

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

102 Commerce Street Waynesville, NC 28786 Phone: 828-452-4784 Fax: 828-452-4786 USP Certificate of Analysis

Release Date:	12/15/2014		
CUSTOMER:			
CUST. REF:		SHIP DATE:	
PRODUCT:	Magnesium Sulfate - USP	TRAILER NUMBER:	
SHELF LIFE:	3 Years	BILL OF LADING #:_	
LOT NUMBER:	14347	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	50.73%
USP35	Iron (ppm)	~~	20.00	< 20.00 ppm
USP35	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.35%
USP35	MgSO ₄ (As is basis, %)	48.30	52.00	48.48%
USP35	pH 5% Solution	5.00	9.20	6.47
USP35	Selenium (%)	~~	0.003	< 0.003%
USP35	$Mg^{2+}ID$			Present
USP35	SO ₄ ²⁻ ID			Present

CONTACT: ANALYST:

Quality Assurance Laboratory

John Safi - Chemist

828-452-4784 ext. 31

SIGNATURE ON FILE