
Lab Dept: Urine/Stool

Test Name: REDUCING SUBSTANCES, URINE

General Information

Lab Order Codes: URS

Synonyms: Urine Reducing Substance; Carbohydrate, urine; Disaccharide screening; Monosaccharide screening

CPT Codes: 81002 – urinalysis, by dip stick or tablet, non-automated, without microscopy

Test Includes: Reducing substance in urine

Logistics

Test Indications: Useful for detecting any reducing substance in urine which may be present as a result of an inherited metabolic disorder.

Lab Testing Sections: Urinalysis

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 hours

Special Instructions: Send to lab within 30 minutes of collection.

Specimen

Specimen Type: Urine

Container: Urine cup

Draw Volume: 12 mL (Minimum: 1 mL) urine

Processed Volume: Entire volume submitted

Collection: A specimen collected by catheterization is optimal; however, a clean-catch or mid-stream specimen is also acceptable. Random, voided specimens will be accepted, but are the least desirable and are not recommended if a urine culture is also being requested. In all cases, a first morning specimen is most desirable.

Collect a clean-catch urine specimen as follows:

Males: Clean glans with soap and water. Rinse area with wet gauze pads. While holding foreskin retracted, begin voiding. After several mL's have passed, collect midstream portion without stopping flow of urine. Place the cap on the cup and tighten securely. Refrigerate specimen after collection and promptly forward to the lab.

Females: Thoroughly clean urethral area with soap and water. Rinse area with wet gauze pads. While holding labia apart, begin voiding. After several mL's have passed, collect midstream portion without stopping the flow of urine. Place the cap on the cup and **tighten securely**. Refrigerate specimen after collection and promptly forward to the lab.

Note: Indicate type of specimen (catheterized or void) and time of collection on the label.

Special Processing: Transport immediately since glucose and other reducing substances are consumed by bacteria. Refrigerate specimen if it cannot be transported or processed immediately.

Patient Preparation: [See Collection](#)

Sample Rejection: <1 mL urine submitted, contamination with feces; urine in cotton balls; specimen decomposition (e.g., pH >9.0); bacterial overgrowth; mislabeled or unlabeled specimens

Interpretive

Reference Range: Negative

Critical Values: N/A

Limitations: Clinitest is not specific for glucose and will react with sufficient quantities of any reducing substance in the urine. These include lactose, fructose, galactose, and pentoses.

Methodology: Clinitest®, Copper Reduction Tablet Test

Contraindications: **Interfering Substances:**

Creatinine/Urine Acid	May cause false positive
Homogentisic Acid	Positive
Ascorbic Acid (large amounts)	False trace positive (false positive, brown color)
Cephalosporins (Keflin, etc)	Negative
L-Dopa (large amounts)	False positive
Nalidixic Acid	False positive
Probenecid	False positive
x-ray dye (diatrizoates)	Black color
Hydrogen peroxide	May inhibit positive test
<p>Note: Other drugs implicated in copper reduction are amino acids, caronamide, choral, chloroform, chloramphenicol, formaldehyde, hippuric acid, isoniazid, thiazides, oxytetracycline, p-aminosalicylic acid, penicillin, phenols, streptomycin, phenothiazine and sulfonamides.</p>	

References:

Bruist NR, British Medical Journal 2:745

Clinitest® Package Insert, Bayer Corporation, Diagnostic Division

Strasinger SK (1989) Urinalysis and Body Fluids, 2nd ed, FA Davis Company