MAYO CLINIC LABORATORIES

Test Definition: CDAU7

Drug Abuse Survey with Confirmation, Panel 9, Random, Urine

Overview

Useful For

Detecting drug abuse involving, amphetamines, barbiturates, benzodiazepines, cocaine, ethanol, methadone, opiates, phencyclidine, and tetrahydrocannabinol

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

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

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
OPATU	Opiate Confirmation, U	Yes	No
AMPHU	Amphetamines Confirmation, U	Yes	No
BARBU	Barbiturates Confirmation, U	Yes	No
COKEU	Cocaine and metabolite Conf, U	Yes	No
ETOH	Ethanol, U	No	No
MTDNU	Methadone Confirmation, U	Yes	No
PCPU	Phencyclidine Confirmation, U	Yes	No
THCU	Carboxy-THC Confirmation, U	Yes	No
BNZU	Benzodiazepines Confirmation, U	Yes	No

Testing Algorithm

Testing begins with screening tests for alcohol and drugs of abuse. Positives are confirmed and quantitated by definitive methods (gas chromatography with flame ionization detector for ethanol; gas chromatography mass spectrometry for barbiturates, cocaine and metabolites, methadone, and phencyclidine) at an additional charge. Amphetamines, benzodiazepines, opiates, and tetrahydrocannabinol metabolite that screen positive will be quantified with liquid chromatography tandem mass spectrometry at an additional charge.

Method Name

Enzymatic Assay/Immunoassay
ETOH: Headspace Gas Chromatography with Flame Ionization Detector (HSGC-FID)

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 CDA7X / Drug Abuse Survey with Confirmation, Panel 9, Chain of Custody, Random, Urine.

Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700

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. For more information see ADULT / Adulterants Survey, Random, 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. Submitting less than 30 mL will compromise the ability to perform all necessary testing.
3. 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
15 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)	7 days	
	Frozen	14 days	

Clinical & Interpretive

Clinical Information

This assay was designed to screen by immunoassay and confirm the following drugs, by either gas chromatography mass spectrometry (GC-MS), gas chromatography-flame ionization detection (GC-FID), or liquid chromatography tandem mass spectrometry (LC-MS/MS):
-Amphetamines
-Barbiturates
-Benzodiazepines
-Cocaine
-Ethanol
-Opiates
-Methadone
-Phencyclidine
-Tetrahydrocannabinol

This test uses the simple screening technique which involves immunoassay testing for drugs by class. All positive immunoassay screening results will be confirmed by the definitive assay available and is described in each individual reflex test (eg, AMPHU / Amphetamines Confirmation, Random, Urine). All positive screening results are confirmed by either GC-MS, GC-FID, or LC-MS/MS and quantitated before a positive result is reported.

Reference Values

Negative
Screening cutoff concentrations
Amphetamines: 500 ng/mL
Barbiturates: 200 ng/mL
Benzodiazepines: 100 ng/mL
Cocaine (benzoylecgonine-cocaine metabolite): 150 ng/mL
Ethanol: 10 mg/dL
Methadone metabolite: 300 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. For more information, see

individual tests (eg, AMPHU / Amphetamines Confirmation, Random, Urine).

For information about drug testing, including estimated detection times, see Drug Class Testing.

Cautions

The test does not screen for drug classes other than those listed above. More comprehensive screening is available using the serum or urine drug screens (DSS / Drug Screen, Prescription/Over the Counter, Serum or PDSU / Drug Screen, Prescription/Over the Counter, Random, Urine).

Clinical Reference

1. Physician's Desk Reference (PDR). 60th edition. Medical Economics Company; 2006
2. Bruntman LL. Goodman and Gilman's The Pharmacological Basis of Therapeutics. 11th ed. McGraw-Hill Book Company; 2006
3. Langman LJ, Bechtel LK, Holstege CP. 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

The amphetamines, barbiturates, benzodiazepines, cocaine, methadone metabolite, 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: EDDP Specific Urine Enzyme Immunoassay. Immunalysis; 09/2018; AMPS2 cobas. Roche Diagnostics; V 10.0 09/2018; BARB cobas. Roche Diagnostics; V 13.0 09/2021; THC2 cobas. Roche Diagnostics; V 13.0 03/2022; BNZ2 cobas. Roche Diagnostics; V 2.0 04/2024; COC2 cobas. Roche Diagnostics; V 9.0 03/2019; ETOH2 cobas. Roche Diagnostics; V 16.0 06/2022; OPI2 cobas. Roche Diagnostics; V 16.0 01/2022; PCP cobas. Roche Diagnostics; V 13.0 09/2021)

ETOH Confirmation
Specimens are analyzed and quantified by headspace gas chromatography with flame ionization detection.(Baselt RC. Disposition of Toxic Drugs and Chemicals in Man, 10th edition, Biomedical Publications; 2014:2211)

PDF Report

No

Day(s) Performed

Monday through Saturday

MAYO CLINIC LABORATORIES

Test Definition: CDAU7

Drug Abuse Survey with Confirmation, Panel 9, Random, Urine

Report Available
Same day/1 to 2 days

Specimen Retention Time
2 weeks

Performing Laboratory Location
Rochester

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 has been modified from the manufacturer's instructions. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
80307

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CDAU7	Confirmed Drug Abuse Panel 9, U	87428-9

Result ID	Test Result Name	Result LOINC® Value
30909	Alcohol	34180-0
2573	Amphetamines	43983-6
2574	Barbiturates	70155-7
2575	Benzodiazepines	16195-0
21652	Cocaine	19359-9
4435	Methadone metabolite	16246-1
2577	Opiates	18390-5
2578	Phencyclidine	18392-1
2664	Tetrahydrocannabinol	19415-9
20672	Chain of Custody	77202-0