
Lab Dept: Chemistry

Test Name: TEGRETOL EPOXIDE LEVEL

General Information

Lab Order Codes: EPOX

Synonyms: Carbamazepine-10,11-Epoxyde, Tegretol®, Epoxyde, CBZ

CPT Codes: 80156 – Carbamazepine, total
80161- Drug assay Carbamazepine -10,11-Epoxyde

Test Includes: Carbamazepine and Carbamazepine-10,11 Epoxyde levels reported in µg/mL.

Logistics

Test Indications: Antiepileptic (Anticonvulsant) therapeutic drug monitoring

Lab Testing Sections: Chemistry - Sendouts

Referred to: MedTox Laboratories (MedTox Test: 150)

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

Test Availability: Daily, 24 hours

Turnaround Time: 2 days

Special Instructions: Trough levels are most reproducible.

Specimen

Specimen Type: Blood

Container: Red top NO GEL tube
Alternate: Green top NO GEL tube

Draw Volume: 6 mL (Minimum: 1.5 mL) blood

Processed Volume: 2 mL (Minimum: 0.5 mL) serum/plasma

Note: Submission of the minimum volume results in an elevated reporting limit and inability to repeat analysis.

Collection:	Routine venipuncture
Special Processing:	Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into a screw-capped round bottom plastic vial. Store and ship at refrigerated temperatures. Forward promptly. Specimen stable ambient for 3 days, longer (timeline unspecified by reference lab) if frozen or refrigerated.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimens. Gel barrier tubes are not recommended.

Interpretive

Reference Range:	Carbamazepine:	4.0 – 12.0 µg/mL
	Carbamazepine-10,11-Epoide:	0.4 – 4.0 µg/mL
Critical Values:	Carbamazepine:	>20.0 µg/mL
	Carbamazepine-10,11-Epoide:	>10.0 µg/mL
Limitations:	Carbamazepine:	0.5 µg/mL reporting limit
	Carbamazepine 10, 11-Epoide:	0.2 µg/mL reporting limit

Methodology: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)

References: [MedTox Laboratories](#) December 2023

Updates:
 1/7/2015: CPT update
 11/4/2016: Tube update
 12/19/2017: Critical value update. Carb previously >15 and Epoide >7. Method update.
 12/18/2023: Updated CPT code, turnaround time, and minimum volume. Added specimen stability.