
Overview**Useful For**

Detection and quantification of oxycodone, oxymorphone, noroxycodone, and noroxymorphone in urine

Method Name

Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

NY State Available

Yes

Specimen**Specimen Type**

Urine

Specimen Required

Collection Container/Tube: Plastic urine container

Submission Container/Tube: Plastic, 60-mL urine bottle

Specimen Volume: 20 mL

Collection Instructions:

1. Collect a random urine specimen.
2. Submit 20 mL in 1 plastic bottle.
3. No preservative.

Additional Information:

1. No specimen substitutions.
2. No STATS are acceptable for this procedure.
3. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OXYCX / Oxycodone with Metabolite Confirmation, Chain of Custody, Urine.
4. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700.
5. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterant Survey, Urine. For additional information, please refer to ADULT / Adulterant Survey, Urine.

Forms

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

Gross hemolysis	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

Clinical and Interpretive
Clinical Information

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

Oxymorphone is metabolized in the liver to noroxymorphone 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.

The detection interval for opiates is generally 2 to 3 days after last ingestion.

Reference Values

Negative

Cutoff concentrations:

Oxycodone-by LC-MS/MS: 25 ng/mL

Noroxycodone-by LC-MS/MS: 25 ng/mL

Oxymorphone-by LC-MS/MS: 25 ng/mL

Noroxymorphone-by LC-MS/MS: 25 ng/mL

Interpretation

This procedure reports the total urine concentration; this is the sum of the unconjugated and conjugated forms of the parent drug.

Cautions

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

Clinical Reference

1. Gutstein HB, Akil H: Opioid Analgesics. In The Pharmacological Basis of Therapeutics. 11th edition. Edited by LL Brunton, JS Lazo, KL Parker. Goodman and Gilman's: McGraw-Hill Companies, Inc. 2006:<http://www.accessmedicine.com/content.aspx?aID=940653>
2. Baselt, RC: Disposition of Toxic Drugs and Chemical in Man. Ninth edition. Edited by RC Baselt. Foster City, CA: Biomedical Publications, 2011
3. [Hackett LP](#), [Dusci LJ](#), [Ilett KF](#), [Chiswell GM](#): Optimizing the hydrolysis of codeine and morphine glucuronides in urine. Ther Drug Monit 2002;24(5):652-657

Performance

Method Description

Confirmation with quantification by liquid-chromatography-tandem mass spectrometry (LC-MS/MS).(Unpublished Mayo method)

PDF Report

No

Day(s) and Time(s) Test Performed

Monday through Friday, Varies

Analytic Time

2 days

Maximum Laboratory Time

5 days

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. 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. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

80365

G0480 (if appropriate)

LOINC® Information



Test ID	Test Order Name	Order LOINC Value
OXYCU	Oxycodone w/metabolite Conf, U	94304-3

Result ID	Test Result Name	Result LOINC Value
62616	Oxycodone-by LC-MS/MS	16249-5
42010	Noroxycodone-by LC-MS/MS	61425-5
35965	Oxymorphone-by LC-MS/MS	17395-5
42011	Noroxymorphone-by LC-MS/MS	90894-7
36022	Oxycodone Interpretation	19643-6