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. <u>See</u>

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