

# PORPHYRINS; URINE



**LAB #:**  
**PATIENT:** Sample Patient  
**ID:** PATIENT-S-0000  
**SEX:** Male  
**AGE:** 5

**CLIENT #:** 12345  
**DOCTOR:**  
 Doctor's Data, Inc.  
 3755 Illinois Ave.  
 St. Charles, IL 60174

PORPHYRINS	RESULT nmol/g creat	REFERENCE RANGE	PERCENTILE	
			95 <sup>th</sup>	99 <sup>th</sup>
Uroporphyrins	73	< 30		
Heptacarboxylporphyrins	0.7	< 6		
Hexacarboxylporphyrins	0.92	< 5.2		
Pentacarboxylporphyrins	2.5	< 4.5		
Coproporphyrin I	22	< 36		
Coproporphyrin III	110	< 105		
Copro I/Copro III	0.2	< 0.8		
Total Porphyrins	230	< 160		
Precoproporphyrin I*	0.77	< 2		
Precoproporphyrin II*	0.15	< 1.2		
Precoproporphyrins III*	0	< 2		
Total Precoproporphyrins*	0.92	< 5.2		
Precoproporphyrins*/Uro	0.013	< 0.25		

Urinary porphyrins are oxidized intermediate metabolites of heme biosynthesis and can serve as biomarkers of disorders in heme production. Abnormal porphyrin profiles have been associated with genetic disorders, poor nutritional status, oxidative stress, and high level exposure to toxic chemicals or toxic metals. The ratio of Precoproporphyrins-to-Uroporphyrins is reported to increase the sensitivity for detecting abnormalities in individuals with low heme biosynthesis. Alcohol, sedatives, analgesics, antibiotics estrogens and oral contraceptives can affect the levels of urinary porphyrins. Anemia, pregnancy, and liver disease can also affect porphyrin metabolism. The Urine Porphyrins test is best used in conjunction with urine toxic metals pre- and post-provocation testing.

### Porphyrins Pattern Recognition Guide:

Mercury ↑ Penta, ↑ Copro III, ↑ Precopros, ↑ Precopros : Uros  
Arsenic ↑ Uros, ↑ Copro I : Copro III  
Lead ↑ Copro III  
Hexachlorobenzene, Dioxin ↑ Uros  
Methylchloride,  
Polyvinylchloride, ↑ Copros  
Polybrominated biphenyl

### CREATININE

	RESULT mg/dL	REFERENCE RANGE	PERCENTILE				
			2.5 <sup>th</sup>	16 <sup>th</sup>	MEAN	84 <sup>th</sup>	97.5 <sup>th</sup>
Creatinine	79	25- 180					

### SPECIMEN DATA

**Comments:**  
 Date Collected: **6/23/2009**      Method: **HPLC**      Collection Period: **Random**  
 Date Received: **6/29/2009**      <dl: **less than detection**      Volume:  
 Date Completed: **7/8/2009**

\*Precoproporphyrins are atypical porphyrins associated with high-level mercury exposure as described in Woods, J et al. J. Toxicol. Env. Hlth. 40,235-46(1993) and Morita, Y et al. Porphyrins 14,93-7(2005). Precoproporphyrins are intended for Research Use Only. Not for use in diagnostic procedures.

# Abbreviated Porphyrinogen/Heme Metabolism

