
Lab Dept: Chemistry

Test Name: PIPECOLIC ACID, SERUM

General Information

Lab Order Codes: PIPE

Synonyms: N/A

CPT Codes: 82542 – Column chromatography, includes mass spectrometry, if performed, non-drug analytes, not elsewhere specified, qualitative or quantitative, each specimen

Test Includes: Pipecolic Acid reported in nmol/mL.

Logistics

Test Indications: Differential diagnosis between disorders of peroxisomal biogenesis and disorders with loss of a single peroxisomal function.

Lab Testing Sections: Chemistry – Sendouts

Referred to: Mayo Medical Laboratories (MML Test: PIPA)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 - 31 days

Special Instructions: Fasting is recommended. See [Patient Preparation](#)

Specimen

Specimen Type: Blood

Container: SST (Marble, gold or red top tube)

Draw Volume: 4.5 mL (Minimum: 3 mL) blood

Processed Volume: 1.5 mL (Minimum: 1 mL) serum

Collection: Routine venipuncture

Special Processing: Lab Staff: Centrifuge specimen within 45 minutes of draw, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at frozen temperatures. Forward promptly.

Patient Preparation: Patient should fast 12 hours or more, infants and small children just before next feeding.

Sample Rejection: Warm; cold refreeze; mislabeled or unlabeled specimens

Interpretive

Reference Range:

Age	Range (nmol/mL)
<6 months:	<or =6.0 nmol/mL
6 months to <1 year:	<or =5.9 nmol/mL
1 – 17 years:	<or =4.3 nmol/mL
>or=18 years:	<or =7.4 nmol/mL
<p>Interpretation: Elevated pipecolic acid levels are seen in disorders of peroxisomal biogenesis; normal levels are seen in disorders with loss of a single peroxisomal function.</p> <p>Abnormal levels of pipecolic acid should be interpreted together with the results of other biochemical markers of peroxisomal disorders, such as plasma C(22)-C(26) very long chain fatty acids, phytanic acid, pristanic acid, RBC plamalogen, and bile acid intermediates.</p>	

Critical Values: N/A

Limitations: Newborn with disorders of peroxisomal biogenesis often have normal levels of pipecolic acid which increase with age.

Abnormal results may reflect either prematurity or nongenetic liver and/or renal disease.

Methodology: Gas Chromatography-Mass Spectrometry (GC-MS).

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

Updates: 5/8/2012: Reference range updates.
1/26/2016: CPT update