

Certificate of Analysis

(Representative Sample Certificate)

Product Name: Glycerin, USP
INCI Name: Glycerin
CAS Number: 56-81-5
Lot Number: Not available (data may vary slightly with different lots or batches)
Expiration Date: 24 months from production date

| Property | Specification | Analysis |
|---------------------------------------|-----------------|----------|
| Appearance (USP) | PASS | PASS |
| Purity by Specific Gravity (USP) | 99.7% MIN | 99.71 |
| Specific Gravity @ 25°C (USP) | 1.2613 MIN | 1.2613 |
| Identification A by FTIR (USP) | PASS | PASS |
| Identification B (USP) | PASS | PASS |
| Diethylene Glycol (USP) | 0.10% MAX | <0.10 |
| Ethylene Glycol (USP) | 0.10% MAX | <0.10 |
| Identification C (USP) | PASS | PASS |
| Related Compounds - Individual (USP) | 0.1% MAX | <0.1 |
| Related Compounds - Total (USP) | 1.0% MAX | <1.0 |
| Assay (Anhydrous Basis) (USP) | 99.0 - 101.0% | 99.84 |
| Sulfates (USP) | 20 ppm MAX | <20 |
| Chlorides (USP) | 10 ppm MAX | <10 |
| Chlorinated Compounds (USP) | 30 ppm MAX | <30 |
| Fatty Acids & Esters (USP) | MAX 0.30ml NaOH | 0.11 |
| Heavy Metals (USP) | 5 ppm MAX | <5 |
| Lead (USP) | 1 ppm MAX | <1 |
| Residue on Ignition (USP) | 0.01% MAX | 0.000 |
| Color (APHA) | 10 APHA MAX | 0 |
| Readily Carbonizable Substances (USP) | PASS | PASS |
| Moisture (USP) | 0.30% MAX | 0.10 |
| Odor (USP) | PASS | PASS |
| Residue Solvents (USP) | PASS | PASS |

This product is manufactured in compliance with the quality and food safety standards laid out by FSSC 22000, an approved Global Food Safety Standard. Due diligence for other intended uses is the responsibility of the customer. We expressly disclaim any and all liability related to the use of glycerin as an active pharmaceutical ingredient or in applications producing vapor, fog, mist, or smoke where there is a possibility of inhalation. This certificate of analysis meets the USP43NF38-NF 38 and FCC12 requirements.

The above data was obtained using the test indicated and is subject to the deviation inherent in the test method. Results may vary under other test methods or conditions. This report is not to be signed. All data are as per our supplier.

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy themselves as to the suitability & completeness of such information for their own particular use.