Test Definition: COKEX

Cocaine and metabolite Conf, CoC, U

Overview

Useful For

Detecting and confirming drug abuse involving cocaine

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

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

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

Cocaine is a drug of current health concern because of its proliferation among recreational drug abusers.

Freebase and crack increase the potential for major cocaine toxicity. Cocaine use is declining across the nation according to the National Institute of Drug Abuse.

Increasingly, laboratory results are disputed or there are medical/legal overtones. Therefore, physicians are finding an increased need to confirm positive results before informing or confronting the patients.

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

Positives are reported with a quantitative GC-MS result.

Cutoff concentrations:

IMMUNOASSAY SCREEN

<150 ng/mL

COCAINE BY GC-MS

<50 ng/mL

BENZOYLECGONINE BY GC-MS

<50 ng/mL

Interpretation

Reports will specifically indicate the presence or absence of cocaine and benzoylecgonine.

The presence of cocaine, or its major metabolite, benzoylecgonine, indicates use within the past 4 days.

Cocaine has a 6-hour half-life, so it will be present in urine for 1 day after last use.

Benzoylecgonine has a half-life of 12 hours, so it will be detected in urine up to 72 hours after last use.

There is no correlation between concentration and pharmacologic or toxic effects.

Cautions

Not intended for use in employment-related testing.

Clinical Reference

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

2. Langman LJ, Bechtel L, Holstege CP: Chapter 35. In Tietz Textbook of Clinical Chemistry and Molecular Diagnostics. Edited by CA Burtis, ER Ashwood, DE Bruns. WB Saunders Company, 2011, pp 1109-1188

Performance

Method Description

Drug classes are initially screened by an immunoassay technique. To accommodate the need to confirm specifically the presence of cocaine in urine, Mayo Clinic Laboratories offers a single test to identify cocaine and its principal metabolite, benzoylecgonine, by using gas chromatography/mass spectrometry (GC-MS).(Chinn DM, Crouch DJ, Peat MA, et al: Gas chromatography-chemical ionization mass spectrometry of cocaine and its metabolites in biological fluids. J Anal Toxicol 1980;4:37-42)

PDF Report

No

Day(s) Performed

Monday, Wednesday, Thursday, Friday

Report Available

2 to 5 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

80353

G0480 (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
COKEX	Cocaine and metabolite Conf, CoC, U	47400-7

Result ID	Test Result Name	Result LOINC Value
2903	Cocaine Immunoassay Screen	42241-0
36162	Cocaine-by GC/MS	19360-7
36163	Benzoylecgonine-by GC/MS	16226-3
36164	Cocaine Interpretation	69050-3
36165	Chain of Custody	77202-0