
Lab Dept: Chemistry

Test Name: MANGANESE

General Information

Lab Order Codes: MANG

Synonyms: Mn

CPT Codes: 83785 - Manganese

Test Includes: Manganese level reported in ng/mL.

Logistics

Test Indications: Useful in detecting toxic manganese exposure or for nutritional monitoring.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: MNS)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 - 6 days, test setup Tuesday and Friday

Special Instructions: Special collection tube required. See [Container](#) below.

Specimen

Specimen Type: Blood

Container: **Dark Blue top with Red Stripe** [Metal Free Navy (No additive) tube] – available from the laboratory)

Draw Volume: 4.8 mL (Minimum: 1.2 mL) blood

Processed Volume: 1.6 mL (Minimum: 0.4 mL) serum

Collection: Routine venipuncture

Special Processing:

Lab Staff: It is important to follow Mayo's processing instructions for this testing to avoid contamination.

1. Allow the specimen to clot for 30 minutes, then centrifuge to separate the serum from the cellular portion of the sample.

2. Remove the stopper and carefully pour serum into a 7 mL Mayo metal-free, screw-capped plastic vial, avoiding transfer of cellular components or blood. **Do Not** insert a pipet into the serum to accomplish transfer and **Do Not** ream the specimen with a wooden stick to assist with serum transfer.

3. Send specimen refrigerated. All specimens to be stored more than 48 hours should be sent frozen.

4. Forward promptly.

Patient Preparation:

None

Sample Rejection:

Specimens other than serum, gross hemolysis; grossly icteric; unlabeled or mislabeled specimens

Interpretive**Reference Range:**

Age	Range
All ages:	Not established
> or = 18 years	<2.4 ng/mL

Critical Values:

N/A

Limitations:

Reporting limits: 1.0-1000.0 ng/mL

Specimens collected from healthy, unexposed adults have extremely low levels of manganese. Because of the high environmental concentration of manganese, contamination is always a possibility when considering elevated results. Precautions must be taken to ensure the specimen is not contaminated. Metal-free serum collection procedures must be followed and centrifuged serum must be aliquoted into an acid-washed Mayo metal-free vial.

High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium or iodine containing contrast media has been administered, a specimen should not be collected for 96 hours.

Methodology:

Dynamic Reaction Cell/Inductively Coupled Plasma/Mass Spectrometry (DRC-ICP-MS)

References:

[Mayo Medical Laboratories](#) February 2011

Updates:

11/28/2005: Method previously listed as Graphite Furnace Atomic Absorption Spectrometry.

2/22/2011: Updated reference ranges and specimen volumes.

4/21/2016: Updated ref range and reportable range.

2/14/2017: Tube update.