



Certificate of Analysis

1.06431.0000 tri-Sodium citrate 5,5-hydrate EMPROVE® ESSENTIAL E 331
Batch AM1869231

	Spec. Values		Batch Values	
Assay (perchloric acid titration, calculated on dried substance)	≥ 99.0	%	100.2	%
Identity	passes test		passes test	
pH-value (5 %; water)	7.5 - 9.0		8.1	
Oxalate (C ₂ O ₄)	≤ 0.0100	%	≤ 0.0100	%
As (Arsenic)	≤ 0.0001	%	≤ 0.0001	%
Fe (Iron)	≤ 0.001	%	≤ 0.001	%
Hg (Mercury)	≤ 0.0001	%	≤ 0.0001	%
Pb (Lead)	≤ 0.0001	%	≤ 0.0001	%
Loss on drying (180 °C)	≤ 30.0	%	27.7	%

Elemental impurity specifications have been set considering ICH Q3D (Guideline for Elemental Impurities). Class 1-3 elements are not likely to be present above the ICH Q3D option 1 limit, unless specified and indicated (*).

Corresponds to E 331

Conforms to the purity criteria on food additives according to the current European Commission Regulation.

Date of manufacture (DD.MM.YYYY) 22.03.2019

Date of examination (DD.MM.YYYY) 05.04.2019

Minimum shelf life (DD.MM.YYYY) 31.08.2023

Retested Date (DD.MM.YYYY) 15.05.2022

Claudia Wiegand

Responsible laboratory manager quality control

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