

CARBAMAZEPINE, SERUM
(CLIA)

ug/mL

4.00-12.00

Interpretation

RESULT IN ug/mL	REMARKS
4-12	Therapeutic range
>15	Toxic range

- Note :**
1. Co-administration of Phenytoin / Valproic acid / Erythromycin increases the rate of metabolism of Carbamazepine thereby reducing blood concentration
 2. Itraconazole and grape fruit juice increase Carbamazepine levels

Comments

Carbamazepine (Tegretol) is commonly used in the treatment of Generalized tonic-clonic, Partial & Partial complex seizures. It has also been used in the treatment of pain associated with Trigeminal neuralgia. In early stages of therapy the half life is approximately 24 hours whereas in chronic therapy it is reduced to 15 to 20 hours. Due to relatively long half life of Carbamazepine, the specimen yielding most useful information is the trough concentration. Peak levels collected 4-8 hours after the oral dose is recommended in cases suspected of mild intoxication. Any reduction in liver function results in drug accumulation. The active metabolite is carbamazepine 10, 11 epoxide, which can also have therapeutic and toxic effects, especially in children.