



Certificate of Analysis
Glycerin 99.7% USP Kosher

Lot #: AaCGLY-21092-175

Manufacture Date: 04/02/2021

Product Testing Requirements

| Test | AgCertain Specification | Method Reference | Result |
|---|-----------------------------------|-----------------------|----------------|
| Appearance | Clear Liquid | Organoleptic | PASS |
| Odor | PASS | Organoleptic | PASS |
| Assay (% Glycerol) | NLT 99.7% | Bosart & Snoddy table | 99.7 % |
| Assay (% Glycerol on Anhydrous Basis) | 99.7 % to 101.0 % | USP Monograph | 99.77 % |
| Specific Gravity @ 25.0°C | 1.2612 min | USP <841> | 1.2612 |
| Identification A by IR | Conform to USP | USP <197> | 99.77 % /PASS |
| Identification B by GC: Limit of DEG & EG | Conform to USP | USP Monograph | PASS |
| Identification C by GC | Conform to USP | USP Monograph | PASS |
| Chlorides, % (as chloride) | NMT 10 ppm | USP <221> | PASS |
| Sulfates, % | NMT 20 ppm | USP <221> | PASS |
| Heavy metals | NMT 5 ppm | USP <233> | 0.188ppm/PASS |
| Residue on Ignition | NMT 0.01 % | USP <281> | 0.0000 % /PASS |
| Related Compounds | Conform to USP | USP Monograph | PASS |
| Chlorinated Compounds (as Cl) % | NMT 30 ppm Cl | USP Monograph | PASS |
| Fatty acids and Esters | NMT 1 mL of 0.5N NaOH is consumed | USP Monograph | 0.40 mL/PASS |
| Residual solvents | Conform to USP | USP <467> | PASS |
| Color | Conform to USP | USP Monograph | PASS |
| Color APHA (Pt/Co Scale) - 5.25" Cell | NMT 10 | ASTM D1209 | 0/PASS |
| Water | NMT 0.3% | USP <921> | 0.0559 %/PASS |

Shelf Life: Expected shelf life is 24 months when kept between 20 to 52°C (68 to 125°F) with restricted exposure to air and moisture. It is recommended to retest the material, if the product has not been used within 6 months of delivery (i.e. stored in a bulk tank).

Multi-lot CoA report:

Testing results are quantified as a weighted average for shipments containing product from multiple lot numbers.

Approved By: _____

Date: 04/05/2021

QC Manager: Lei Fang