



Giles Chemical, a division of Premier Magnesia , LLC.
102 Commerce Street Waynesville, NC 28786
Tech Certificate of Analysis

Release Date: 12/21/2012

CUSTOMER: _____

CUST. REF: _____ SHIP DATE: _____

PRODUCT: Magnesium Sulfate - Tech TRAILER NUMBER: _____

SHELF LIFE: 3 Years BILL OF LADING #: _____

LOT NUMBER: 2212 PO NUMBER #: _____

SHIPPER: _____ MANUFACTURED: _____

CUST. SERV.: _____ 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, Tech Grade

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	44.58%
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	5.83
USP35	Selenium (%)	~~	0.003	< 0.003%
USP35	Mg ²⁺ ID			Present
USP35	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST: STEPHEN BALLEW

Stephen Ballew