

## Quality Department - Product Specification

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### ETHYL ALCOHOL ANHYDROUS USP EP BP JP

Measure Description	Method Description	Specification
Density (in air), Kg/L, at 20°C	Methods specified in the Revenue Canada Customs & Excise Alcoholometric Tables	NMT 0.7885
Ethyl Alcohol Content, v/v%	Methods specified in the Revenue Canada Customs & Excise Alcoholometric Tables	NLT 99.5
IDENTIFICATION A - Specific Gravity at 15.56°C	Current USP	NMT 0.7962
Specific Gravity (in vacuo), at 15/15°C	Current JP	0.79422 to 0.79679
IDENTIFICATION A - Relative Density at 20°C	Current EP BP	0.790 to 0.793
IDENTIFICATION B - Infrared Absorption	Current USP	Conforms to standard
Acidity or Alkalinity	Current USP	1mL of 0.01N NaOH in 20mL sample produces pink colour
Nonvolatile Residue, g/100mL	Current USP	NMT 0.0025
Clarity of Solution	Current USP	Sample Solution A and Sample Solution B show the same clarity as that of water or their opalescence is not more pronounced than that of Standard Suspension A
Colour of Solution	Current USP	The Sample Solution has the appearance of water or is not more intensely coloured than the Standard Solution
UV Absorbance - Spectrometer at 240nm	Current USP	NMT 0.40
UV Absorbance - Spectrometer at 250nm	Current USP	NMT 0.30
UV Absorbance - Spectrometer at 260nm	Current USP	NMT 0.30
UV Absorbance - Spectrometer at 270nm	Current USP	NMT 0.10
UV Absorbance - Spectrometer at 340nm	Current USP	NMT 0.10
UV Absorbance - Smoothness of UV Curve	Measured in a 5cm cell from 235nm to 340nm	The spectrum shows a steadily descending curve with no observable peaks or shoulders
GC - Acetaldehyde + Acetal, ppm (µL/L)	GC Analysis	NMT 10
GC - Methanol, ppm (µL/L)	GC Analysis	NMT 75
Identification Test C (Limit of Methanol)	Current USP	NMT 200µL/L (200ppm) of methanol
GC - Benzene, ppm (µL/L)	GC Analysis	NMT 2
GC - Sum of All Impurities, ppm (µL/L)	GC Analysis	NMT 300
Water Content, v/v%	Karl Fischer Titration	NMT 0.100

#### Comments:

Ethyl alcohol anhydrous conforms with all US Pharmacopoeia (USP), European Pharmacopoeia (EP), British Pharmacopoeia (BP), Japanese Pharmacopoeia (JP), and Food Chemicals Codex (FCC) standards.

#### Specification:

QCSPEC #: QSPEC000037, Version #: QV00000003, Approver: SHANNON.SMITH, Effective Date: 29-Mar-2021