



USP - CERTIFICATE OF ANALYSIS

11/27/2007

CUSTOMER: _____
CUST. REF: _____ SHIP DATE: _____
PRODUCT: Magnesium Sulfate - USP TRAILER NUMBER: _____
SHELF LIFE: 3 Years BILL OF LADING #: _____
LOT NUMBER: 1107 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 30. 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
USP30	Arsenic (PPM)	~~	3.00	< 3 ppm
ESAP	Boron (PPM)	~~	15.00	< 15.0 ppm
USP30	Chloride as Cl (%)	~~	0.014	.001%
USP30	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP30	ignition Loss (%)	40.00	52.00	50.23%
USP30	Iron	~~	20.00	.29 ppm
USP30	MgSO ₄ (Anhydrous wt. %)	99.00	100.50	99.65%
USP30	MgSO ₄ (As is basis, %)	48.30	52.00	48.63%
USP30	pH 5% Solution	5.00	9.20	6.35
USP30	Selenium (%)	~~	0.003	< .003%
USP30	Mg ²⁺ ID			Present
USP29	SO ₄ ²⁻ ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE

PQ - CORPORATION - UTICA, IL

(815) 667-4241