Distributed by:
Rocky Mountain Reagents
SCIENTIFIC SOLUTIONS SINCE 1951
4621 Technology Drive, Golden, CO 80403
ph: (303) 762-0800 fax: (303) 762-1240
Part #: I1051

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BY GREENFIELD GLOBAL

CERTIFICATE OF ANALYSIS

Product Name	Isopropyl Alcohol 99%
Grade	ACS/HPLC-UV Grade
Catalog #	231HPLC99
Item #	100915
Batch #	260702-B174358
Date of Manufacture:	17 Jun 2026
Recommended Retest Date:	16 Jun 2031
Customer PO #	PO5706
Packaging Type	Case Poly Fluor 4x1 Gal
Quantity for Delivery	27
Packaged by:	Greenfield Global USA Inc., 58 Vale Road, Brookfield, CT 06804

TEST	MONO-GRAPH	SPECIFICATION	RESULT
Assay	USP	NLT 99.0%	99.92 %
Assay (corrected for water)	ACS	99.5% min	99.92 %
Solubility in water	ACS*	To Pass Test	Pass
Color, APHA	ACS	10 max	1
Limit of Nonvolatile Residue	USP*	NMT 2.5 mg (0.005%)	0.0 mg
Residue after Evaporation	ACS*	0.001% max	0.000 %
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
Specific Gravity	Custom	0.7862 - 0.7878 @20°C	0.7864
Identification A - Infrared Spectroscopy	USP	To Pass Test	Pass
Identification B	USP	To Pass Test	Pass
Identification C - Limit of Methanol	USP	NMT 0.02%	Pass
Refractive Index @ 20oC	USP	1.376-1.378	1.377

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TEST	MONO-GRAPH	SPECIFICATION	RESULT
Distillation Range	Custom	81.8°C - 83.0°C	Pass
Acidity	USP*	NMT 0.70 ml of 0.020N NaOH is required	0.30 ml
Titrable Acid or Base	ACS*	0.0001 meq/g max	0.0001 meq/g
Carbonyl Compounds - Propionaldehyde	ACS	0.002% max	None Detected
Carbonyl Compounds - Acetone	ACS	0.002% max	0.001 %
UV Absorbance @210nm	ACS	1.0 max.	0.37
UV Absorbance @220nm	ACS	0.40 max.	0.17
UV Absorbance @230nm	ACS	0.20 max.	0.09
UV Absorbance @245nm	ACS	0.08 max.	0.03
UV Absorbance @260nm	ACS	0.04 max.	0.02
UV Absorbance @275nm	ACS	0.03 max.	0.01
UV Absorbance @300nm	ACS	0.02 max.	0.01
UV Absorbance @330nm - 400nm	ACS	0.01 max.	0.00
Absorbance @230nm	USP	NMT 0.30	0.09
Absorbance @250nm	USP	NMT 0.10	0.02
Absorbance @270nm	USP	NMT 0.03	0.01
Absorbance @290nm	USP	NMT 0.02	0.01
Absorbance @310nm	USP	NMT 0.01	0.00
Absorbance Curve	USP	The spectrum shows a steadily descending curve with no observable peaks or shoulders.	Pass
Limit of Volatile Impurities - Methanol	USP	NMT 0.02%	LT 0.02%

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TEST	MONO-GRAPH	SPECIFICATION	RESULT
Limit of Volatile Impurities - Diethyl Ether	USP	NMT 0.1%	None Detected
Limit of Volatile Impurities - Acetone	USP	NMT 0.1%	LT 0.1%
Limit of Volatile Impurities - Diisopropyl Ether	USP	NMT 0.1%	None Detected
Limit of Volatile Impurities - n-Propyl Alcohol	USP	NMT 0.1%	LT 0.1%
Limit of Volatile Impurities - 2-Butanol	USP	NMT 0.1%	LT 0.1%
Limit of Volatile Impurities - Individual unspecified	USP	NMT 0.1%	LT 0.1%
Limit of Volatile Impurities - Total	USP	NMT 1.0%	LT 0.1%
Water, wt%	ACS	NMT 0.2%	0.03 %
Water Determination	USP	NMT 0.5%	0.03 %
Water	Custom	0.05% max.	0.04 %

Certification and Compliance Statements

This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, and American Chemical Society monographs.
* This test performed quarterly

This product is manufactured for Routine HPLC Analysis and meets the requirements for General Use HPLC Grade, ACS Monographs. This product is not intended for GC or critical HPLC analysis.

This product is not derived, nor does it come in contact with, any materials derived from bovine or other animal sources.

No chemicals whatsoever are used as solvents at any point in the manufacture, processing or packaging of Isopropyl Alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related

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substances / low level contaminants in IPA. Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467> and ICH Q3C Impurities: Residual Solvents.

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This document was electronically signed by John Piskura on 30 Jun 2026 09:29 AM to indicate Quality Assurance Approval and to release this batch.