



<u>Procedure</u>	<u>Result</u>	<u>Units</u>	<u>Ref Interval</u>	<u>Accession</u>	<u>Collected</u>	<u>Received</u>	<u>Reported/ Verified</u>
Carbamazepine 10-11 Epoxide	4.6	ug/mL		18-243-900118	31-Aug-18	31-Aug-18	31-Aug-18
Carbamazepine, Total	12.5 H	ug/mL	[4.0-12.0]	18-243-900118	31-Aug-18	31-Aug-18	31-Aug-18
					13:02:00	13:02:00	13:04:20
					13:02:00	13:02:00	13:04:20

31-Aug-18 13:02:00 Carbamazepine 10-11 Epoxide:
 INTERPRETIVE INFORMATION: Carbamazepine-10, 11-Epoxide

Carbamazepine-10, 11 Epoxide
 Therapeutic Range: Not well established

Toxic: Greater than 15.0 ug/mL

Total Carbamazepine
 Therapeutic Range: 4.0-12.0 ug/mL

Toxic: Greater than 15.0 ug/mL

The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. The carbamazepine metabolite, Carbamazepine-10, 11-Epoxide, has anticonvulsant activity and a proposed therapeutic range of 0.4-4 µg/mL.

A rare, adverse drug reaction to carbamazepine therapy includes Stevens-Johnson syndrome or toxic epidermal necrolysis. Patients of Asian ancestry with the presence of the HLA-B*15:02 have an increased risk for this carbamazepine-induced, life-threatening reaction. Pharmacogenetic testing for HLA-B*15:02 is recommended prior to treatment for patients at risk of carbamazepine hypersensitivity. This information has been included in the FDA-approved label for carbamazepine (<https://www.accessdata.fda.gov/scripts/cder/daf/index.cfm?event=overview.process&varApplNo=016608>) and in the guideline from the Clinical Pharmacogenetics Implementation Consortium (<https://www.pharmgkb.org/guidelines>). [HLA-B*15:02 Genotyping, Carbamazepine Hypersensitivity, ARUP test code 2012049.]

A combination of therapeutic drug monitoring with HLA-B*15:02 pharmacogenetics genotyping may benefit patients at increased risk of developing carbamazepine-induced adverse events due to rare genotypes other than the HLA-B*15:02 variant allele.

See Compliance Statement B: www.aruplab.com/CS

* Abnormal, # = Corrected, C = Critical, f = Footnote, H = High, L = Low, t = Interpretive Text, @ = Reference Lab