



Giles Chemical, a division of Premier Chemicals, LLC.

102 Commerce Street Waynesville, NC 28786

USP Certificate of Analysis

3/9/2009

CUSTOMER: _____

CUST. REF: _____ SHIP DATE: _____

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

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

LOT NUMBER: **0409** 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 31. 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
USP30	Arsenic (PPM)	~~	3.00	< 3 ppm
USP30	Chloride as Cl (%)	~~	0.014	<.001%
USP30	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP30	ignition Loss (%)	40.00	52.00	51.14%
USP30	Iron	~~	20.00	0.01
USP30	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.68%
USP30	MgSO ₄ (As is basis, %)	48.30	52.00	48.64%
USP30	pH 5% Solution	5.00	9.20	6.29
USP30	Selenium (%)	~~	0.003	< .003%
USP30	Mg ²⁺ ID			Present
USP30	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE