Lab Dept: Urine/Stool

Test Name: CITRATE EXCRETION, TIMED URINE

General Information

Lab Order Codes: UCIT

Synonyms: Citric Acid, Urine; Urinary Citrate Excretion

CPT Codes: 82507 - Citrate

Test Includes: Urine Citrate concentration in mg/specimen. Specimens collected for other than a 24 hour time period are reported in mg/dL for which reference values are not established.

Logistics

Test Indications: Useful for diagnosing risk factors for patients with calcium kidney stones and for monitoring results of therapy in patients with calcium stones or renal tubular acidosis.

Lab Testing Sections: Urine/Stool - Sendouts

Referred to: Mayo Medical Laboratories (test #9329)

Phone Numbers:

Minneapolis: 612-813-6280

Saint Paul: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 1 - 3 days, test set up Monday – Friday, continually

Special Instructions: Submit an entire 24-hour urine collection. Contact laboratory to add Boric Acid (10 g) preservative to the urine container prior to starting the collection. This will yield the best possible specimen. Mix the specimen each time more urine is added. **Refrigerate specimen** during and after collection. See Patient Preparation.

Note: Starting and ending times of collection are required for a timed urine collection and must be documented electronically or on the proper request form.

Specimen

Specimen Type:	Urine, timed collection
Container:	Plastic leakproof container (Boric Acid 10 g as preservative). Urine GUARD® collection container is preferred for a timed urine sample.
Draw Volume:	Submit an entire 24-hour urine collection
Processed Volume:	5.0 mL (Minimum: 1.0 mL) aliquot from a 24 hour collection
Collection:	Add 10g of boric acid as preservative at start of collection. Refrigerate specimen during and after collection. Preservative can be added at the end of the collection in the lab, but it is a better specimen if the preservative is added before starting the collection. If added at the end, the preservative must be mixed with the specimen within 4 hours of completion of the collection.
Special Processing:	Lab Staff: Measure total urine volume. Mix the specimen well before taking 5.0 mL (Minimum: 1.0 mL) aliquot. Store and send refrigerated or frozen in a plastic, 13 mL urine tube. Patient's age and 24 hour volume are required on request form for processing.
Patient Preparation:	Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible.
Sample Rejection:	Specimens other than timed or random urine, warm specimens, unlabeled or mislabeled specimens

Interpretive

Reference Range:	Lower limit of normal at age 20 is 150 mg/specimen and increases at a rate of 7.11 mg/specimen for each year over age 20. Upper limit: 1191 mg/specimen for each age level No pediatric reference values at this time. No reference ranges for ages greater than 60. The reference value is for a 24 hour collection. Specimens collected for other than a 24 hour time period are reported in units of mg/dL for which reference values are not established.
Critical Values:	N/A
Limitations:	N/A
Methodology:	Enzymatic

Contraindications:

Drugs that lower systemic pH, potassium, and/or magnesium lower urine citrate and are to be avoided in patients with tendency to calcium stones.

Conversely, drugs that raise systemic pH, potassium, and/or magnesium may raise urine citrate and should be considered in treating patients or interpreting results.

References:

Mayo Medical Laboratories Web Page June 2009