Test Definition: AMOBS

Amobarbital, S

Overview

Useful For

Monitoring amobarbital therapy

Method Name

GasChromatography-MassSpectrometry(GC-MS)

NY State Available

Yes

Specimen

Specimen Type

Serum Red

Specimen Required

Collection Container/Tube: Red top (Serum gel/SST are **not acceptable**)

Submission Container/Tube: Plastic vial

Specimen Volume: 1.2 mL

Collection Instructions:

1. Draw blood immediately before next scheduled dose.

2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Forms

If not ordering electronically, complete, print, and send a Neurology Specialty Testing Client Test Request (T732) with the specimen.

Specimen Minimum Volume

0.6 mL

Reject Due To

Gross hemolysis	Reject
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	

Specimen Type	Temperature	Time	Special Container
	Frozen	14 days	

Clinical and Interpretive

Clinical Information

Amobarbital is an intermediate-acting barbiturate with hypnotic properties used in short-term treatment of insomnia and to reduce anxiety and provide sedation preoperatively.(1,2)

Amobarbital is administered by intravenous infusion or intramuscular injection. The duration of its hypnotic effect is about 6 to 8 hours. The drug distributes throughout the body, with a volume of distribution of 0.9 to 1.4 L/kg, and about 59% of a dose is bound to plasma proteins. Metabolism takes place in the liver primarily via hepatic microsomal enzymes. Its half-life is about 15 to 40 hours (mean: 25 hours). Excretion occurs mainly in the urine.(2,3)

Reference Values

Therapeutic concentration: 1.0-5.0 mcg/mL

Toxic concentration: >10.0 mcg/mL

Interpretation

Amobarbital concentrations above 10 mcg/mL have been associated with toxicity.

Cautions

The concentration at which toxicity occurs varies, and results should be interpreted in light of the clinical situation.

Specimens collected in serum gel tubes are not acceptable because the drug can absorb on the gel and lead to falsely decreased concentrations.

Clinical Reference

1. Mihic SJ, Mayfield J, Harris RA: Hypnotics and sedatives. In: Brunton LL, Hilal-Dandan R, Knollmann BC, eds. Goodman and Gilman's The Pharmacological Basis of Therapeutics. 13th ed. McGraw-Hill Education; 2017

2. Milone MC, Shaw LM: Therapeutic drugs and their management. In: Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018:800-831

3. Baselt RC: Disposition of Toxic Drugs and Chemicals in Man. 10th ed. Biomedical Publications; 2014:2211

4. Langman LJ, Bechtel LK, Meier BM, Holstege C: Clinical toxicology. In: Rifai N, Horvath AR, Wittwer CT, eds. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. 6th ed. Elsevier; 2018:832-887

Performance

Method Description

Barbiturates are extracted from serum using solid-phase extraction techniques. The serum is buffered and eluted with organic solvent. The organic phase is dried, reconstituted, and analysis performed by gas chromatography-mass spectrometry (GC-MS) using selected ion monitoring. The assay utilizes deuterated barbiturates as internal standards.(Unpublished Mayo method)

PDF Report

No

Day(s) and Time(s) Test Performed

Friday; Varies

Analytic Time

1 day

Maximum Laboratory Time

8 days

Specimen Retention Time

2 weeks

Performing Laboratory Location

Rochester

Fees and Codes

Fees

- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification

This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

80345

G0480 (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
AMOBS	Amobarbital, S	3338-1

Result ID	Test Result Name	Result LOINC Value
8325	Amobarbital, S	3338-1