

Certificate of Analysis

Material Material description Grade

Lot Expires end of CAS Number Molecular formula Molecular mass 20276.292 Citric acid monohydrate AnalaR NORMAPUR Reag. Ph.Eur., Reag. USP, ACS

24F054103 2027-Mar-31 5949-29-1 C₆H₈O₇.H₂O 210.14

Characteristics	Specifications	Measured values
Assay	99.7 - 100.5 %	100.0 %
Identification (IR)	Passes test	Passes test
Readily carbonisable substances	Passes test	Passes test
Heavy metals (as Pb)	≤ 10 ppm	≤ 10 ppm
Ignition residue (SO₄)	≤ 0.02 %	< 0.01 %
Insolubility in water	≤ 50 ppm	≤ 50 ppm
Oxalic acid (calculated on anhydrous)	≤ 360 ppm	≤ 360 ppm
Tartaric acid	≤ 0.2 %	≤ 0.2 %
Water	7.5 - 9.0 %	8.4 %
C_2O_4 (as $C_2H_2O_4$)	≤ 0.04 %	0.01 %
Cl (Chloride)	≤ 5 ppm	≤ 5 ppm
PO₄ (Phosphate)	≤ 10 ppm	≤ 10 ppm
SO₄ (Sulphate)	≤ 20 ppm	≤ 20 ppm
As (Arsenic)	≤ 0.1 ppm	≤ 0.1 ppm
Ca (Calcium)	≤ 20 ppm	10 ppm
Cu (Copper)	≤ 5 ppm	1 ppm
Fe (Iron)	≤ 3 ppm	< 1 ppm
Mg (Magnesium)	≤ 5 ppm	1 ppm
Ni (Nickel)	≤ 1 ppm	≤ 1 ppm
Pb (Lead)	≤ 2 ppm	< 1 ppm
Conforms to ACS	Passes test	Passes test
Conforms to Reag. Ph.Eur.	Passes test	Passes test
Conforms to Reag. USP	Passes test	Passes test



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Signature

We certify that this batch conforms to the specifications listed above.

This document has been produced electronically and is valid without a signature.

Jessie Pijck, Head of Laboratory - Haasrode VWR International bv; Geldenaaksebaan 464; BE-3001 Leuven; Belgium

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