
Lab Dept: Chemistry

Test Name: IMIPRAMINE AND DESIPRAMINE LEVEL

General Information

Lab Order Codes: IMIP

Synonyms: Norpramin®, Tofranil®

CPT Codes: 80335 – Antidepressants, tricyclic and other cyclical; 1 or 2
OR
G0480 – Drug, test, definitive (if appropriate)

Test Includes: Imipramine and Desipramine total concentration, Desipramine only, both reported in ng/mL.

Logistics

Test Indications: Antidepressant therapeutic drug monitoring, compliance and assessing potential toxicity.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (Test: IMIPR)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 – 4 days

Special Instructions: Do not use separator tubes for collection. It is recommended that specimens be drawn 12 hours after the last dose.

Specimen

Specimen Type: Blood

Container: Red NO GEL tube

Draw Volume: 3 mL (Minimum: 0.75 mL) blood

Processed Volume: 1 mL (Minimum: 0.25 mL) serum

Collection:	Routine venipuncture
Special Processing:	Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Serum must be removed from cells within 2 hours of collection. Store and ship at refrigerated temperatures.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimens; gross hemolysis; gross lipemia; grossly icteric; drawn in gel tube

Interpretive

Reference Range:

Desipramine:	Therapeutic: 100 - 300 ng/mL
Imipramine and Desipramine::	Therapeutic: 175 - 300 ng/mL
<p>Interpretation: Most individuals display optimal response to imipramine when combined serum levels of imipramine and desipramine are between 175-300 ng/mL. Risk of toxicity is increased with levels of > or = 300 ng/mL.</p> <p>Most individuals display optimal response to desipramine with serum levels of 100-300 ng/mL. Risk of toxicity is increased with desipramine levels > or = 300 ng/mL.</p> <p>Some individuals may respond well outside of these ranges, or may display toxicity within the therapeutic range, thus interpretation should include clinical evaluation.</p> <p>Therapeutic ranges are based on specimen drawn at trough (immediately before the next dose).</p>	

Critical Values: N/A, see Interpretation comment above

Limitations: This test cannot be performed on whole blood. Serum must be separated from cells within 2 hours of drawing; if serum is not removed within this time, tricyclic antidepressant levels may be falsely elevated due to drug release from RBCs. Specimens that are obtained from gel tubes are also not acceptable, as the drug can absorb on the gel and lead to falsely decreased concentrations.

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

References: [Mayo Medical Laboratories](#) (April 2016)

Updates:

3/25/2004: Test moved from MedTox Laboratories to Mayo Medical Laboratories.

10/28/2009: Note new reference values. Plasma samples are no longer accepted.

10/25/2012: Toxic level concentrations updated.

1/5/2015: CPT updated

11/9/2015: Ref range and method update. Critical values removed.