



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

102 Commerce Street Waynesville, NC 28786

USP Certificate of Analysis

Release Date: 12/10/2012

CUSTOMER: _____

CUST. REF: _____

PRODUCT: **Magnesium Sulfate - USP**

SHELF LIFE: 3 Years

LOT NUMBER: **2112**

SHIPPER: _____

CUST. SERV.: _____

SHIP DATE: _____

TRAILER NUMBER: _____

BILL OF LADING #: _____

PO NUMBER #: _____

MANUFACTURED: _____

EXPIRATION: _____

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

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	51.67%
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	6.61
USP35	Selenium (%)	~~	0.003	< 0.003%
USP35	Mg ²⁺ ID			Present
USP35	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST: STEPHEN BALLEW

Stephen Ballew