



Giles Chemical, a division of Premier Chemicals, LLC.

102 Commerce Street Waynesville, NC 28786

USP Certificate of Analysis

12/14/2009

CUSTOMER: _____

CUST. REF: _____ SHIP DATE: _____

PRODUCT: **Magnesium Sulfate - USP** TRAILER NUMBER: _____

SHELF LIFE: **3 Years** BILL OF LADING # : _____

LOT NUMBER: **1509** PO NUMBER # : _____

SHIPPER : _____ MANUFACTURED : _____

CUST. SERV. : _____

I, certify that this material meets all the requirements of the Giles Chemical sales specification and the United States Pharmacopeia 32. 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
USP32	Arsenic (PPM)	~~	3.00	< 3 ppm
USP32	Chloride as Cl (%)	~~	0.014	0.002%
USP32	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP32	ignition Loss (%)	40.00	52.00	51.24%
USP32	Iron	~~	20.00	< 0.05 ppm
USP32	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.47%
USP32	MgSO ₄ (As is basis, %)	48.30	52.00	48.54%
USP32	pH 5% Solution	5.00	9.20	6.23
USP32	Selenium (%)	~~	0.003	< .003%
USP32	Mg ²⁺ ID			Present
USP32	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE