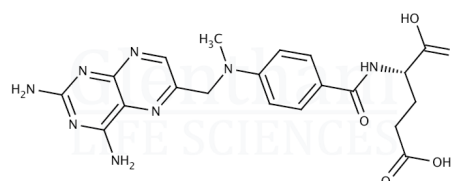


Certificate of Analysis

Product Name Methotrexate hydrate
Glentham Code GA6211
CAS Number 133073-73-1
MDL-Nummer MFCD00150847
Zusätzliche CAS 59-05-2
PubChem SID 310276236
Batch Number 647EDA

Molecular Weight 454.44 (anhydrous)
Molecular Formula $C_{20}H_{22}N_8O_5 \cdot xH_2O$
Storage Temp. -20°C



Property	Specification	Batch 647EDA
Physical Description	Yellow to dark yellow powder	Yellow powder
Identification (IR)	To conform to structure	Entspricht
Specific Optical Rotation ($[\alpha]_{20/D}$)	+18.0 - +23.0 ° (c=0.1, 1M NaOH, anhydrous)	+19.5°
Residue on Ignition	≤ 0.1%	0.03%
Any Individual Impurity	≤ 0.5%	0.35%
Total Organic Impurities	≤ 2.0%	0.7%
Water (KF)	≤ 12.0%	10.9%
Assay	≥ 98.0%	99.3%

Specification Version v1.1
Manufacture Date 2021-08-20
Re-Test Date 2030-12-14

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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