50	ppm
Readily carbonisable substance	passes test		passes test	
Sulfated ash	≤ 200	ppm	39	ppm
Water (according to Karl Fischer)	7.5 - 8.8	%	8.4	%

Corresponds to ACS, ISO 6353/2, Reag. Ph. Eur.

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Responsible laboratory manager quality control

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