



Giles Chemical, a division of Premier Magnesia, LLC. Repacking Facility

102 Commerce Street Waynesville, NC 28786

Phone: 828-452-4784 Fax: 828-452-4786

USP Certificate of Analysis

Release Date: 12/22/2014

CUSTOMER: _____

CUST. REF: _____

SHIP DATE: _____

PRODUCT: **Magnesium Sulfate - USP**

TRAILER NUMBER: _____

SHELF LIFE: 3 Years

BILL OF LADING #: _____

LOT NUMBER: **14355**

PO NUMBER #: _____

SHIPPER: _____

MANUFACTURED: _____

CUST. SERV.: _____

EXPIRATION: _____

I certify that this material meets all the requirements of the Giles Chemical sales specifications and the United States Pharmacopeia 35. Periodic testing has shown the samples to be consistently free of volatile organic impurities. Giles Chemical magnesium sulfate is manufactured under the guidelines of Current Good Manufacturing Practices (cGMP).

EPSOM SALT, Magnesium Sulfate - Heptahydrate, USP

| METHOD | TEST | LOWER | UPPER | Test Results |
|--------|---------------------------------------|-------|--------|--------------|
| VISUAL | Appearance | ~~ | ~~ | Clear |
| USP35 | Chloride as Cl (%) | ~~ | 0.014 | < 0.014% |
| USP35 | Heavy Metals As Pb (%) | ~~ | 0.001 | < 0.001% |
| USP35 | Ignition Loss (%) | 40.00 | 52.00 | 50.78% |
| USP35 | Iron (ppm) | ~~ | 20.00 | < 20.00 ppm |
| USP35 | MgSO ₄ (Anhydrous wt. %) | 99.00 | 100.50 | 99.54% |
| USP35 | MgSO ₄ (As is basis, %) | 48.30 | 52.00 | 48.57% |
| USP35 | pH 5% Solution | 5.00 | 9.20 | 8.17 |
| USP35 | Selenium (%) | ~~ | 0.003 | < 0.003% |
| USP35 | Mg ²⁺ ID | | | Present |
| USP35 | SO ₄ ²⁻ ID | | | Present |

CONTACT:

ANALYST:

Quality Assurance Laboratory

SIGNATURE ON FILE

John Safi - Chemist

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