



PRODUCT SPECIFICATIONS SHEET

Product Name Isopropyl Alcohol 99%
 Grade USP/EP/BP/JP Grade
 Catalog # 231USP/EP

TEST	MONO-GRAPH	SPECIFICATION	TYPICAL RESULT
Assay	USP	NLT 99.0%	99.94 %
Appearance	EP/BP	The solution is clear and colourless	Pass
Appearance	JP	Clear, colorless liquid	Pass
Characters / Solubility	EP/BP	Appearance: clear, colourless liquid. Solubility: miscible with water and with ethanol (96 per cent).	Pass
Solubility	JP	Miscible with water, ethanol, methanol, diethyl ether	Pass
Purity 1- Clarity of Solution	JP	Solution is Clear	Pass
Nonvolatile Substances	EP/BP	NMT 20ppm	0 ppm
Purity 3 - Residue on Evaporation	JP	NMT 1.0mg/20mL	0.0 mg
Limit of Nonvolatile Residue	USP	NMT 2.5 mg (0.005%)	0.0 mg
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
Specific Gravity	JP	0.785-0.788 @ 20°C	0.787
Identification A - Relative Density	EP/BP	0.785 - 0.789 g/ml @ 20°C	0.785
Identification A - Infrared Spectroscopy	USP	To Pass Test	Pass
Identification C - Infrared Absorption	EP/BP	Compares to standard	Pass
Identification Test 1	JP	Light yellow precipitate is formed	Pass
Identification Test 2	JP	Filter paper turns red-brown color	Pass
Identification B	USP	To Pass Test	Pass



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TEST	MONO-GRAPH	SPECIFICATION	TYPICAL RESULT
Identification C - Limit of Methanol	USP	NMT 0.02%	Pass
Identification D	EP/BP	The entire sulfuric acid layer turns violet	Pass
Identification B - Refractive Index @ 20°C	EP/BP	1.376-1.379	1.377
Refractive Index @ 20°C	USP	1.376-1.378	1.377
Acidity or Alkalinity	EP/BP	To Pass Test	Pass
Acidity	USP	NMT 0.70 ml of 0.020N NaOH is required	0.50 ml
Purity 2 - Acidity	JP	To pass Test	Pass
Benzene and related substances - Benzene (by GC)	EP/BP	NMT 2 ppm	0 ppm
Benzene and related substances – Total of Impurities	EP/BP	NMT 0.3%	0.1 %
Absorbance @230nm	EP/BP	0.30 max.	0.09
Absorbance @250nm	EP/BP	0.10 max.	0.02
Absorbance @270nm	EP/BP	0.03 max.	0.00
Absorbance @290nm	EP/BP	0.02 max.	0.00
Absorbance @310nm	EP/BP	0.01 max.	0.00
Absorbance	EP/BP	The spectrum shows a steadily descending curve with no observable peaks or shoulders	Pass
Absorbance @ 230nm	USP	NMT 0.30	0.09
Absorbance @ 250nm	USP	NMT 0.10	0.02
Absorbance @ 270nm	USP	NMT 0.03	0.00
Absorbance @ 290nm	USP	NMT 0.02	0.00
Absorbance @ 310nm	USP	NMT 0.01	0.00



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TEST	MONO-GRAPH	SPECIFICATION	TYPICAL RESULT
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%
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%
Peroxides Test	EP/BP	No color develops	Pass
Distilling Range 81-83°C	JP	More than 94% (vol)	Pass
Water, wt%	EP/BP	NMT 0.5%	0.04 %
Water, wt/v%	JP	NMT 0.75%	0.04 %
Water Determination	USP	NMT 0.5%	0.04 %
Ag (Silver)	USP<232>	Lot Analysis	0.00 ppm
As (Arsenic)	USP<232>	Lot Analysis	0.00 ppm
Au (Gold)	USP<232>	Lot Analysis	0.00 ppm
Ba (Barium)	USP<232>	Lot Analysis	0.00 ppm
Cd (Cadmium)	USP<232>	Lot Analysis	0.00 ppm
Co (Cobalt)	USP<232>	Lot Analysis	0.00 ppm



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TEST	MONO-GRAPH	SPECIFICATION	TYPICAL RESULT
Cr (Chromium)	USP<232>	Lot Analysis	0.00 ppm
Cu (Copper)	USP<232>	Lot Analysis	0.00 ppm
Hg (Mercury)	USP<232>	Lot Analysis	0.00 ppm
Ir (Iridium)	USP<232>	Lot Analysis	0.00 ppm
Li (Lithium)	USP<232>	Lot Analysis	0.00 ppm
Mo (Molybdenum)	USP<232>	Lot Analysis	0.00 ppm
Ni (Nickel)	USP<232>	Lot Analysis	0.00 ppm
Os (Osmium)	USP<232>	Lot Analysis	0.00 ppm
Pb (Lead)	USP<232>	Lot Analysis	0.00 ppm
Pd (Palladium)	USP<232>	Lot Analysis	0.00 ppm
Pt (Platinum)	USP<232>	Lot Analysis	0.00 ppm
Rh (Rhodium)	USP<232>	Lot Analysis	0.00 ppm
Ru (Ruthenium)	USP<232>	Lot Analysis	0.00 ppm
Sb (Antimony)	USP<232>	Lot Analysis	0.00 ppm
Se (Selenium)	USP<232>	Lot Analysis	0.00 ppm
Sn (Tin)	USP<232>	Lot Analysis	0.00 ppm
Tl (Thallium)	USP<232>	Lot Analysis	0.00 ppm
V (Vanadium)	USP<232>	Lot Analysis	0.00 ppm

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.