



**Specification for Isopropyl Alcohol, 99 Percent, USP, EP, BP, JP, FCC, ACS, bioCERTIFIED(TM) (I9200)**

Item Number	I9200
Item	Isopropyl Alcohol, 99 Percent, USP, EP, BP, JP, FCC, ACS, bioCERTIFIED(TM)
CAS Number	67-63-0
Molecular Formula	C <sub>3</sub> H <sub>8</sub> O
Molecular Weight	60.10
MDL Number	
Synonyms	Isopropanol ; 2-Propanol ; Propan-2-ol ; Dimethyl Carbinol ; IPA

Test	Specification	
	Min	Max
APPEARANCE		
ASSAY (USP/FCC)	99.5 %	
ASSAY (ACS)	99.5 %	
SPECIFIC GRAVITY (USP)	0.783	0.787
SPECIFIC GRAVITY (JP)	0.785	0.788
REFRACTIVE INDEX (USP)	1.376	1.378
SOLUBILITY IN WATER (FCC/ACS)	SOLUTION IS CLEAR	
APPEARANCE (EP/BP/JP)	SOLUTION IS CLEAR AND COLORLESS, THE SOLUTION REMAINS CLEAR	
DISTILLING RANGE (JP)	NOT LESS THAN 94% BETWEEN 81-83° C	
DISTILLATION RANGE (FCC)	NOT MORE THAN 1° RANGE, INCLUDES 82.3° C	
SPECIFIC GRAVITY (FCC)		0.7840
LIMIT OF NONVOLATILE RESIDUE (USP)		0.005 %
NONVOLATILE RESIDUE (FCC/ACS)		10 mg/kg
NONVOLATILE SUBSTANCES (EP/BP)		20 ppm
RESIDUE ON EVAPORATION (JP)		1.0 mg
ACIDITY (USP)		0.70 mL
ACIDITY (FCC)		0.7 mL
ACIDITY (JP)	RED COLOR DEVELOPS	
ACIDITY OR ALKALINITY (EP/BP)		0.6 mL
TITRABLE ACID OR BASE (ACS)		0.001 meq/g
WATER DETERMINATION (USP/EP/BP)		0.5 %

Test	Specification	
	Min	Max
WATER (JP)		0.75 %
WATER (FCC)		0.2 %
WATER (ACS)		0.2 %
BENZENE AND RELATED SUBSTANCES (EP/BP):		
BENZENE		2 ppm
TOTAL IMPURITIES APART FROM 2-BUTANOL		0.3 %
PEROXIDES (EP/BP)	NO COLOR DEVELOPS	
ULTRAVIOLET ABSORPTION (USP/EP/BP):		
CURVE	THE SPECTRUM SHOWS A STEADILY DESCENDING CURVE WITH NO OBSERVABLE PEAKS OR SHOULDER	
230 nm		0.30
250 nm		0.10
270 nm		0.03
290 nm		0.02
310 nm		0.01
ULTRAVIOLET SPECTROPHOTOMETRY (ACS):		
400-330 nm		0.01
300 nm		0.02
275 nm		0.03
260 nm		0.04
245 nm		0.08
230. nm		0.20
220 nm		0.40
210 nm		1.00
LIMIT OF VOLATILE IMPURITIES (USP/FCC):		
METHANOL		0.02 %
EACH OTHER INDIVIDUAL KNOWN IMPURITY		0.1 %
INDIVIDUAL UNSPECIFIED IMPURITY		0.1 %
TOTAL IMPURITIES		0.5 %
CARBONYL COMPOUNDS (ACS):		
PROPIONALDEHYDE		0.002 %
ACETONE		0.002 %
COLOR (ACS)		10
LEAD (FCC)		1 mg/kg

Test	Specification	
	Min	Max
SUBSTANCES REDUCING PERMANGANATE (FCC)	PINK COLOR IS NOT ENTIRELY DISCHARGED	
MICROBIAL LIMITS:		
TAMC		1000 cfu/mL
TYMC		100 cfu/mL
BET		10 IU/mL
ELEMENTAL IMPURITIES	AS REPORTED	
IDENTIFICATION A (USP A)	SPECTRUM MATCHES REFERENCE	
IDENTIFICATION B (USP B)	RETENTION TIME CORRESPONDS TO STANDARD	
IDENTIFICATION C (USP C)		0.02 %
IDENTIFICATION D (EP/BP A)	0.785	0.789
IDENTIFICATION E (EP/BP B)	1.376	1.379
IDENTIFICATION F (EP/BP C)	SPECTRUM MATCHES REFERENCE	
IDENTIFICATION G (EP/BP D)	BRIGHT REDDISH-VIOLET RING FORMS, LAYER TURNS VIOLET	
IDENTIFICATION H (JP 1)	A YELLOW PRECIPITATE IS FORMED	
IDENTIFICATION I (JP 2)	GAS TURNS FILTER PAPER RED-BROWN	
IDENTIFICATION J (FCC A)	1.377	1.380
IDENTIFICATION K (FCC B)	SPECTRUM MATCHES REFERENCE	
EXPIRATION DATE		
DATE OF MANUFACTURE		
MONOGRAPH EDITION		
MONOGRAPH EDITION.		
RESIDUAL SOLVENTS	AS REPORTED	

***Spectrum Chemical Mfg Corp***

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