PHARMCO-AAPER
THE POWER OF THREE®

# CERTIFICATE OF ANALYSIS
# METHANOL
## Meets GENERAL USE HPLC-UV Grade Monographs

| | |
|---|---|
| Lot # | C18B22009 |
| QC # | PPR35426 |
| Date of Manufacture: | 02/22/18 |
| Recommended Retest Date: | Five Years from Date of Manufacture |
| Main Catalog # | 33900HPLC |

| PRODUCT SPECIFICATIONS | MONO - GRAPH | LIMITS | | RESULTS |
|---|---|---|---|---|
| Assay (GC), min, corrected for water | ACS | 99.8% | | 99.98% |
| | NF | 99.9% | | 99.98% |
| Identification A (Infrared Absorption) | NF | To Pass | | Pass |
| Identification B (GC Analysis) | NF | To Pass | | Pass |
| Acidity | NF | NMT 0.45mL 0.02N NaOH required | | 0.20 mL |
| Titrable Acid, max | ACS | 0.0003 meq/g | | 0.0001 meq/g |
| Alkalinity (as ammonia) | NF | NMT 0.20mL 0.02N $H_2SO_4$ required (3 ppm ma | | 0.10 mL |
| Titrable Base, max | ACS | 0.0002 meq/g | | 0.0001 meq/g |
| Readily Carbonizable Substances | NF | To Pass | | Pass |
| Carbonyl Compounds, max | ACS | Acetone | 0.001% | None Detected |
| | | Formaldehyde | 0.001% | <0.001% |
| | | Acetaldehyde | 0.001% | <0.001% |
| Acetone & Aldehydes (as Acetone) | NF | 0.003% | | <0.003% |
| Readily Oxidizable Substances | NF | To Pass | | Pass |
| Non-Volatile Residue | NF | NMT 2mg (0.001% w/w) | | 0.0 mg |
| Residue After Evaporation, max | ACS | 0.001% | | 0.000% |
| Color (APHA), max | ACS | 10 | | 1 |
| Substances Darkened by $H_2SO_4$ | ACS | To Pass | | Pass |
| Substances Reducing $KMnO_4$ | ACS | To Pass | | Pass |
| Ultraviolet absorption | ACS | 205nm | 1.00 max. | 0.64 |
| | | 210nm | 0.80 max. | 0.36 |
| | | 220nm | 0.40 max. | 0.17 |
| | | 230nm | 0.20 max. | 0.08 |
| | | 240nm | 0.10 max. | 0.03 |
| | | 260nm | 0.04 max. | 0.00 |
| | | 280nm-400nm | 0.01 max. | 0.00 |
| Water, max | NF, ACS | 0.10% | | 0.02% |
| Solubility in Water | ACS | To Pass | | Pass |

This product is manufactured for Routine HPLC Analysis and meets the requirements for General Use HPLC Grade, ACS Monographs. This product is not intended for GC or critical HPLC analysis. See Glass Purified, Glass Distilled Grade for those

Form Methanol-HPLC, # 401, Rev. 2.8, 06/16, KAD

Approved by: T. Boudreau, Quality Control Chemist