

Certificate of Analysis

Material : 20252.244
Batch : 11D260526

Hydrochloric acid 37% AnalAR NORMAPUR Reag. Ph. Eur.
Expires end of 04/2016

CHARACTERISTICS	SPECIFICATIONS	MEASURED VALUES
Assay	35,0 --> 38,0 %	35,9 %
Appearance	Clear colourless liquid	Clear colourless liquid
Colouration	Max. 10 APHA	Max. 10 APHA
Density (20/4)	1,174 --> 1,193	1,178
Free chlorine	Max. 0,5 ppm	Max. 0,5 ppm
Ignition residue (SO ₄)	Max. 5 ppm	Max. 5 ppm
Reducing substances (as O)	Max. 4 ppm	Max. 4 ppm
Br (Bromide)	Max. 5 ppm	Max. 5 ppm
NH ₄ (Ammonium)	Max. 1 ppm	Max. 1 ppm
PO ₄ (Phosphate)	Max. 0,5 ppm	Max. 0,5 ppm
SO ₃ (Sulphite)	Max. 1 ppm	Max. 1 ppm
SO ₄ (Sulphate)	Max. 1 ppm	Max. 1 ppm
Al (Aluminium)	Max. 0,05 ppm	Max. 0,05 ppm
As (Arsenic)	Max. 0,01 ppm	Max. 0,01 ppm
Ba (Barium)	Max. 0,02 ppm	Max. 0,02 ppm
Be (Beryllium)	Max. 0,01 ppm	Max. 0,01 ppm
Bi (Bismuth)	Max. 0,02 ppm	Max. 0,02 ppm
Ca (Calcium)	Max. 0,5 ppm	Max. 0,5 ppm
Cd (Cadmium)	Max. 0,01 ppm	Max. 0,01 ppm
Co (Cobalt)	Max. 0,01 ppm	Max. 0,01 ppm
Cr (Chromium)	Max. 0,07 ppm	0,02 ppm
Cu (Copper)	Max. 0,1 ppm	< 0,1 ppm
Fe (Iron)	Max. 0,3 ppm	0,2 ppm
Ge (Germanium)	Max. 0,02 ppm	Max. 0,02 ppm
Hg (Mercury)	Max. 0,01 ppm	Max. 0,01 ppm
K (Potassium)	Max. 0,1 ppm	Max. 0,1 ppm
Li (Lithium)	Max. 0,01 ppm	Max. 0,01 ppm
Mg (Magnesium)	Max. 0,1 ppm	Max. 0,1 ppm
Mn (Manganese)	Max. 0,01 ppm	Max. 0,01 ppm
Mo (Molybdenum)	Max. 0,02 ppm	Max. 0,02 ppm
Na (Sodium)	Max. 0,5 ppm	Max. 0,5 ppm
Ni (Nickel)	Max. 0,04 ppm	0,02 ppm
Pb (Lead)	Max. 0,02 ppm	Max. 0,02 ppm
Sr (Strontium)	Max. 0,01 ppm	Max. 0,01 ppm
Ti (Titanium)	Max. 0,02 ppm	Max. 0,02 ppm
Tl (Thallium)	Max. 0,02 ppm	Max. 0,02 ppm

VWR International S.A.S.

Le Périgares
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94126 Fontenay-sous-Bois Cedex
FRANCE

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<i>CHARACTERISTICS</i>	<i>SPECIFICATIONS</i>	<i>MEASURED VALUES</i>
V (Vanadium)	Max. 0,01 ppm	Max. 0,01 ppm
Zn (Zinc)	Max. 0,5 ppm	0,1 ppm
Zr (Zirconium)	Max. 0,02 ppm	Max. 0,02 ppm
Conforms to BDH 10125	Passes test	Passes test

We certify that this batch conforms to the specifications listed above.
BDL : Below detected limit.

Isabelle Habay, Head of laboratory - Briare
VWR International
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