



## USP - CERTIFICATE OF ANALYSIS

3/9/2009

CUSTOMER: \_\_\_\_\_  
CUST. REF: \_\_\_\_\_ SHIP DATE: \_\_\_\_\_  
PRODUCT: Magnesium Sulfate - USP TRAILER NUMBER: \_\_\_\_\_  
SHELF LIFE: 3 Years BILL OF LADING #: \_\_\_\_\_  
LOT NUMBER: 0409 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 31. 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
USP30	Chloride as Cl (%)	~~	0.014	<.001%
USP30	Heavy Metals As Pb (%)	~~	0.001	<.001%
USP30	Ignition Loss (%)	40.00	52.00	51.14%
USP30	Iron	~~	20.00	0.01
USP30	MgSO <sub>4</sub> ( Anhydrous wt. % )	99.00	100.50	99.68%
USP30	MgSO <sub>4</sub> ( As is basis, % )	48.30	52.00	48.64%
USP30	pH 5% Solution	5.00	9.20	6.29
USP30	Selenium ( % )	~~	0.003	< .003%
USP30	Mg <sup>2+</sup> ID			Present
USP30	SO <sub>4</sub> <sup>2-</sup> ID			Present

ATTN:

ANALYST:

SIGNATURE ON FILE

PQ - CORPORATION - UTICA, IL

(815) 667-4241