MAYO CLINIC LABORATORIES

Test Definition: COKEU

Cocaine and Metabolite Confirmation, Random, Urine

Overview

Useful For

Detecting and confirming drug abuse involving cocaine

This test is **not intended for** employment-related testing.

Special Instructions

- Clinical Toxicology CPT Code Client Guidance

Method Name

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

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order COKEX / Cocaine and Metabolite Confirmation, Chain of Custody, Random, Urine.
2. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700.
3. If urine creatinine is required or adulteration of the sample is suspected, order ADULT / Adulterants Survey, Random, Urine.

Specimen Required

Supplies: Urine Tubes, 10 mL (T068)
Collection Container/Tube: Plastic urine container
Submission Container/Tube: 10-mL urine tube
Specimen Volume: 10 mL
Collection Instructions:
1. Collect a random urine specimen.
2. No preservative.
Additional Information:
1. No specimen substitutions.
2. STAT requests are **not** accepted for this test.

Forms
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	
	Ambient	72 hours	
	Frozen	14 days	

Clinical & 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.

Reference Values
Negative (Positive results are reported with a quantitative result.)

Cutoff concentrations by gas chromatography mass spectrometry:
Cocaine: 50 ng/mL
Benzoylecgonine: 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 4 days after last use.

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

Cautions
No significant cautionary statements

Clinical Reference
1. Baselt RC, ed. Disposition of Toxic Drugs and Chemicals in Man. 10th ed. In: Biomedical Publications; 2014
2. Langman LJ, Bechtel LK, Holstege C. Clinical toxicology. In: Rifai N, Chiu RWK, Young I, Burnham CAD, Wittwer CT, eds. Tietz Textbook of Laboratory Medicine. 7th ed. Elsevier; 2023:chap 43

Performance

Method Description
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.(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; Rosado T, Goncalves A, Margalho C, Barroso M, Gallardo E. Rapid analysis of cocaine and metabolites in urine using microextraction in packed sorbent and GC/MS. Anal Bioanal Chem. 2017;409(8):2051-2063. doi:10.1007/s00216-016-0152-2)

PDF Report
No

Day(s) Performed
Monday, Wednesday, Thursday, Friday

Report Available
2 to 5 days

Specimen Retention Time
14 days

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Superior Drive

Fees & 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 account representative. 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. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

G0480

80353 (if appropriate for select payers)

Clinical Toxicology CPT Code Client Guidance

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
COKEU	Cocaine and metabolite Conf, U	53747-2

Result ID	Test Result Name	Result LOINC® Value
2922	Cocaine-by GC/MS	20519-5
2902	Benzoylecgonine-by GC/MS	16226-3
20671	Cocaine Interpretation	69050-3
28080	Chain of Custody	77202-0