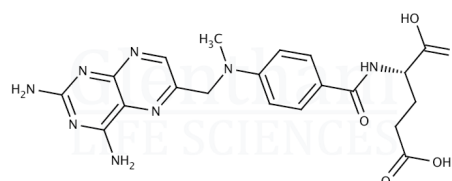


Certificate of Analysis

Product Name	Methotrexate hydrate, USP grade
Glentham Code	GA8916
CAS Number	133073-73-1
MDL Number	MFCD00150847
Additional CAS	59-05-2
Batch Number	725GAB
Molecular Weight	454.44 (anhydrous)
Molecular Formula	$C_{20}H_{22}N_8O_5 \cdot xH_2O$
Storage Temp.	-20°C



Property	Specification	Batch 725GAB
Physical Description	Yellow to dark yellow-orange powder	Yellow powder
Identification (IR)	To conform to standard	Conforms to standard
Identification (UV)	To conform to standard	Conforms to standard
Related Substances	To pass USP limits	Conforms
Any Unspecified Impurity	≤ 0.10%	0.04%
Total Impurities	≤ 1.0%	0.4%
Enantiomeric Purity	≤ 3.0%	1.6%
Water	≤ 12.0%	9.5%
Residue on Ignition	≤ 0.1%	0.08%
Assay (anhydrous basis)	98.0 - 102.0 %	98.7%
Residual Solvents	To conform to requirements of USP	Conforms
Pharmacopoeia Specification(s)	USP	Conforms

Specification Version	v1.0
Manufacture Date	2023-11-18
Re-Test Date	2030-11-30

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glentham.com or contact us using the details above for the current version of this document.

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