

Overview

Useful For

Detecting drug abuse involving amphetamines, cocaine, marijuana, opiates, and phencyclidine

This chain-of-custody test is intended to be used in a setting where the test results can be used definitively to make a diagnosis.

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

Testing begins with immunoassay screen. Positives are confirmed and quantitated by gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-tandem mass spectrometry (LC-MS/MS) at an additional charge.

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

Reflex Tests

| Test Id | Reporting Name | Available Separately | Always Performed |
|---------|-------------------------------------|----------------------|------------------|
| AMPHX | Amphetamines Confirmation, CoC, U | Yes | No |
| COKEX | Cocaine and metabolite Conf, CoC, U | Yes | No |
| OPATX | Opiate Confirmation, CoC, U | Yes | No |
| PCPX | Phencyclidine Confirmation, CoC, U | Yes | No |
| THCX | Carboxy-THC Confirmation, CoC, U | Yes | No |

Method Name

Immunoassay

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: 30 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 less than 30 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.

Reject Due To

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

Specimen Minimum Volume

15 mL

Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---------------|--------------------------|---------|-------------------|
| Urine | Refrigerated (preferred) | 14 days | |
| | Frozen | 14 days | |
| | Ambient | | |

Clinical & Interpretive

Clinical Information

This assay was designed to screen for and confirm by gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-tandem mass spectrometry (LC-MS/MS) the following drugs:

-Amphetamines

-Cocaine

-Opiates

-Phencyclidine

-Tetrahydrocannabinol

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. 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.

Reference Values

Negative

Screening cutoff concentrations

Amphetamines: 500 ng/mL

Cocaine (benzoylecgonine-cocaine metabolite): 150 ng/mL

Opiates: 300 ng/mL

Phencyclidine: 25 ng/mL

Tetrahydrocannabinol carboxylic acid: 50 ng/mL

This report is intended for use in clinical monitoring or management of patients. It is not intended for use in employment-related testing.

Interpretation**Cautions**

Not intended for use in employment-related testing.

The test does not screen for drug classes other than those listed above. More comprehensive screening is available using DSSX / Drug Screen, Prescription/OTC, Chain of Custody, Serum or PDSUX / Drug Screen, Prescription/OTC, Chain of Custody, Urine.

Clinical Reference

1. Physicians Desk Reference (PDR). 60th edition. Montvale, NJ, Medical Economics Company, 2006
2. Goodman and Gilman's The Pharmacological Basis of Therapeutics. 11th edition. Edited by LL Bruntman. New York, McGraw-Hill Book Company, 2006
3. 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**

The amphetamines, cocaine, opiates, phencyclidine, and tetrahydrocannabinol metabolite assays are based on the kinetic interaction of microparticles in a solution (KIMS) as measured by changes in light transmission. In the absence of sample drug, soluble drug conjugates bind to antibody-bound microparticles, causing the formation of particle aggregates. As the aggregation reaction proceeds in the absence of sample drug, the absorbance increases. When a urine sample contains the drug in question, this drug competes with the drug derivative conjugate for microparticle-bound antibody. Antibody bound to sample drug is no longer available to promote particle aggregation, and subsequent particle lattice formation is inhibited. The presence of sample drug diminishes the increasing absorbance in proportion to the concentration of drug in the sample. Sample drug content is determined relative to the value obtained for a known cutoff concentration of drug. (Package insert: Roche Amphetamines, Cannabinoids, Cocaine, Opiates, Phencyclidine reagents, Roche Diagnostic Corp, Indianapolis, IN)

PDF Report

No

Specimen Retention Time

2 weeks

Performing Laboratory Location

Rochester

Fees & Codes**Test Classification**

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

80307

LOINC® Information

| Test ID | Test Order Name | Order LOINC Value |
|---------|--|-------------------|
| CDA5X | Confirmed Drug Abuse Panel5, CoC, U | 87428-9 |

| Result ID | Reporting Name | LOINC® |
|-----------|----------------------|---------|
| 36253 | Amphetamines | 43983-6 |
| 36254 | Cocaine | 43984-4 |
| 36255 | Opiates | 70151-6 |
| 36256 | Phencyclidine | 14310-7 |
| 36257 | Tetrahydrocannabinol | 14312-3 |
| 36261 | Chain of Custody | 77202-0 |