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Certificate of Analysis

Product Description: Methotrexate, USP and EP Grade_
Catalog Number: 199855_
Lot: 9070H_

Formula: C₂₀H₂₂N₈O₅

CAS #: 59-05-2

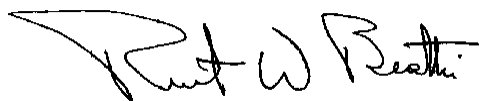
Physical Description: Yellow Powder

Formula Weight: 454.46

Storage: +4°C

Test	Compendium	Specification	Results
Identity Test A	USP	Passes	Passes
Identity Test C	EP	Passes	Passes
Identity Test A	EP	Passes	Passes
Identity Test B	USP	Passes	Passes
Identity Test B	EP	Passes	Passes
Specific Rotation (anhydrous basis)	USP	+19° to +24°	+21.1°
Water	USP	≤12.0%	9.3%
Water	EP	≤13.0%	9.3%
Chromatographic Purity	USP	Passes	Passes
Related Substances	EP	Passes (<1.3%)	Passes (0.4%)
(R)-Methotrexate	EP	≤3.0%	0.6%
Heavy Metals	EP	≤50 ppm	<20 ppm
Residue on Ignition	USP	≤0.1%	0.07%
Sulfated Ash	EP	≤0.1%	0.07%
Organic Volatile Impurities	USP	Passes	Passes

Methotrexate Content (anhydrous basis as $C_{20}H_{22}N_8O_5$)	USP	Not less than 98% and not more than 102.0%	99.6%
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11/22/2005 - Robert Beattie

MP Biomedicals, LLC.

Technical Director

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Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site

Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)