

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.

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
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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)