
Reporting Title: ALA Dehydratase, RBC**Performing Location:** Rochester**Ordering Guidance:**

This assay is not useful in assessment of lead intoxication as it reactivates aminolevulinic acid dehydratase that has been inhibited by lead. The preferred test for lead toxicity is PBDV / Lead, Venous, with Demographics, Blood.

Necessary Information:

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

Specimen Requirements:

Patient Preparation: Abstinence from alcohol is essential for at least 24 hours prior to specimen collection as ethanol suppresses aminolevulinic acid dehydratase activity, leading to false-positive results.

Collection Container/Tube:

Preferred: Green top (sodium heparin)

Acceptable: Lavender top (EDTA) or green top (lithium heparin)

Submission Container/Tube: Plastic vial

Specimen Volume: Entire 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.

Specimen Minimum Volume:

1 mL of washed and resuspended erythrocytes

Forms:

New York Clients-Informed consent is required. Document on the request form or electronic order that a copy is on file.

The following documents are available:

- Informed Consent for Genetic Testing (T576)
- Informed Consent for Genetic Testing-Spanish (T826)

| Specimen Type | Temperature | Time | Special Container |
|---------------|--------------------|---------|-------------------|
| Washed RBC | Frozen (preferred) | 7 days | |
| | Refrigerated | 14 days | |
| | Ambient | 4 days | |

Ask at Order Entry (AOE) Questions:

| Test ID | Question ID | Description | Type | Reportable |
|---------|-------------|-----------------------|------------|------------|
| ALADW | BG573 | Total Cell Suspension | Plain Text | Yes |
| ALADW | BG574 | Packed Cell Volume | Plain Text | Yes |

Result Codes:

| Result ID | Reporting Name | Type | Unit | LOINC® |
|-----------|-----------------------|--------------|------------|---------|
| 31946 | ALA Dehydratase | Alphanumeric | nmol/L/sec | 2813-4 |
| 31948 | Interpretation | Alphanumeric | | 59462-2 |
| BG573 | Total Cell Suspension | Alphanumeric | | 94496-7 |
| BG574 | Packed Cell Volume | Alphanumeric | | 94497-5 |
| 606469 | Reviewed By | Alphanumeric | | 18771-6 |

LOINC and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82657

Reference Values:

Reference ranges have not been established for patients who are younger than 16 years of age.

> or =4.0 nmol/L/sec
3.5-3.9 nmol/L/sec (indeterminate)
<3.5 nmol/L/sec (diminished)