Lab Dept: Chemistry

Test Name: ITRACONAZOLE LEVEL

General Information

Lab Order Codes:	ITRZ
Synonyms:	Antimicrobial Assay, Itraconazole; Sporanox
CPT Codes:	80299 – Quantitation of drug not elsewhere specified
Test Includes:	Itraconazole and Hydroxyitraconazole levels reported in mcg/mL.

Logistics

Test Indications:	Verifying systemic absorption of orally administered itraconazole. The test is indicated in patients with life-threatening fungal infections and in patients considered at risk for poor absorption or rapid clearance.
Lab Testing Sections:	Chemistry - Sendouts
Referred to:	Mayo Medical Laboratories (Test# 81247/ITCON)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	1 - 3 days, days test set up varies
Special Instructions:	N/A

Specimen

Specimen Type:	Blood
Container:	Red top (plain, no gel) tube
Draw Volume:	3 mL (Minimum: 0.6 mL) blood
Processed Volume:	1 mL (Minimum: 0.2 mL) serum
Collection:	Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship refrigerated.

Patient Preparation: None

Sample Rejection: Specimens other than serum; mislabeled or unlabeled specimens; gross hemolysis; gross lipemia; grossly icteric; use of gel tube

Interpretive

Reference Range:

Metabolite	Reference Range (mcg/mL)
Itraconazole (trough)	>0.5 mcg/mL (localized infection) >1.0 mcg/mL (systemic infection)
Hydroxyitraconazole	No therapeutic range established; activity and serum concentration are similar to parent drug.

Critical Values: N/A

Limitations: Enteropathy, H2-histamine receptor blockers, hepatic enzyme inducers, and other variables can result in low to non-detectable serum levels with concomitant high risk of therapeutic failure.

AIDS patients and organ transplant patients receiving immunosuppressive therapy tend to have lower serum itraconazole levels on standard doses and are thus at high risk of therapeutic failure.

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

References: Mayo Medical Laboratories Web Page (June 2013)

Updates: 1/14/2010: Plasma or CSF no longer accepted specimen type. Units change from ug/mL to mcg/mL. Reference range change.
7/31/2012: Moved from frozen to refrigerated storage and transport.
6/24/2013: Method change previously listed as HPLC. Note, no change in reference values or specimen requirements.