
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 [Pseudochoolinesterase](#).

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

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.