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**Lab Dept:** Chemistry

**Test Name:** METHYLMALONIC ACID (MMA), SERUM

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***General Information***

**Lab Order Codes:** MMA

**Synonyms:** MMA

**CPT Codes:** 83921 – Organic acid, single, quantitative

**Test Includes:** Quantitative MMA level reported in nmol/L.

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***Logistics***

**Test Indications:** Evaluating children with signs and symptoms of methylmalonic Acidemia. Screening for the differential diagnosis of signs and symptoms associated with a variety of causes of cobalamin deficiency. Serum MMA may be a more reliable marker of cobalamin deficiency than direct cobalamin determination.

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: MMAS)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 3 - 5 days, test performed Monday - Friday

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** SST (Gold, marble or red) tube

**Draw Volume:** 4.5 mL (Minimum: 1.5 mL) blood

**Processed Volume:** 1.5 mL (Minimum: 0.5 mL) serum

**Collection:** Routine venipuncture

**Special Processing:** Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at refrigerated temperatures. Forward promptly.

**Patient Preparation:** None

**Sample Rejection:** Specimens other than serum; unlabeled or mislabeled specimens

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### ***Interpretive***

**Reference Range:** < or = 0.40 nmol/L

In pediatric patients, markedly elevated MMA values are consistent with a diagnosis of methylmalonic acidemia.

In adults, moderately time elevated values are indicative of cobalamin deficiency.

**Critical Values:** N/A

**Limitations:** Diet, nutritional status, and age should be considered in the evaluation of serum MMA level.

**Methodology:** Liquid chromatography-tandem mass spectrometry stable isotope dilution analysis (LC-MS/MS).

**References:** [Mayo Medical Laboratories](#) November 2017

**Updates:** 4/18/2011: Storage temp changed from frozen to refrigerated.  
11/6/2017: Updated collection tube