

PRODUCT SPECIFICATION SHEET

Ethyl Alcohol 200 Proof, Pure, Non-Denatured

Meets HPLC-UV Monographs Grain Derived Ethanol

| Test | Specification | Typical Results |
|--|---|---|
| Assay (by GC, corrected for water) | NLT 99.5% | 99.98% |
| Assay (by specific gravity@15.56°C) | NLT 99.5% | 99.98% |
| Water (wt%) | NMT 0.2% | 0.02% |
| Proof | Lot Analysis | 200.0 |
| Identification A (Specific Gravity) | Meets the requirements of the test for Specific Gravity | Pass |
| Identification B (Infrared Spectroscopy) | Conforms to Infrared Spectra (Neat) | Pass |
| Identification C (Limit of Methanol) | NMT 200 µL/L (200ppm) of Methanol | Pass |
| Color (APHA) | NMT 10 | <10 |
| Clarity of Solution | Sample Solution A & B show the same clarity as that of water, or their opalescence is not more pronounced than that of Standard suspension A | Pass |
| Color of Solution | The Sample Solution has the appearance of water or is not more intensely colored than the Standard solution | Pass |
| Solubility in Water | To Pass Test | Pass |
| Specific Gravity | NMT 0.7962 at 15.56C | 0.7938 |
| Residue on Evaporation | NMT 0.001% | <0.001% |
| Limit of Nonvolatile Residue | The weight of the residue does not exceed 2.5mg | <1.0 mg |
| Acetone/Isopropyl Alcohol | To Pass Tests | Pass |
| Titrable Acid | NMT 0.0005 meq/g | <0.0003 meq/g |
| Titrable Base | NMT 0.0002 meq/g | <0.0001 meq/g |
| Acidity or Alkalinity | The solution is pink (30ppm, expressed as acetic acid) | Pass |
| Methanol | NMT 0.1% | <0.1% |
| Substances Darkened by Sulfuric Acid | To Pass Test | Pass |
| Substances Reducing Permanganate | To Pass Test | Pass |
| Ultraviolet Absorption | NMT 0.40 at 240 nm NMT 0.30 between 250 nm and 260 nm NMT 0.10 between 270 nm and 340 nm The spectrum shows a steadily descending curve with no observable peaks or shoulders | 0.29 0.11 0.02 Pass |
| Organic Impurities | Methanol NMT 200ppm Acetaldehyde and Acetal NMT 10ppm Benzene NMT 2ppm Sum of all other impurities NMT 300ppm | <5 ppm None Detected None Detected <10 ppm |

Appropriate/legal use of this product is the responsibility of the user