



Giles Chemical Corporation USP Certificate of Analysis

12/19/2006

CUSTOMER: _____	
CUST. REF: _____	SHIP DATE: _____
PRODUCT: Magnesium Sulfate - USP	TRAILER NUMBER: _____
SHELF LIFE: 3 Years	BILL OF LADING #: _____
LOT NUMBER: 1506	PO NUMBER #: _____
SHIPPER: _____	MANUFACTURED: _____
CUST. SERV.: _____	EXPIRES: _____

I, certify that this material meets all the requirements of the Giles Chemical Corporation sales specification and the United States Pharmacopeia 29. Periodic testing has shown the samples to be consistently free of volatile organic impurities. Giles Chemical corporation 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	51.18%
USP29	Iron	~~	20.00	.34 ppm
USP29	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.63%
USP29	MgSO ₄ (As is basis, %)	48.30	52.00	48.62%
USP29	pH 5% Solution	5.00	9.20	6.80
USP29	Selenium (%)	~~	0.003	< .003%
USP29	Mg ²⁺ ID			Present
USP29	SO ₄ ²⁻ ID			Present

ATTN: _____

ANALYST: _____

SIGNATURE ON FILE