

METHOTREXATE,  
 SERUM/  
 PLASMA

## Orderable - MTX

Turn Around Time: 4 hours

STAT: 1 hour

### Specimen:

Adult	Pediatric
4.5 mL Green (Lithium Heparin) top Vacutainer tube	0-2 years: 0.5 mL Red Microtainer 2-10 years: 2 mL Red top tube
Serum from a 5 mL Gold top or 6 mL Red top Vacutainer tubes are also acceptable	



**Laboratory:**  
 Core Lab



**Requisition:**  
 GENERAL LABORATORY  
 REQUISITION



**Method of Analysis:**  
 Enzyme Immunoassay



**Test Schedule:**  
 As required

### Collection Information:

**NOTE: LABORATORY ANALYZER IS DOWN FOR MAINTENANCE FROM 0000 to approximately 0300h EXPECT DELAYS DURING THIS TIME.**

Collect blood aseptically in a Vacutainer tube.

Minimum volume required is 3 mL of serum/plasma.

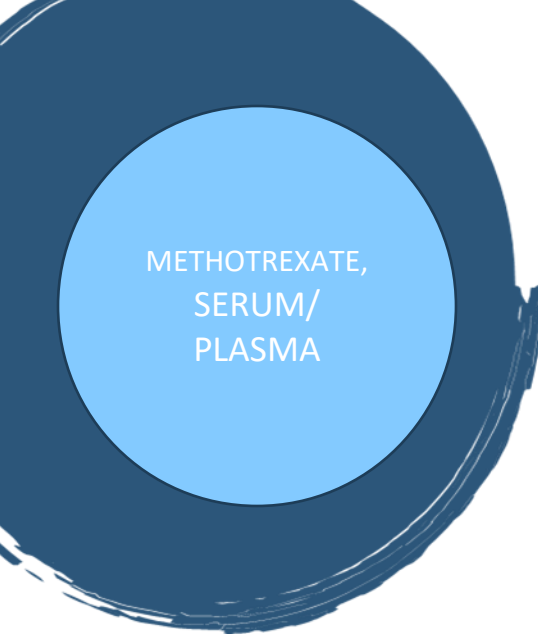
Collected according to dosing protocol.

### Reference Ranges:

High-risk Concentrations for toxicity (after high dose methotrexate):	
24 hours post dose:	>10 µmol/L
48 hours post dose:	>1 µmol/L
72 hours post dose:	>0.2 µmol/L

### Interpretive Comments:

Antineoplastic chemotherapeutic agent. A clear relationship between serum concentration and therapeutic efficacy has not been clearly defined. Serum concentration monitoring has had a significant impact on drug-related toxicity. It is important that patients at high risk for toxicity be identified within 48 hours after initiation of methotrexate administration, since methotrexate toxicity may not be reversible if adequate leucovorin rescue is delayed for more than 42-48 hours.



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**Comments:**

Specimens from patients who have received glucarpidase (carboxypeptidase G2) as a high dose methotrexate rescue therapy should not be tested by the Enzyme Immunoassay due to interference.