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**Reporting Title:** Protoporphyrins, Fractionation, RBC**Performing Location:** Rochester**Ordering Guidance:**

This test is for assessment for protoporphyria, an erythropoietic porphyria. The preferred test for lead toxicity in children is blood lead. For more information see PBDV / Lead, Venous with Demographics, Blood or PBDC / Lead, Capillary, with Demographics, Blood. The preferred screening test for suspicion of a hepatic porphyria is urine porphyrins. For more information see PQNRU / Porphyrins, Quantitative, Random, Urine.

**Necessary Information:**

1. Volume of packed cells and total volume of erythrocyte suspension (red cells + saline) are required and must be sent with specimen.
2. Include a list of medications the patient is currently taking.

**Specimen Requirements:**

All porphyrin tests on erythrocytes can be performed on 1 tube.

Patient Preparation: Patient should abstain from alcohol for 24 hours prior to specimen collection.

Collection Container/Tube:

Preferred: Green top (sodium heparin)

Acceptable: Dark blue top (metal free heparin), green top (lithium heparin), or lavender top (EDTA)

Submission Container/Tube: Plastic vial

Specimen Volume: Washed erythrocyte suspension

Collection Instructions: Collect and process whole blood specimen as follows:

1. Transfer entire specimen to a 12-mL graduated centrifuge tube.
2. Centrifuge specimen at 4 degrees C for 10 minutes at 2000 rpm.
3. Record volume of packed cells and the total volume of the specimen.
4. Discard supernatant plasma.
5. Wash packed erythrocytes 2 times by resuspension of at least an equal amount of cold 0.9% saline, mix, and centrifuge for 5 minutes at 2000 rpm, discarding supernatant after each washing.
6. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix.
7. Transfer washed erythrocytes into a plastic vial and freeze.

**Specimen Minimum Volume:**

1 mL

**Forms:**

If not ordering electronically, complete, print, and send a Biochemical Genetics Test Request (T798) with the specimen.

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	14 days	
	Refrigerated	14 days	

**Ask at Order Entry (AOE) Questions:**

Test ID	Question ID	Description	Type	Reportable
PPFWE	BG571	Total cell suspension	Plain Text	Yes
PPFWE	BG572	Packed cell volume	Plain Text	Yes

**Result Codes:**

Result ID	Reporting Name	Type	Unit	LOINC®
31932	Zinc-Complexed Protoporphyrin	Alphanumeric	mcg/dL	2895-1
31933	Free Protoporphyrin	Alphanumeric	mcg/dL	94491-8
INTP6	Interpretation	Alphanumeric		59462-2
BG571	Total cell suspension	Alphanumeric		94496-7
BG572	Packed cell volume	Alphanumeric		94497-5

LOINC and CPT codes are provided by the performing laboratory.

**Supplemental Report:**

No

**CPT Code Information:**

82542

**Reference Values:**

FREE PROTOPORPHYRIN

<20 mcg/dL

ZINC-COMPLEXED PROTOPORPHYRIN

<60 mcg/dL