MAYO CLINIC LABORATORIES

Test Definition: PNRCH

Drug Immunoassay Panel, Urine

Overview

Useful For

Detecting drug use involving barbiturates, cocaine, and carboxy-tetrahydrocannabinol

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

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
BARBU	Barbiturates Confirmation, U	Yes	No
COKEU	Cocaine and metabolite Conf, U	Yes	No
THCU	Carboxy-THC Confirmation, U	Yes	No

Testing Algorithm

Testing begins with screening tests for drugs of abuse including barbiturates, cocaine, and tetrahydrocannabinol.

Positive results are confirmed and quantitated by definitive methods, gas chromatography mass spectrometry for barbiturates, cocaine, and metabolites and liquid chromatography tandem mass spectrometry for tetrahydrocannabinol metabolites at an additional charge.

Method Name

Only orderable as part of profile. For more information see:
-CSMPU / Controlled Substance Monitoring Panel, Random, Urine.
-ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine
-CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Immunoassay

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

The test does not screen for drug classes other than those listed in Testing Algorithm.

Specimen Required

Only orderable as part of profile. For more information see:
-CSMPU / Controlled Substance Monitoring Panel, Random, Urine
-ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine
-CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Specimen Minimum Volume

10 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

This test uses the simple screening technique that involves immunoassay testing for drugs by class. All positive immunoassay screening results are confirmed by either gas chromatography mass spectrometry (GC-MS) or liquid chromatography tandem mass spectrometry (LC-MS/MS) and quantitated before a positive result is reported.

This assay was designed to test for and confirm by GC-MS the following:
-Barbiturates
-Cocaine

This assay was designed to test for and confirm by LC-MS/MS the following:
-Carboxy-tetrahydrocannabinol

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

Reference Values

Only orderable as part of profile. For more information see:
-CSMPU / Controlled Substance Monitoring Panel, Random, Urine
-ADMPU / Addiction Medicine Profile with Reflex, 22 Drug Classes, High Resolution Mass Spectrometry and

Immunoassay Screen, Random, Urine
-CSMEU / Controlled Substance Monitoring Enhanced Profile with Reflex, 21 Drug Classes, High Resolution Mass Spectrometry and Immunoassay Screen, Random, Urine

Negative
Screening cutoff concentrations:
Barbiturates: 200 ng/mL
Cocaine (benzoylecgonine-cocaine metabolite): 150 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 derived by this testing indicates that the patient has used one of the drugs detected by these techniques in the recent past.

For information about drug testing, including estimated detection times and Result Interpretations, see Controlled Substance Monitoring on MayoClinicLabs.com.

Cautions

No significant cautionary statements

Clinical Reference

1. Baselt RC. Disposition of Toxic Drugs and Chemical in Man. 12th ed. Biomedical Publications; 2020:2343
2. Brunton LL, Hilal-Dandan R, Knollmann BC, eds. In: Goodman and Gilman's: The Pharmacological Basis of Therapeutics. 13th ed. McGraw-Hill; 2018
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
4. Jannetto PJ, Bratanow NC, Clark WA, et al. Executive summary: American Association of Clinical Chemistry Laboratory Medicine Practice Guideline-Using clinical laboratory tests to monitor drug therapy in pain management patients. J Appl Lab Med. 2018;2(4):489-526

Performance

Method Description

The barbiturate, cocaine metabolite, and tetrahydrocannabinol metabolite assays are based on the kinetic interaction of microparticles in a solution 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: BARB. Roche Diagnostics; V 13.0, 09/2021; THC2. Roche Diagnostics; V 13.0, 03/2022; COC2. Roche Diagnostics; V 9.0, 03/2019)

PDF Report
No

Day(s) Performed
Monday through Saturday

Report Available
Same day/1 to 2 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 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
PNRCH	Drug Immunoassay Panel, U	87428-9

Result ID	Test Result Name	Result LOINC® Value
2574	Barbiturates	70155-7
21652	Cocaine	19359-9
2664	Tetrahydrocannabinol	19415-9