MAYO CLINIC LABORATORIES

Test Definition: TEMZS

Temazepam and Oxazepam, Serum

Overview

Useful For

Assessing compliance

Monitoring for appropriate therapeutic level

Assessing temazepam toxicity

Method Name

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

NY State Available

Yes

Specimen

Specimen Type

Serum Red

Specimen Required

Supplies: Sarstedt Aliquot Tube, 5 mL (T914)
Collection Container/Tube: Red top (Serum gel/SST are **not acceptable**)
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL
Collection Instructions: Centrifuge and aliquot serum into a plastic vial.

Specimen Minimum Volume

0.3 mL

Reject Due To

Gross hemolysis	OK
Gross lipemia	OK
Gross icterus	OK

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	

	Ambient	28 days	
	Frozen	28 days	

Clinical & Interpretive

Clinical Information

Temazepam is US Food and Drug Administration-approved to treat insomnia (trouble with sleeping). It is typically taken short-term (approximately 7-10 days). It is a benzodiazepine, which are a class of medicines that are central nervous system depressants and slow down the nervous system. It is extensively metabolized via conjugation and *N*-demethylation to oxazepam. Its elimination half-life ranges from 3.5 to 18.4 hours.

Reference Values

Therapeutic concentrations
Temazepam: 600-1100 ng/mL at 1 hour

Cutoff concentrations by liquid chromatography tandem mass spectrometry:
Temazepam: 10 ng/mL
Oxazepam: 10 ng/mL

Interpretation

Suggested therapeutic serum temazepam concentrations range between 600 and 1100 ng/mL at 1-hour post-dose.

Cautions

No significant cautionary statements

Clinical Reference

1. 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
2. Hiemke C, Bergemann N, Clement HW, et al. Consensus guidelines for therapeutic drug monitoring in neuropsychopharmacology: Update 2017. Pharmacopsychiatry. 2018;51(1-02):9-62

Performance

Method Description

The internal standard mixture containing chlordiazepoxide-d5, diazepam-d5, nordiazepam-d5, oxazepam-d5, and temazepam-d5 is added to serum samples, mixed, and centrifuged. The supernatant is diluted and injected on a liquid chromatography tandem mass spectrometer.(Unpublished Mayo method)

PDF Report

No

Day(s) Performed

Wednesday

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 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 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
80299

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
TEMZS	Temazepam and Oxazepam, S	11024-7

Result ID	Test Result Name	Result LOINC® Value
623017	Temazepam	10343-2
623018	Oxazepam	3886-9