

**Scharlab S.L.**

Crtra.Polinya a Sentmenat, Km 8,2

08181 Sentmenat

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CERTIFICATE OF ANALYSIS**ET0005_24270310/1**

Product Ethanol absolute, for analysis, ExpertQ®, ACS, ISO

Batch 24270310

ET0005

Quality release date 08/11/2023

Expiry date 11/2028

Analysis	Batch value	Specifications
Assay (G.C.) (v/v)	99,99 %	≥ 99,9
Identity (IR-Spectrum)	passes test	passes test
Density (20°/4°)	0,7896 g/mL	0,789 - 0,790
Appearance	clear	clear
Colour (Hazen)	5	≤ 10
Acidity	0,00019 meq/g	≤ 0,0002
Solubility in water	passes test	passes test
Acidity or alkalinity	< 0,0003 %	≤ 0,0003
Chlorides (Cl)	< 0,00003 %	≤ 0,00003
Nitrates (NO ₃)	< 0,00003 %	≤ 0,00003
Phosphates (as PO ₄)	< 0,00003 %	≤ 0,00003
Sulfates (SO ₄)	< 0,00003 %	≤ 0,00003
Aluminium (Al)	< 0,5 ppm	≤ 0,5
Antimony (Sb)	< 0,02 ppm	≤ 0,02
Arsenic (As)	< 0,02 ppm	≤ 0,02
Barium (Ba)	< 0,1 ppm	≤ 0,1
Beryllium (Be)	< 0,02 ppm	≤ 0,02
Bismuth (Bi)	< 0,02 ppm	≤ 0,02
Boron (B)	< 0,02 ppm	≤ 0,02
Cadmium (Cd)	< 0,05 ppm	≤ 0,05
Calcium (Ca)	< 0,5 ppm	≤ 0,5
Chromium (Cr)	< 0,02 ppm	≤ 0,02
Cobalt (Co)	< 0,02 ppm	≤ 0,02
Copper (Cu)	< 0,02 ppm	≤ 0,02
Gallium (Ga)	< 0,02 ppm	≤ 0,02
Gold (Au)	< 0,02 ppm	≤ 0,02
Indium (In)	< 0,02 ppm	≤ 0,02
Iron (Fe)	< 0,1 ppm	≤ 0,1
Lead (Pb)	< 0,1 ppm	≤ 0,1
Lithium (Li)	< 0,02 ppm	≤ 0,02
Magnesium (Mg)	< 0,1 ppm	≤ 0,1
Manganese (Mn)	< 0,02 ppm	≤ 0,02
Molybdenum (Mo)	< 0,05 ppm	≤ 0,05
Nickel (Ni)	< 0,02 ppm	≤ 0,02
Platinum (Pt) ppm	< 0,02 ppm	≤ 0,02
Silver (Ag)	< 0,02 ppm	≤ 0,02
Thallium (Tl)	< 0,02 ppm	≤ 0,02
Tin (Sn)	< 0,1 ppm	≤ 0,1
Titanium (Ti)	< 0,02 ppm	≤ 0,02
Vanadium (V)	< 0,02 ppm	≤ 0,02

Results marked with # are out of specifications.

This certificate does not exempt the user from checking the results upon receipt of the goods.

Any copy of our CoA may be obtained from our website at www.scharlab.comMarta Martinez Casals
Laboratory Technician

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Zinc (Zn)	< 0,1 ppm	≤ 0,1
Zirconium (Zr)	< 0,02 ppm	≤ 0,02
Formaldehyde	< 0,0005 %	≤ 0,0005
Furfural	passes test	passes test
Fusel oil	passes test	passes test
Acetaldehyde and acetal (G.C.)	0,0004 %	≤ 0,001
Acetone (G.C.)	< 0,001 %	≤ 0,001
Isoamyl alcohol (G.C.)	< 0,005 %	≤ 0,05
Benzene (G.C.)	< 0,0002 %	≤ 0,0002
Methanol (G.C.)	< 0,005 %	≤ 0,01
Methylethylketone (G.C.)	< 0,005 %	≤ 0,02
2-Propanol (G.C.)	< 0,001 %	≤ 0,003
Higher alcohols (G.C.)	< 0,005 %	≤ 0,01
Aldehydes (as CH ₃ CHO)	< 0,001 %	≤ 0,001
Carbonyl compounds (as CO)	< 0,003 %	≤ 0,003
Substances darkened by H ₂ SO ₄	passes test	passes test
UV Spectroscopy	passes test	passes test
Substances reducing KMnO ₄	passes test	passes test
Residue on evaporation	0,0002 %	≤ 0,0005
Water (v/v) (K.F.)	0,041 %	≤ 0,1

For laboratory use only.

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Marta Martinez Casals
Laboratory Technician