

Certificate of Analysis

Ethanol, Grain derived, 190 Proof

Lot Number: 6206001

Product Number: RSOE0010

Manufacture Date: JUN 23, 2022
 Recommended Retest Date: MAY 2025

Name	CAS#	Grade
Ethyl Alcohol	64-17-5	USP
Water	7732-18-5	USP

Test	Specification	Result	NIST SRM#
Acidity (as Acetic Acid)	max 0.003	< 0.003 %	
Alkalinity (as NH ₃)	max 3	< 3 mg/Kg	
Appearance	Clear, Colorless liquid	Passed	
Assay	min 94.9 % (v/v)	95.0 % (v/v)	
Flash Point, Tag Closed Cup	To Pass Test	Passed	
Fusel Oil	To Pass Test	Passed	
Ketones/Isopropanol	To Pass Test	Passed	
Lead (Pb)	max 0.50 mg/Kg	< 0.50 mg/Kg	3128
Methanol (pass/fail)	To Pass Test	Passed	
Nonvolatile Residue	max 0.003 %	0 %	
Odor	To Pass Test	Passed	
Refractive Index	1.362-1.366 @ 20°C	1.362 @ 20°C	
Solubility in Water	To Pass Test	Passed	
Specific Gravity @ 15.56°C	max 0.8161	0.8157	
Specific Gravity @ 25.0°C	max 0.8096	0.8092	
Substances Darkened by Sulfuric Acid	To Pass Test	Passed	
Substances Reducing Permanganate	To Pass Test	Passed	

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
RSOE0010-5E4	5 gal metal drum	36 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (06/23/2022)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.