



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 PQ Corporation sales specification 600546 and the United States Pharmacopeia 29. All organic volatile impurities listed in General Chapter 467, USP 29 NF 20 are below the USP limits.

EPSOM SALT, Magnesium Sulfate - Heptahydrate, USP; CAS Registry #: 10034-99-8

METHOD	TEST	LOWER	UPPER	Test Results
VISUAL	Appearance	~~	~~	Clear
USP29	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

PQ - CORPORATION - UTICA, IL

(815) 667-4241