Lab Dept: Chemistry

Test Name: ACETYLCHOLINESTERASE, RBC

General Information

Lab Order Codes: ACER

Synonyms: Cholinesterase, RBC; RBC Acetyl Cholinesterase; Carbamates

CPT Codes: 82482 – Cholinesterase; RBC

Test Includes: Acetylcholinesterase RBC’s level measured in U/g of hemoglobin.

Logistics

Test Indications: Useful for detecting effects of remote (months) past exposure to cholinesterase inhibitors (organophosphate insecticide poisoning). For more recent exposure, see Pseudocholinesterase.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (MML Test: 8522/ACHS)

Phone Numbers:
- MIN Lab: 612-813-6280
- STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 4 - 7 days, test is set up Tuesday and Friday

Special Instructions: EDTA whole blood must arrive at the reference laboratory within 72 hours of collection.

Specimen

Specimen Type: Whole blood

Container: Lavender top (EDTA) tube

Draw Volume: 4 mL (Minimum: 2.5 mL) blood

Processed Volume: Same as Draw Volume. See Special Processing.

Collection: Routine venipuncture
**Special Processing:** Lab Staff: Do Not centrifuge. Specimens should remain in the original collection container. Forward promptly. Specimen must arrive at reference laboratory within 72 hours of collection.

Collection date is required on request form.

**Patient Preparation:** 4 hour fast preferred, non-fasting acceptable

**Sample Rejection:** Specimens other than EDTA whole blood; hemolyzed specimens; mislabeled or unlabeled specimens

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**Interpretive**

**Reference Range:** 31.2 – 61.3 U/g of hemoglobin

**Note:** Activities less than normal are suspect for exposure to certain insecticides.

**Critical Values:** N/A

**Limitations:** Make sure the potential offending agent is, indeed, an AChe inhibitor. Pseudocholinesterase activity in serum is the appropriate test for succinylcholine sensitivity to anesthesia.

**Methodology:** Spectrophotometric-Thiocholine Production

**References:** Mayo Medical Laboratories Web Page (January 2013)

**Updates:** 1/10/2011: Change in specimen type required, change in reference ranges.