

Overview

Useful For

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

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

Testing Algorithm

Testing begins with immunoassay screen. If cocaine and metabolites, phencyclidine, or tetrahydrocannabinol metabolite screen is positive, then the gas chromatography-mass spectrometry (GC-MS) confirmation with quantification will be performed at an additional charge. Amphetamines and opiates that screen positive will be quantified with liquid chromatography-tandem mass spectrometry (LC-MS/MS) at an additional charge.

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
AMPHU	Amphetamines Confirmation, U	Yes	No
COKEU	Cocaine and metabolite Conf, U	Yes	No
OPATU	Opiate Confirmation, U	Yes	No
PCPU	Phencyclidine Confirmation, U	Yes	No
THCU	Carboxy-THC Confirmation, U	Yes	No

Method Name

Immunoassay

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing,

order CDA5X / Drug Abuse Survey with Confirmation, Panel 5, Chain of Custody, Urine.

Additional Testing Requirements

If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine.

Specimen Required

Supplies: Urine Container, 60 mL (T313)

Collection Container/Tube: Plastic urine container

Submission Container/Tube: Plastic, 60-mL urine bottle

Specimen Volume: 30 mL

Collection Instructions:

1. Collect a random urine specimen.
2. Submit 30 mL in 1 plastic bottle.
3. No preservative.

Additional Information:

1. No specimen substitutions.
2. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700.
3. Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Forms

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 by immunoassay and confirm by gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-tandem mass spectrometry (LC-MS/MS) for the following drugs:

- Amphetamines
- Cocaine
- Opiates
- Phencyclidine
- Tetrahydrocannabinol

This assay represents the coupling of an immunoassay screen with an automatic confirmation of all positive results by the definitive assay available and described in each individual reflex test (eg, AMPHU / Amphetamines Confirmation, Urine). All positive screening results are confirmed by GC-MS or LC-MS/MS, and quantitated, before a positive result is reported.

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

A positive result indicates that the patient has used the drugs detected in the recent past. See individual tests (eg, AMPHU / Amphetamines Confirmation, Urine) for more information.

For information about drug testing, including estimated detection times, see Drugs of Abuse Testing at <https://www.mayocliniclabs.com/test-info/drug-book/index.html>

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 DSS / Drug Screen, Prescription/OTC, Serum or PDSU / Drug Screen, Prescription/OTC, Urine.

Clinical Reference

1. Physician's 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: 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 inserts: Roche Amphetamines 09/2018, Cannabinoids 03/2014, Cocaine 11/2017, Opiates 11/2017, Phencyclidine reagents 11/2017, 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

See individual reflex tests for appropriate CPT codes

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
CDAU5	Confirmed Drug Abuse Panel 5, U	87428-9

Result ID	Reporting Name	LOINC®
2573	Amphetamines	43983-6
21652	Cocaine	19359-9
2577	Opiates	18390-5
2578	Phencyclidine	18392-1
2664	Tetrahydrocannabinol	19415-9
20672	Chain of Custody	77202-0