



## USP - CERTIFICATE OF ANALYSIS

5/25/2010

CUSTOMER: \_\_\_\_\_  
CUST. REF: \_\_\_\_\_ SHIP DATE: \_\_\_\_\_  
PRODUCT: Magnesium Sulfate - USP TRAILER NUMBER: \_\_\_\_\_  
SHELF LIFE: 3 Years BILL OF LADING #: \_\_\_\_\_  
LOT NUMBER: 0510 PO NUMBER #: \_\_\_\_\_  
SHIPPER: \_\_\_\_\_ MANUFACTURED: \_\_\_\_\_  
CUST. SERV.: \_\_\_\_\_

I, certify that this material meets all the requirements of the PQ Corporation sales specification 600546 and the United States Pharmacopeia 32. 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
USP32	Arsenic ( PPM )	~~	3.00	< 3 ppm
USP32	Chloride as Cl (%)	~~	0.014	.002%
USP32	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP32	Ignition Loss (%)	40.00	52.00	51.31%
USP32	Iron	~~	20.00	.52 ppm
USP32	MgSO <sub>4</sub> ( Anhydrous wt. % )	99.00	100.50	99.75%
USP32	MgSO <sub>4</sub> ( As is basis, % )	48.30	52.00	48.68%
USP32	pH 5% Solution	5.00	9.20	6.50
USP32	Selenium ( % )	~~	0.003	< .003%
USP32	Nickel ( % )	~~	~~	< .005%
USP32	Mg <sup>2+</sup> ID			Present
USP32	SO <sub>4</sub> <sup>2-</sup> ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE

PQ - CORPORATION - UTICA, IL

(815) 667-4241