

Overview

Useful For

Detecting drug abuse involving barbiturates such as amobarbital, butalbital, pentobarbital, phenobarbital, and secobarbital

Chain-of-custody is required whenever the results of testing could be used in a court of law. Its purpose is to protect the rights of the individual contributing the specimen by demonstrating that it was under the control of personnel involved with testing the specimen at all times; this control implies that the opportunity for specimen tampering would be limited.

Additional Tests

Test ID	Reporting Name	Available Separately	Always Performed
COCH	Chain of Custody Processing	No	Yes
ADLTX	Adulterants Survey, CoC, U	Yes	Yes

Testing Algorithm

Adulterants testing will be performed on all chain of custody urine samples as per regulatory requirements.

Method Name

Immunoassay/Gas Chromatography-Mass Spectrometry (GC-MS) Confirmation with Quantitation

NY State Available

Yes

Specimen

Specimen Type

Urine

Specimen Required

Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required.

Specimen Volume: 20 mL

Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Forms

1. [Chain-of-Custody Request](#) is included in the Chain-of-Custody Kit (T282).



2. If not ordering electronically, complete, print, and send a [Therapeutics Test Request](#) (T831) with the specimen.

Specimen Minimum Volume

5 mL

Reject Due To

Gross hemolysis	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

Clinical and Interpretive
Clinical Information

Barbiturates represent a class of drugs that were originally introduced as sleep inducers. Butalbital is also used to control severe headaches. Mephobarbital and phenobarbital are frequently used to control major motor (grand mal) seizures. These drugs are commonly abused as "downers" to induce sleep after an amphetamine- or cocaine-induced "high."

Chain-of-custody is a record of the disposition of a specimen to document who collected it, who handled it, and who performed the analysis. When a specimen is submitted in this manner, analysis will be performed in such a way that it will withstand regular court scrutiny.

Reference Values

Negative

Cutoff concentrations:

IMMUNOASSAY SCREEN

<200 ng/mL

BUTALBITAL BY GC-MS

<100 ng/mL

AMOBARBITAL BY GC-MS

<100 ng/mL

PENTOBARBITAL BY GC-MS

<100 ng/mL

SECOBARBITAL BY GC-MS

<100 ng/mL

PHENOBARBITAL BY GC-MS

<100 ng/mL

Interpretation

The presence of a barbiturate in urine indicates use of one of these drugs.

Most of the barbiturates are fast acting; their presence indicates use within the past 3 days.

Phenobarbital, commonly used to control epilepsy, has a very long half-life. The presence of phenobarbital in urine indicates that the patient has used the drug sometime within the past 30 days.

Cautions

No significant cautionary statements.

Clinical Reference

1. Baselt RC, Cravey RH: Disposition of Toxic Drugs and Chemicals in Man. Third edition. Year Book Medical Publishers, 1989

2. Langman LJ et al: Clinical Toxicology. In Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. Edited by N Rifai, AR Horvath, CT Wittwer. Sixth edition. Elsevier, 2018, pp 832-887

Performance

Method Description

Preliminary screen by immunoassay followed by gas chromatography-mass spectrometry (GC/MS) confirmation with quantitation. (Porter WH, Moyer TP: Clinical toxicology. In Tietz Textbook of Clinical Chemistry. Second edition. Edited by CA Burtis, ER Ashwood. WB Saunders Company, 1994, pp 1162-1167)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday, Wednesday, Friday; Varies

Analytic Time

2 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
BARBX	Barbiturates Confirmation, CoC, U	53746-4

Result ID	Test Result Name	Result LOINC Value
6668	Barbiturates Immunoassay Screen	70155-7
36143	Butalbital-by GC/MS	18385-5
36144	Amobarbital-by GC/MS	16190-1
36145	Pentobarbital-by GC/MS	16193-5
36146	Secobarbital-by GC/MS	16194-3
36147	Phenobarbital-by GC/MS	16241-2
36148	Barbiturates Interpretation	69050-3
36149	Chain of Custody	77202-0