



Giles Chemical, a division of Premier Chemicals, LLC. Repacking Facility
102 Commerce Street Waynesville, NC 28786
USP Certificate of Analysis

11/9/2010

CUSTOMER: _____
CUST. REF: _____ SHIP DATE: _____
PRODUCT: **Magnesium Sulfate - USP** TRAILER NUMBER: _____
SHELF LIFE: **3 Years** BILL OF LADING # : _____
LOT NUMBER: **1110** 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 33. 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
USP33	Arsenic (PPM)	~~	3.00	< 3 ppm
USP33	Chloride as Cl (%)	~~	0.014	.002%
USP33	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP33	ignition Loss (%)	40.00	52.00	51.26%
USP33	Iron	~~	20.00	.11 ppm
USP33	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.49%
USP33	MgSO ₄ (As is basis, %)	48.30	52.00	48.55%
USP33	pH 5% Solution	5.00	9.20	6.05
USP33	Selenium (%)	~~	0.003	<.003%
USP33	Nickel (%)	~~	~~	<.005%
USP33	Mg ²⁺ ID			Present
USP33	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE