

Overview

Useful For

Detection of oxycodone and oxymorphone in urine following chain-of-custody procedures

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 |
|---------|----------------------------------------|----------------------|------------------|
| OXYCX | Oxycodone w/metabolite Conf, 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 assay. If oxycodone screen is positive, then the liquid chromatography-tandem mass spectrometry (LC-MS/MS) confirmation with quantification will be performed at an additional charge.

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

Method Name

Immunoassay

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: 20 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

2.5 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 | |
| | Frozen | 14 days | |
| | Ambient | 72 hours | |

Clinical & Interpretive

Clinical Information

Opiates are the natural or synthetic drugs that have a morphine-like pharmacological action. Medically, opiates are used primarily for relief of pain. Opiates include morphine and drugs structurally similar to morphine (eg, codeine, hydrocodone, hydromorphone, oxycodone, oxymorphone).

Oxycodone is metabolized to noroxycodone, oxymorphone, and their glucuronides and is excreted primarily via the kidney. The presence of oxycodone greater than 100 ng/mL indicates exposure to oxycodone within 2 to 3 days prior to specimen collection.

Oxymorphone is metabolized in the liver and excreted via the kidney primarily as the glucuronide conjugates. Oxymorphone is also a metabolite of oxycodone and therefore the presence of oxymorphone could also indicate exposure to oxycodone.

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 concentration:
Oxycodone: 100 ng/mL

Interpretation

A positive result indicates that the patient has used the drugs detected in the recent past. See individual tests (eg, OXYCU / Oxycodone with Metabolite Confirmation, Urine) for more information.

For information about drug testing, including estimated detection times, see [Drugs of Abuse Testing](#).

Cautions

Other drugs in the opioid class, such as fentanyl, meperidine, methadone, and opiate antagonists such as naloxone, are not detected.

Clinical Reference

1. Anderson DT, Fritz KL, Muto JJ: Oxycotin: the concept of a "ghost pill" and the postmortem tissue distribution of oxycodone in 36 cases. J Anal Toxicol 2002;26:448-459

2. Jannetto PJ, Gock SG: Oxycodone: Recognition and Pharmacogenomics. Clinical and Forensic Toxicology News 2003 March

3. Cone EJ: Oxycodone Involvement in Drug Abuse Deaths: A DAWN-Based Classification Scheme applied to an Oxycodone Postmortem Database Containing over 1000 Cases. J Anal Toxicol 2003;27:57-67

4. Baselt RC, Cravey RH: Oxycodone. In Disposition of Toxic Drugs and Chemicals in Man. Fourth edition. Chemical Toxicology Institute, Foster City, CA. 1995;572-574

Performance

Method Description

Oxycodone and its metabolite, oxymorphone, are analyzed via immunoassay. The assay uses specific antibodies that can detect oxycodone and oxymorphone without any significant cross-reactivity to other opiate compounds. The assay is based on the competition between a drug labeled with glucose-6-phosphate dehydrogenase (G6PDH), and free drug from the urine sample for a fixed amount of specific antibody binding sites. In the absence of free drug from the sample, the specific antibody binds the drug labeled with G6PDH and causes a decrease in enzyme activity. This phenomenon creates a direct relationship between the drug concentration in urine and enzyme activity. The enzyme activity is determined spectrophotometrically at 340 nm by measuring the conversion of nicotinamide adenine dinucleotide (NAD) to NADH.(Package insert: Roche Oxycodone, Roche Diagnostic Corp, Indianapolis, IN)

PDF Report

No

Day(s) Performed

Monday through Saturday

Report Available

2 to 3 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 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 |
|---------|--------------------------|--------------------|
| OYYSX | Oxycodone Screen, CoC, U | 19642-8 |

| Result ID | Test Result Name | Result LOINC® Value |
|-----------|------------------|---------------------|
| 61727 | Oxycodone | 19642-8 |
| 36027 | Chain of Custody | 77202-0 |