

**Isopropyl Alcohol 99%**

**HPLC Grade**

**Grade:** ACS/HPLC-UV

**Catalog number:** 231HPLC99

Test	Mono-graph	Specification	Typical Result
Assay (corrected for water)	ACS	99.5% min	99.94 %
Assay	USP	NLT 99.0%	99.94 %
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
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
Residue after Evaporation	ACS	0.001% max	0.000 %
Refractive Index @ 20°C	USP	1.376-1.378	1.377
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
Titration Acid or Base	ACS	0.0001 meq/g max	0.0001 meq/g
Acidity	USP	NMT 0.70 ml of 0.020N NaOH is required	0.50 ml
Carbonyl Compounds - Propionaldehyde	ACS	0.002% max	LT 0.002%
Carbonyl Compounds - Acetone	ACS	0.002% max	0.000 %
Limit of Volatile Impurities - Methanol	USP	NMT 0.02%	LT 0.02%

Test	Mono-graph	Specification	Typical Result
Limit of Volatile Impurities - Diethyl Ether	USP	NMT 0.1%	LT 0.1%
Limit of Volatile Impurities - Acetone	USP	NMT 0.1%	None Detected
Limit of Volatile Impurities - Diisopropyl Ether	USP	NMT 0.1%	LT 0.1%
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%
UV Absorbance @210nm	ACS	1.0 max.	0.39
UV Absorbance @220nm	ACS	0.40 max.	0.19
UV Absorbance @230nm	ACS	0.20 max.	0.11
Absorbance @ 230nm	USP	NMT 0.30	0.09
UV Absorbance @245nm	ACS	0.08 max.	0.05
Absorbance @ 250nm	USP	NMT 0.10	0.02
UV Absorbance @260nm	ACS	0.04 max.	0.03
Absorbance @ 270nm	USP	NMT 0.03	0.00
UV Absorbance @275nm	ACS	0.03 max.	0.02
Absorbance @ 290nm	USP	NMT 0.02	0.00
UV Absorbance @300nm	ACS	0.02 max.	0.02
Absorbance @ 310nm	USP	NMT 0.01	0.00

Test	Mono-graph	Specification	Typical Result
UV Absorbance @330nm – 400nm	ACS	0.01 max.	0.01
Absorbance Curve	USP	The spectrum shows a steadily descending curve with no observable peaks or shoulders.	Pass
Water, wt%	ACS	NMT 0.2%	0.04 %
Water Determination	USP	NMT 0.5%	0.04 %

### Certification and Compliance Statements

This product 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.

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 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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