MAYO CLINIC LABORATORIES

Test Definition: PCPX

Phencyclidine Confirmation, Chain of Custody, Random, Urine

Overview

Useful For

Detection of drug abuse involving phencyclidine (street names: angel dust, hog, or angel hair) in urine specimens handled through the chain-of-custody process

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, at all times, was under the control of personnel involved with testing the specimen; this control implies that the opportunity for specimen tampering would be limited.

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 for adulterants will be performed on all chain of custody urine samples per regulatory requirements.

Method Name

Immunoassay/Gas Chromatography Mass Spectrometry (GC-MS) Confirmation with Quantitation

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

This test is for situations that require the chain-of-custody process. For testing **not** requiring chain of custody, order PCPU / Phencyclidine Confirmation, Random, Urine.

Specimen Required

Supplies: Chain of Custody Kit (T282)
Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required.
Specimen Volume: 10 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.

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

5 mL

Reject Due To

Gross hemolysis	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

Clinical & Interpretive

Clinical Information

Phencyclidine (PCP) is a drug of abuse. This compound affects diverse neural pathways and interacts with cholinergic, adrenergic, gamma-aminobutyric acid (GABA)-secreting, serotoninergic, opiate neuronal receptors, and gamma receptors. It has analgesic, anesthetic, and stimulatory effects, yielding bizarre behavior, ranging from depression through catatonia, euphoria, violent rage, and hallucinations. Most fatalities result from its hypertensive effect.

Diagnosis of PCP usage depends on drug screening. PCP is excreted in the urine.

Chain of custody is a record of the disposition of a specimen to document the personnel who collected, handled, and 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.

Reference Values

Negative

Cutoff concentrations
IMMUNOASSAY SCREEN
<25 ng/mL

PHENCYCLIDINE BY GC-MS
<10 ng/mL

Interpretation
The presence of phencyclidine (PCP) in urine is a strong indicator that the patient has used PCP.

Cautions
Urine phencyclidine (PCP) may be undetectable at alkaline pH. Urine pH must, therefore, always be recorded.

Clinical Reference
1. Schuster DI, Arnold FJ, Murphy RB. Purification, pharmacological characterization and photoaffinity labeling of sigma receptors from rat and bovine brain. Brain Res. 1995;670(1):14-28
2. Bayorh MA, Zokowska-Grojec A, Palkovits M, Kopin IJ. Effect of phencyclidine (PCP) on blood pressure and catecholamine levels in discrete brain nuclei. Brain Res. 1984;321(2):315-318
3. Baselt RC. Disposition of Toxic Drugs and Chemicals in Man. 11th edition. Biomedical Publications; 2017

Performance

Method Description
The phencyclidine assay is 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: Phencyclidine. Roche Diagnostics; 11/2017)

The specimen is then analyzed by gas chromatography mass spectrometry (GC/MS) for confirmation with quantitation.(Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Monday, Wednesday

Report Available
2 to 7 days

Specimen Retention Time

14 days

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 was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information

83992
G0480 (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
PCPX	Phencyclidine Confirmation, CoC, U	16254-5

Result ID	Test Result Name	Result LOINC® Value
6672	Phencyclidine Immunoassay Screen	19659-2
36229	Phencyclidine-by GC/MS	16254-5
36230	Phencyclidine Interpretation	69050-3
36231	Chain of Custody	77202-0