
Lab Dept: Urine/Stool

Test Name: CITRATE EXCRETION, PEDIATRIC RANDOM URINE

General Information

Lab Order Codes: UCITR

Synonyms: Citric Acid, Urine; Urinary Citrate Excretion

CPT Codes: 82507 - Citrate

Test Includes: Urine Citrate concentration in mg/dL, Creatinine concentration in mg/dL and Citrate/Creatinine Ratio. Reference values are not established for random specimens.

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.

A timed 24-hour urine collection is the preferred specimen for measuring and interpreting this urinary analyte. Random collections normalized to urinary creatinine may be of some clinical use in patients who cannot collect a 24-hour specimen, typically small children. Therefore, this random test is offered for children <16 years old.

Lab Testing Sections: Urine/Stool - Sendouts

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

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

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

Special Instructions: Submit an entire random urine collection. **Refrigerate specimen** during and after collection. See [Patient Preparation](#).

Specimen

Specimen Type: Urine, random collection

Container:	Plastic leakproof container
Draw Volume:	Submit an entire random collection
Processed Volume:	4 mL (Minimum: 1 mL) aliquot from a random urine collection
Collection:	Routine random urine collection
Special Processing:	Lab Staff: Mix the specimen well before taking 4 mL (Minimum: 1 mL) aliquot. Store and send refrigerated in a plastic, 6 mL urine tube Mayo Supply T465.
Patient Preparation:	Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible.
Sample Rejection:	Unlabeled or mislabeled specimens

Interpretive

Reference Range: No pediatric reference values at this time.

Interpretation:

A low value represents a potential risk for kidney stone formation/growth. Patients with low urinary citrate, and new or growing stone formation may benefit from adjustments in therapy known to increase urinary citrate excretion.

Very low levels suggest investigation for the possible diagnosis of metabolic acidosis (e.g., renal tubular acidosis).

For children ages 5 to 18, a ratio of <0.176 mg citrate/ mg creatinine is below the 5% reference range and considered low.

Critical Values: N/A

Limitations: 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.

Methodology: Enzymatic

References: [Mayo Medical Laboratories Web Page](#) October 2020