



# 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

Benzoyllecgonine: 50 ng/mL

**Interpretation**

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

The presence of cocaine, or its major metabolite, benzoyllecgonine, 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.

Benzoyllecgonine 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      | Benzoyllecgonine-by GC/MS | 16226-3             |
| 20671     | Cocaine Interpretation    | 69050-3             |
| 28080     | Chain of Custody          | 77202-0             |