Test Definition: CDA7X

Confirmed Drug Abuse Panel9, CoC, U

Overview

Useful For

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

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.

Reflex Tests

Test ID	Reporting Name	Available Separately	Always Performed
THCX	Carboxy-THC Confirmation, CoC, U	Yes	No
PCPX	Phencyclidine Confirmation, CoC, U	Yes	No
MTDNX	Methadone Confirmation, CoC, U	Yes	No
ETOHX	Ethanol, CoC, U	Yes	No
COKEX	Cocaine and metabolite Conf, CoC, U	Yes	No
BNZX	Benzodiazepines Conf, CoC, U	Yes	No
BARBX	Barbiturates Confirmation, CoC, U	Yes	No
AMPHX	Amphetamines Confirmation, CoC, U	Yes	No
OPATX	Opiate Confirmation, CoC, U	Yes	No

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 screening tests for alcohol and drugs of abuse. Positives are confirmed and quantitated by definitive methods (gas chromatography-flame ionization detector for ethanol; gas chromatography-mass

spectrometry for barbiturates, benzodiazepines, cocaine and metabolites, methadone, phencyclidine, and tetrahydrocannabinol metabolite) 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.

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

Method Name

CDA7X: Alcohol Screened by an Enzymatic Assay/All Others Screened by Immunoassay
ETOHX: Ethanol Confirmed by Gas Chromatography-Flame Ionization Detector (GC-FID)

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 provided container, 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.

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 and Interpretive

Clinical Information

This assay was designed to test for and confirm by gas chromatography-mass spectrometry (GC-MS) or liquid chromatography-tandem mass spectrometry (LC-MS/MS) the most common classes of drugs of abuse.

This test uses the simple screening technique which involves immunologic testing for drugs by class. All positive screening results are confirmed by GC-MS (positive alcohol by GC) or LC-MS/MS and quantitated, before a positive result is reported.

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

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. See individual tests (eg, AMPHX / Amphetamines Confirmation, Chain of Custody, 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 the serum or urine drug screens (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 Co, 2011, pp 1109-1188

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.

ADH

Ethyl alcohol + NAD+ ----------> acetaldehyde + NADH + H+

PDF Report

No

Day(s) Performed

Monday through Saturday

Report Available

Same day/1 to 2 days

Specimen Retention Time

2 weeks

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. 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
CDA7X	Confirmed Drug Abuse Panel9, CoC, U	87428-9

Result ID	Test Result Name	Result LOINC Value
36262	Alcohol	42242-8
36253	Amphetamines	43983-6
36258	Barbiturates	70155-7
36259	Benzodiazepines	14316-4
36254	Cocaine	43984-4
36260	Methadone metabolite	41858-2
36255	Opiates	70151-6
36256	Phencyclidine	14310-7
36257	Tetrahydrocannabinol	14312-3
36261	Chain of Custody	77202-0