**Lab Dept:** Urine/Stool  

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

### General Information

**Lab Order Codes:** MMAU  

**Synonyms:** MMA, Urine  

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

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

### 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: MMAU)  

**Phone Numbers:**  
- MIN Lab: 612-813-6280  
- STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours  

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

**Special Instructions:** Overnight fast recommended prior to specimen collection. See Collection.

### Specimen

**Specimen Type:** Random urine  

**Container:** Urine container  

**Draw Volume:** 4 mL (Minimum: 1.2 mL) second-voided urine  

**Processed Volume:** Same as Draw Volume  

**Collection:** Second-voided urine specimen after an overnight fast.
Special Processing: Lab Staff: Send urine specimen aliquot frozen in a plastic, 10 mL urine tube. Forward promptly.

Patient Preparation: Second-voided urine specimen after an overnight fast.

Sample Rejection: Warm specimen; specimens other than urine

**Interpretive**

Reference Range: <3.60 mmol/mol creatinine

- In pediatric patients, markedly elevated MMA values are consistent with a diagnosis of methylmalonic acidemia.
- In adults, moderately elevated MMA values indicate a likely 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 August 2015