



**Giles Chemical, a division of Premier Chemicals, LLC. USP Certificate of Analysis**

4/20/2007

CUSTOMER: \_\_\_\_\_

CUST. REF: \_\_\_\_\_ SHIP DATE: \_\_\_\_\_

PRODUCT: **Magnesium Sulfate - USP** TRAILER NUMBER: \_\_\_\_\_

SHELF LIFE: **3 Years** BILL OF LADING #: \_\_\_\_\_

LOT NUMBER: **0407** PO NUMBER #: \_\_\_\_\_

SHIPPER: \_\_\_\_\_ MANUFACTURED: \_\_\_\_\_

CUST. SERV.: \_\_\_\_\_ EXPIRES: \_\_\_\_\_

I, certify that this material meets all the requirements of the Giles Chemical sales specification and the United States Pharmacopeia 29. 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
USP24	Arsenic ( PPM )	~~	3.00	< 3 ppm
ESAP	Boron ( PPM )	~~	15.00	< 15.0 ppm
USP29	Chloride as Cl (%)	~~	0.014	.001%
USP29	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP29	ignition Loss (%)	40.00	52.00	51.31%
USP29	Iron	~~	20.00	.42 ppm
USP29	MgSO <sub>4</sub> ( Anhydrous wt. % )	99.00	100.50	99.64%
USP29	MgSO <sub>4</sub> ( As is basis, % )	48.30	52.00	48.62%
USP29	pH 5% Solution	5.00	9.20	6.70
USP29	Selenium ( % )	~~	0.003	< .003%
USP29	Mg <sup>2+</sup> ID			Present
USP29	SO <sub>4</sub> <sup>2-</sup> ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE