

**Ethyl Alcohol 100% (200 Proof)**

**Absolute**

**Grain Derived**

**Grade:** ACS/USP

**Catalog number:** 111000200

Test	Mono-graph	Specification	Typical Result
Assay (by GC, corrected for water)	ACS	NLT 99.5%	99.99 %
Assay (by specific gravity@15.56°C)	USP	NLT 99.5%	99.99 %
Water (wt%)	ACS	0.2%, max	0.01 %
Proof	27CFR 30.23	Lot Analysis	200.0
Color (APHA)	ACS	10 max	1
Color of Solution	USP	The Sample solution has the appearance of water or is not more intensely colored than the Standard solution	Pass
Clarity of Solution	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 the Standard suspension A.	Pass
Specific Gravity	USP	NMT 0.7962 @ 15.56°C	0.7936
Identification Test A (Specific Gravity)	USP	It meets the requirements of the test for specific gravity	Pass
Identification Test B (Infrared Spectroscopy)	USP	Conforms to IR Spectra	Pass
Identification Test C (Limit of Methanol)	USP	NMT 200 µL/L (200ppm) of Methanol	Pass
Solubility in Water	ACS	To Pass Test	Pass
Residue after Evaporation	ACS	0.001% , max	0.000 %
Limit of Nonvolatile Residue	USP	NMT 2.5 mg	0.0 mg
Acetone/Isopropyl Alcohol	ACS	To Pass Test	Pass
Methanol	ACS	0.1% max	Pass
Organic Impurities - Methanol	USP	NMT 200µL/L	3 µL/L

Test	Mono-graph	Specification	Typical Result
Organic Impurities - Acetaldehyde and Acetal	USP	NMT 10µL/L, expressed as acetaldehyde	0 µL/L
Organic Impurities - Benzene	USP	NMT 2µL/L	0 µL/L
Organic Impurities - Sum of all other impurities	USP	NMT 300µL/L	7 µL/L
Titration Acid	ACS	0.0005 meq/g max.	0.0001 meq/g
Acidity or Alkalinity	USP	The solution is pink (30µL/L, expressed as acetic acid)	Pass
Titration Base	ACS	0.0002 meq/g max.	0.0001 meq/g
Substances Darkened by Sulfuric Acid	ACS	To Pass Test	Pass
Substances Reducing Permanganate	ACS	To Pass Test	Pass
UV Absorbance	USP	NMT 0.40 at 240 nm	0.28
UV Absorbance	USP	NMT 0.30 between 250 and 260 nm	0.11
UV Absorbance	USP	NMT 0.10 between 270 and 340 nm	0.01
UV Absorbance	USP	The spectrum shows a steadily descending curve with no observable peaks or shoulders	Pass

### Certification and Compliance Statements

This product complies with all of the current requirements listed in the United States Pharmacopeia and American Chemical Society monographs.

Recommended retest period excludes UV Absorbance for pure Ethyl Alcohol unless packaged in glass or UV protected drums (see shelf life statement).

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 ethyl alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related substances / low level contaminants in Ethanol. Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467>.

Greenfield products are for further commercial manufacturing, laboratory use, or research. Greenfield is not registered with the United States Food and Drug Administration (FDA) as a drug manufacturing facility. Greenfield products are not registered with the FDA as active pharmaceutical ingredients in drug manufacturing.

Appropriate/legal use of all products are the responsibility of the user and subject to applicable local laws and regulations.