MAYO CLINIC LABORATORIES

Test Definition: OXYSU

Oxycodone Screen, Random, Urine

Overview

Useful For

Detection of oxycodone and oxymorphone in urine

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
OXYCU	Oxycodone w/metabolite 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; V 3.0, 10/2022)

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