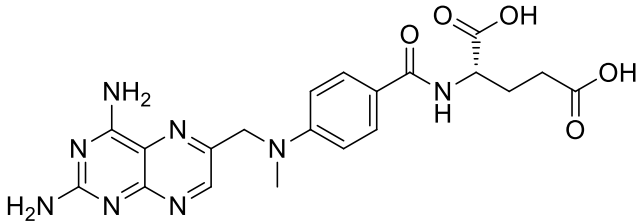


# Certificate of Analysis

MedKoo Cat#:	Product Name:	Lot#:
100610	Methotrexate	T9Z12C10

Chemical name	
(S)-2-(4-(((2,4-diaminopteridin-6-yl)methyl)(methyl)amino)benzamido)pentanedioic acid.	
Synonyms	
alpha-methopterin; amethopterin; Methotrexatum; methylaminopterin; Metotrexato; Abitrexate; Folex; Methotrexate LPF; Mexate; Mexate-AQ; Lantarel; Ledertrexate; Lumexon; Maxtrex; Medsatrexate; Metex; Methoblastin; Metrotex; Novatrex; Texate; Tremetex; MTX. CL-14377; WR-19039; CL 14377; WR 19039; CL14377; WR19039.	
Chemical structure	CAS# and Theoretical analysis
	MedKoo Cat#: 100610 Name: Methotrexate CAS#: 59-05-2 Lot#: T9Z12C10 Chemical Formula: C <sub>20</sub> H <sub>22</sub> N <sub>8</sub> O <sub>5</sub> Exact Mass: 454.17132 Molecular Weight: 454.44

Analysis item	Specifications / Results
Appearance	Yellow to orange crystalline powder.
Structure	<sup>1</sup> H-NMR analysis matches the structure. MS analysis gives the correct molecule weight. Both NMR and MS data are consistent with those reported in the literature.
Purity (HPLC)	>99.0%
Solubility	Soluble in DMSO, DMF, and PBS.
Conclusion	This product conforms with MedKoo's quality standards
Shipping condition	Shipped under ambient temperature as non-hazardous chemical. This product is stable for a few weeks during ordinary shipping and time spent in customs.
Storage condition	Short term storage (weeks): 0 – 4 °C under dry condition Long term storage (months): -20 °C under dry condition
Shelf life	At least 5 years if properly stored.

**CAUTION: NOT FULLY TESTED. FOR RESEARCH ONLY, NOT FOR HUMAN USE**