

Overview

Useful For

Detection of oxycodone and oxymorphone in urine

Reflex Tests

| Test Id | Reporting Name                    | Available Separately | Always Performed |
|---------|-----------------------------------|----------------------|------------------|
| OXYCU   | Oxycodone w/metabolite<br>Conf, U | Yes                  | No               |

Testing Algorithm

Testing begins with the screening assay. If the oxycodone screen is positive, then the liquid chromatography tandem mass spectrometry confirmation with quantification will be performed at an additional charge.

Method Name

Immunoassay

NY State Available

Yes

Specimen

Specimen Type

Urine

Ordering Guidance

For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OXYSX / Oxycodone Screen, Chain of Custody, Random, Urine.

Additional drug panels and specific requests are available; call 800-533-1710 or 507-266-5700.

Additional Testing Requirements

If urine creatinine is required or adulteration of the sample is suspected, the following test should also be ordered, ADULT / Adulterants Survey, Random, Urine.

Specimen Required

**Supplies:** Sarstedt Aliquot Tube, 5 mL (T914)

**Collection Container/Tube:** Plastic urine container

**Submission Container/Tube:** Plastic, 5 mL tube

**Specimen Volume:** 2 mL

**Collection Instructions:**

1. Collect a random urine specimen.
2. No preservative.

Forms

If not ordering electronically, complete, print, and send a [Therapeutics Test Request](#) (T831) with the specimen.

Specimen Minimum Volume

0.5 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  |                   |
|               | Ambient                  | 72 hours |                   |
|               | Frozen                   | 14 days  |                   |

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).

Oxycodone is metabolized to noroxycodone, oxymorphone and their glucuronides and is excreted primarily via the kidney. The presence of oxycodone 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.

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. For more information see individual tests (eg, OXYCU / Oxycodone with Metabolite Confirmation, Random, Urine).

For information about drug testing, including estimated detection times, see [Optimize Urine Drug Monitoring for Opioids](#).

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. Oxycontin: the concept of a "ghost pill" and the postmortem tissue distribution of oxycodone in 36 cases. J Anal Toxicol. 2002;26(7):448-459. doi:10.1093/jat/26.7.448
2. Jannetto PJ, Gock SG. Oxycodone: Recognition and Pharmacogenomics. Clinical and Forensic Toxicology News, 2003 March
3. Cone EJ, Fant RV, Rohay JM, et al. 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(2):57-67. doi:10.1093/jat/27.2.57
4. Baselt RC, Cravey RH. Oxycodone. In: Disposition of Toxic Drugs and Chemicals in Man. 4th ed. Chemical Toxicology Institute; 1995:572-574
5. 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**

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 (G6PD), 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 G6PD 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: Oxycodone. Roche Diagnostics; 12/2016)

**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 |
|---------|---------------------|--------------------|
| OXYSU   | Oxycodone Screen, U | 19642-8            |

| Result ID | Test Result Name | Result LOINC® Value |
|-----------|------------------|---------------------|
| 62623     | Oxycodone        | 19642-8             |