PHARMCO
by Greenfield Global

CERTIFICATE OF ANALYSIS

Product Name	ISOPROPYL ALCOHOL, 99%, HPLC/UV
Grade	Meets ACS HPLC/UV Monograph
Catalog #	231HPLC99
Lot #	C20J20007
Date of Manufacture:	10/20/20
Recommended Retest Date:	Five Years from Date of Manufacture

TEST	MONO GRAPH	SPECIFICATION		RESULT
Assay (corrected for water)	USP	99.0% min		99.96%
Assay (corrected for water)	ACS	99.5% min		
Solubility in water	ACS+	To Pass Test		Pass
Appearance	ACS+	Clear, colorless liquid		Pass
Color, APHA	ACS	10 max		1
Limit of Nonvolatile Residue	USP+	NMT 2.5 mg (0.005%)		0.2 mg
Residue after Evaporation	ACS+	0.001% max		0.001%
Specific Gravity	USP	0.783 - 0.787 @25°C		0.783
Identification A - Infrared Absorption	USP	To Pass Test		Pass
Identification B	USP	To Pass Test		Pass
Refractive Index @ 20°C	USP	1.376-1.378		1.377
Acidity	USP+	NMT 0.70 ml of 0.020N NaOH is required		0.60 mL
Titrable Acid or Base	ACS+	0.0001 meq/g		0.0001 meq/g
Carbonyl Compounds	ACS	Propionaldehyde	0.002% max	< 0.002%
		Acetone	0.002% max	None Detected
Limit of Volatile Impurities	USP	Diethyl Ether	NMT 0.1%	< 0.1%
		Acetone	NMT 0.1%	None Detected
		Diisopropyl Ether	NMT 0.1%	< 0.1%
		n-Propyl Alcohol	NMT 0.1%	< 0.1%
		2-Butanol	NMT 0.1%	< 0.1%
		Total	NMT 1.0%	< 0.1%
Water, wt%	ACS	NMT 0.2%		0.03%
Water Determination	USP	NMT 0.5%		

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TEST	MONO GRAPH	SPECIFICATION		RESULT
UV Absorbance	ACS	210 nm	1.0 max.	0.26
		220 nm	0.40 max.	0.11
		230 nm	0.20 max.	0.05
		245 nm	0.08 max.	0.01
		260 nm	0.04 max.	0.00
		275 nm	0.03 max.	0.00
		300 nm	0.02 max.	0.00
		330 nm - 400 nm	0.01 max.	0.00
Liquid Chromatography	ACS	To Pass Test(s)		Pass
Absorbance				Pass
Gradient Elution				Pass
Gradient Analysis @254 nm				Pass

[+]This test is performed quarterly

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 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. See Distilled Grade for those applications.
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> and ICH Q3C Impurities: Residual Solvents.
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 an excipient or 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.

Approved by: D. Simoncelli, Quality Control Chemist

Date of Approval: 10/20/20

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