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CERTIFICATE OF ANALYSIS**AL0173_23850802/1**

Product	1-Butanol, for analysis, ExpertQ®, ACS, ISO, Reag. Ph Eur	Batch	23850802
AL0173		Quality release date	24/05/2023
		Expiry date	05/2028
Analysis	Batch value	Specifications	
Assay (G.C.)	99,83 %	≥ 99,5	
Identity (IR-Spectrum)	passes test	passes test	
Density (20°/4°)	0,8098 g/mL	0,809 - 0,810	
Density (20°/20°)	0,8113 g/mL	0,810 - 0,812	
Appearance	clear	clear	
Colour (Hazen)	3	≤ 10	
Boiling point	116 - 119 ° C	116 - 119	
Acidity	0,00006 meq/g	≤ 0,0008	
Aluminium (Al)	< 0,5 ppm	≤ 0,5	
Barium (Ba)	< 0,1 ppm	≤ 0,1	
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	
Iron (Fe)	< 0,1 ppm	≤ 0,1	
Lead (Pb)	< 0,1 ppm	≤ 0,1	
Magnesium (Mg)	< 0,1 ppm	≤ 0,1	
Manganese (Mn)	< 0,02 ppm	≤ 0,02	
Nickel (Ni)	< 0,02 ppm	≤ 0,02	
Tin (Sn)	< 0,1 ppm	≤ 0,1	
Zinc (Zn)	< 0,1 ppm	≤ 0,1	
Aldehydes	passes test	passes test	
Carbonyl compounds (as CO)	< 0,01 %	≤ 0,01	
2-Butanol (G.C.)	< 0,05 %	≤ 0,05	
Butyraldehyde (G.C.)	0,0028 %	≤ 0,01	
Dibutyl ether (G.C.)	< 0,01 %	≤ 0,1	
Isobutanol (G.C.)	0,1009 %	≤ 0,15	
Substances darkened by H2SO4	passes test	passes test	
Residue on evaporation	0,0002 %	≤ 0,001	
Water (K.F.)	0,0154 %	≤ 0,1	

For laboratory use only

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.com

Marta Martinez Casals
Laboratory Technician