

Certificate of Analysis

Date of Testing:	2023-07-20 16:13:30
Date of Next Testing:	2027-07-19 16:13:30
Product Name:	1-Butanol
CAS Number:	71-36-3
Specifications & Purity:	Guaranteed Reagent
Lot #:	G2313350
SKU #	B400251
Version	1
Analysis #:	239232
Storage Temperature:	Argon charged, Desiccated

Parameter	Limit Values	Result
Assay (C ₄ H ₁₀ O)	99.8-100 (%)	99.82300 %
Density (20°C)	0.808-0.811 (g/ml)	0.81 g/ml
Evaporation Residue	0-0.001 (%)	0.00 %
Acidity(as H ⁺)	≤0.0005 (mmol/g)	0.00000 %
Esters(As CH ₃ COOC ₄ H ₉)	≤0.1 (%)	0.00000 %
Iron(Fe)	0-0.00005 (%)	0.00 %
Refractive index n ₂₀ /D	1.3980 - 1.4000	1.40
Chloride (Cl ⁻)	0-0.35 (%)	0.00 %
Sulfate(SO ₄ ²⁻)	0-0.04 (%)	0.00 %
Ignition Residue (as sulfate)	0-0.1 (%)	0.00 %
pH(50g/L solution , 25°C)	4.0-7.0	6.13000
Color test (APHA)	0-10	0.00
Water by Karl Fischer	0-0.1 (%)	0.03 %
Carbonyl compounds (As CO)	≤0.02 (%)	0.01000 %
Unsaturated compounds(Br)	≤0.005 (%)	0.00000 %
Salicylic acid(HOC ₆ H ₄ (OOH)	0-0.1 (%)	0.00 %
Appearance (B400251)	Colorless Liquid	Colorless liquid
Readily carbonizable substance	pass	Pass



ALADDIN SCIENTIFIC CORPORATION

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A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su
QA & QC Manager