

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.

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