

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 was always 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 | No | Yes |
| | Processing | | |
| 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 required documentation.

Specimen Volume: 10 mL

Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation



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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 | OK |
|---------------|----|
| hemolysis | |
| Gross icterus | OK |

Specimen Stability Information

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

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-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.

Useful For

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| R | ρf | er | en | CE | Val | lues |
|---|----|----|----|----|-----|------|
| | | | | | | |

Negative

Positive result is reported with a quantitative result.

Cutoff concentrations:

Immunoassay screen:

25 ng/mL

Gas chromatography mass spectrometry:

Phencyclidine: 10 ng/mL

Interpretation

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

Cautions

Urine phencyclidine may be undetectable at alkaline pH. Urine pH must, therefore, always be recorded.

Clinical Reference

- 1. Baselt RC. Disposition of Toxic Drugs and Chemical in Man. 12th ed. Biomedical Publications; 2020.
- 2. 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 PCP (phencyclidine) assay is 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 insert: PCP. Roche Diagnostics; V 13.0, 09/2021)

The specimen is then analyzed by gas chromatography mass spectrometry for confirmation with quantitation.(Unpublished Mayo method)

PDF Report

No

Day(s) Performed



Phencyclidine Confirmation, Chain of Custody, Random, Urine

Tuesday

Report Available

3 to 7 days

Specimen Retention Time

14 days

Performing Laboratory Location

Mayo Clinic Laboratories - Rochester Superior Drive

Fees & Codes

Fees

- Authorized users can sign in to <u>Test Prices</u> for detailed fee information.
- Clients without access to Test Prices can contact <u>Customer Service</u> 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact <u>Customer Service</u>.

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 |