PHARMCO by Greenfield Global

CERTIFICATE OF ANALYSIS

Product Name	Isopropyl Alcohol 99%
Grade	ACS/USP/NF Grade
Catalog #	231000099
Item #	100890
Batch #	220114-B011897
Date of Manufacture:	01/13/2022
Recommended Retest Date:	01/12/2027
Customer PO #	P23927
Packaging Type	Pail Metal 5 Gal

TEST	MONO-GRAPH	SPECIFICATION	RESULT	UNITS
Carbonyl Compounds - Acetone	ACS	0.002% max	0.001	%
Assay (corrected for water)	ACS	99.5% min	99.92	%
Color, APHA	ACS	10 max	1	N/A
Carbonyl Compounds - Propionaldehyde	ACS	0.002% max	LT 0.002%	N/A
Residue after Evaporation	ACS*	0.001% max	0.000	%
Solubility in water	ACS*	To Pass Test	Pass	N/A
Titrable Acid or Base	ACS*	0.0001 meq/g	0.0001	meq/g
Water, wt%	ACS	NMT 0.2%	0.04	%
Limit of Volatile Impurities - 2-Butanol	USP	NMT 0.1%	LT 0.1%	N/A
Limit of Volatile Impurities - Acetone	USP	NMT 0.1%	LT 0.1%	N/A
Acidity	USP*	NMT 0.70 ml of 0.020N NaOH is required	0.4	ml
Assay (corrected for water)	USP	99.0% min	99.92	%
Limit of Volatile Impurities - Diethyl Ether	USP	NMT 0.1%	LT 0.1%	N/A
Limit of Volatile Impurities - Diisopropyl Ether	USP	NMT 0.1%	LT 0.1%	N/A
Identification B	USP	To Pass Test	Pass	N/A

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TEST	MONO-GRAPH	SPECIFICATION	RESULT	UNITS
Identification A - Infrared Spectroscopy	USP	To Pass Test	Pass	N/A
Limit of Volatile Impurities - n-Propyl Alcohol	USP	NMT 0.1%	LT 0.1%	N/A
Limit of Nonvolatile Residue	USP*	NMT 2.5 mg (0.005%)	0.0	mg
Refractive Index @ 20oC	USP	1.376-1.378	1.377	N/A
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783	N/A
Limit of Volatile Impurities - Total	USP	NMT 1.0%	LT 0.1%	N/A
Water Determination	USP	NMT 0.5%	0.04	%

Certification and Compliance Statements

This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, American Chemical Society monographs and the National Formulary.

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 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>.

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

This product is for further commercial manufacturing, laboratory or research use, and may be used as a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user.

* This test is performed quarterly

This document was electronically signed by Natalie Engelbrecht on 1/21/2022 8:45:41 AM to indicate Quality Assurance Approval and to release this batch.