Certificate of Analysis

Material	20104.312
Material description	Acetic acid glacial
Grade	AnalaR NORMAPUR ACS, Reag. Ph. Eur.
Lot	25K054016
Expires end of	2030-Nov-03
CAS Number	64-19-7
Molecular formula	H_3CCOOH
Molecular mass	60.05

Characteristics	Specifications	Measured values
Assay	99.8 - 100.5 %	99.9 %
Appearance	Passes test Ph.Eur.	Passes test Ph.Eur.
Identification A	Passes test Ph.Eur.	Passes test Ph.Eur.
Identification (Acetate)	Passes test Ph.Eur.	Passes test Ph.Eur.
Dilution test	Passes test ACS	Passes test ACS
IR Spectrum	Passes test	Passes test
Substances reducing dichromate	Passes test ACS	Passes test ACS
Substances reducing $KMnO_4$	Passes test	Passes test
Alkalinity	≤ 0.0004 meq/g	≤ 0.0004 meq/g
Boiling point	117 - 119 °C	117 °C
Colouration	≤ 10 APHA	≤ 10 APHA
Solidification point	16.2 - 16.6 °C	16.3 °C
Substances coloured by H_2SO_4	≤ 150 APHA	≤ 150 APHA
Acetaldehyde	≤ 2 ppm	≤ 2 ppm
Acetic anhydride	≤ 100 ppm	≤ 100 ppm
Evaporation residue	≤ 5 ppm	< 1 ppm
Formate	≤ 0.05 %	≤ 0.05 %
Heavy metals (as Pb)	≤ 0.5 ppm	≤ 0.5 ppm
Ignition residue (SO_4)	≤ 10 ppm	< 1 ppm
Water	≤ 0.25 %	0.10 %
Cl (Chloride)	≤ 0.5 ppm	≤ 0.5 ppm
NO_3 (Nitrate)	≤ 2 ppm	1 ppm
PO_4 (Phosphate)	≤ 0.5 ppm	≤ 0.5 ppm
SO_4 (Sulphate)	≤ 1 ppm	≤ 1 ppm
Ag (Silver)	≤ 0.5 ppm	≤ 0.5 ppm
Al (Aluminium)	≤ 0.03 ppm	≤ 0.03 ppm
As (Arsenic)	≤ 0.01 ppm	≤ 0.01 ppm
Ba (Barium)	≤ 0.01 ppm	≤ 0.01 ppm

>>> Continued on page 2 >>>

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Characteristics	Specifications	Measured values
Be (Beryllium)	≤ 0.01 ppm	≤ 0.01 ppm
Bi (Bismuth)	≤ 0.02 ppm	≤ 0.02 ppm
Ca (Calcium)	≤ 0.2 ppm	≤ 0.2 ppm
Cd (Cadmium)	≤ 0.02 ppm	≤ 0.02 ppm
Co (Cobalt)	≤ 0.01 ppm	≤ 0.01 ppm
Cr (Chromium)	≤ 0.08 ppm	≤ 0.08 ppm
Cu (Copper)	≤ 0.01 ppm	≤ 0.01 ppm
Fe (Iron)	≤ 0.2 ppm	≤ 0.2 ppm
Ge (Germanium)	≤ 0.02 ppm	≤ 0.02 ppm
Hg (Mercury)	≤ 0.05 ppm	≤ 0.05 ppm
K (Potassium)	≤ 0.1 ppm	≤ 0.1 ppm
Li (Lithium)	≤ 0.5 ppm	≤ 0.5 ppm
Mg (Magnesium)	≤ 0.05 ppm	≤ 0.05 ppm
Mn (Manganese)	≤ 0.01 ppm	≤ 0.01 ppm
Mo (Molybdenum)	≤ 0.02 ppm	≤ 0.02 ppm
Na (Sodium)	≤ 1 ppm	≤ 1 ppm
Ni (Nickel)	≤ 0.1 ppm	≤ 0.1 ppm
Pb (Lead)	≤ 0.02 ppm	≤ 0.02 ppm
Sb (Antimony)	≤ 0.05 ppm	≤ 0.05 ppm
Sn (Tin)	≤ 0.05 ppm	≤ 0.05 ppm
Sr (Strontium)	≤ 0.01 ppm	≤ 0.01 ppm
Ti (Titanium)	≤ 0.02 ppm	≤ 0.02 ppm
Tl (Thallium)	≤ 0.02 ppm	≤ 0.02 ppm
V (Vanadium)	≤ 0.01 ppm	≤ 0.01 ppm
Zn (Zinc)	≤ 0.05 ppm	≤ 0.05 ppm
Zr (Zirconium)	≤ 0.02 ppm	≤ 0.02 ppm
Conforms to ACS	Passes test	Passes test
Conforms to Reag. Ph.Eur.	Passes test	Passes test

>>> Continued on page 3 >>>

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Certificate of Analysis

Signature

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

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

Isabelle Habay, Head of Laboratory - Briare
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