

**TEST CHANGE**

**Porphyrins and Porphobilinogen (PBG), Urine**

2002181, PORUFPBGU

**Specimen Requirements:**

**Patient Preparation:**

**Collect:** 24-hour or random urine. Refrigerate 24-hour specimens during collection.

**Specimen Preparation:** Protect from light. Transfer 8 mL aliquot to an ARUP [amber transport tube](#) ~~Amber Transport Tube~~. (Min: 4 mL) Record total volume and collection time interval on transport tube and test request form.

**Transport Temperature:** Frozen.

**Unacceptable Conditions:** Body fluids other than urine.

**Remarks:**

**Stability:** Ambient: Unacceptable; Refrigerated: 4 days; Frozen: 1 month

**Methodology:** [Quantitative](#) High Performance Liquid Chromatography (HPLC)/~~Ion Exchange Chromatography~~/Quantitative Spectrophotometry/[Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry](#)

**Performed:** [Sun-Sat](#)~~Mon-Fri~~

**Reported:** 2-5 days

**Note:** Urine porphyrins are useful for the evaluation of cutaneous photosensitivity to exclude porphyria cutanea tarda (PCT). Urine porphobilinogen (PBG) is useful for the evaluation of neurologic and/or psychiatric symptoms to exclude acute porphyrias such as acute intermittent porphyria (AIP).

**CPT Codes:** 84120; 84110

**New York DOH Approval Status:** This test is New York DOH approved.

**Interpretive Data:**

Results are normalized to creatinine concentration and reported as a ratio of amounts (micromoles of porphyrin/moles of creatinine).

[Porphobilinogen \(PBG\), Urine](#)

Results for random urine specimens are normalized to creatinine (CRT) concentration and reported as a ratio of amounts (millimoles of PBG/mole of creatinine).

Porphobilinogen (PBG) in a random urine specimen is used to evaluate an attack of acute porphyria. Slight increases in urinary PBG are associated with acute porphyrias other than acute intermittent porphyria (AIP) and may indicate a resolving or treated acute porphyria.

Urinary PBG in excess of two times the upper reference limit is consistent with acute porphyria.

Per 24h calculations are provided to aid interpretation for collections with a duration of 24 hours and an average daily urine volume. For specimens with notable deviations in collection time or volume, ratios of analytes to a corresponding urine creatinine concentration may assist in result interpretation.

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~~This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.~~

Reference Interval:

| Test Number | Components  | Reference Interval                                  |             |               |
|-------------|---|---|-------------|---------------|
|             |   | Age   | Male (mg/d) | Female (mg/d) |
|             | Creatinine, Urine - per 24h   |   |             |               |
|             |   | 3-8 years   | 140-700     | 140-700       |
|             |   | 9-12 years  | 300-1300    | 300-1300      |
|             |   | 13-17 years   | 500-2300    | 400-1600      |
|             |   | 18-50 years   | 1000-2500   | 700-1600      |
|             |   | 51-80 years   | 800-2100    | 500-1400      |
|             |   | 81 years and older                                  | 600-2000    | 400-1300      |
|             | Porphobilinogen <del>(PBG)</del> , Urine - <u>ratio to CRT per volume</u> | 0.0 - <u>0.2 mmol/mol CRT</u> <del>8.8 μmol/L</del> |             |               |
|             | Uroporphyrin - ratio to CRT   | 0-4 μmol/mol CRT                                    |             |               |
|             | Heptacarboxylate - ratio to CRT   | 0-2 μmol/mol CRT                                    |             |               |
|             | Porphobilinogen (PBG), Urine -per 24h                                     | <u>0.4 - 1.50</u> <del>11.0</del> μmol/d            |             |               |
|             | Coproporphyrin I - ratio to CRT   | 0-6 μmol/mol CRT                                    |             |               |
|             | Coproporphyrin III - ratio to CRT   | 0-14 μmol/mol CRT                                   |             |               |

**HOTLINE NOTE:** There is a component change associated with this test. One or more components have been added or removed. Refer to the Hotline Test Mix for interface build information.