



# 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

- 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
- 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 The supernatant is diluted and injected on a liquid chromatography tandem mass spectrometer.(Unpublished Mayo method)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