



USP - CERTIFICATE OF ANALYSIS

11/21/2006

CUSTOMER: _____

CUST. REF: _____ SHIP DATE: _____

PRODUCT: Magnesium Sulfate - USP TRAILER NUMBER: _____

SHELF LIFE: 3 Years BILL OF LADING #: _____

LOT NUMBER: 1406 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
USP24	Arsenic (PPM)	~~	3.00	< 3 ppm
ESAP	Boron (PPM)	~~	15.00	< 15.0 ppm
USP25	Chloride as Cl (%)	~~	0.014	.001%
USP26	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP25	ignition Loss (%)	40.00	52.00	51.23%
USP26	Iron	~~	20.00	.28 ppm
USP25	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.65%
USP25	MgSO ₄ (As is basis, %)	48.30	52.00	48.63%
USP25	pH 5% Solution	5.00	9.20	6.77
USP25	Selenium (%)	~~	0.003	< .003%
USP25	Mg ²⁺ ID			Present
USP25	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE

PQ - CORPORATION - UTICA, IL

(815) 667-4241