



**Relative standard deviation:** NMT 1.0%, *Standard solution*

#### Analysis

**Samples:** *Standard solution* and *Sample solution*

Calculate the percentage of triazolam ( $C_{17}H_{12}Cl_2N_4$ ) in the portion of Triazolam taken:

$$\text{Result} = (r_U/r_S) \times (C_S/C_U) \times 100$$

$r_U$  = peak response of triazolam from the *Sample solution*

$r_S$  = peak response of triazolam from the *Standard solution*

$C_S$  = concentration of [USP Triazolam RS](#) in the *Standard solution* (mg/mL)

$C_U$  = concentration of Triazolam in the *Sample solution* (mg/mL)

**Acceptance criteria:** 97.0%–103.0% on the dried basis

#### IMPURITIES

• [RESIDUE ON IGNITION \(281\)](#): NMT 0.5%

• **ORGANIC IMPURITIES**

**Diluent, Buffer, Mobile phase, System suitability solution, and Chromatographic system:** Proceed as directed in the Assay.

**Standard solution:** 0.25 µg/mL of [USP Triazolam RS](#) in *Diluent*

**Sample solution:** 0.25 mg/mL of Triazolam in *Diluent*

#### System suitability

**Samples:** *System suitability solution* and *Standard solution*

[**NOTE**—The relative retention times for alprazolam related compound A and triazolam are 0.77 and 1.0, respectively.]

#### Suitability requirements

**Resolution:** NLT 4.0 between alprazolam related compound A and triazolam, *System suitability solution*

**Tailing:** NMT 1.5, *Standard solution*

**Relative standard deviation:** NMT 5.0%, *Standard solution*

#### Analysis

**Sample:** *Sample solution*

Calculate the total percentage of impurities in the portion of Triazolam taken:

$$\text{Result} = (r_U/r_T) \times 100$$

$r_U$  = sum of the areas of each of the minor component peaks detected

$r_T$  = sum of all minor component peak areas and the area of the major component peak

#### Acceptance criteria

**Total impurities:** NMT 1.5%

#### SPECIFIC TESTS

• [Loss on Drying \(731\)](#): Dry a sample at 60° and at a pressure not exceeding 5 mm of mercury for 16 h: it loses NMT 0.5% of its weight.

#### ADDITIONAL REQUIREMENTS

• **PACKAGING AND STORAGE:** Preserve in well-closed containers at room temperature.

• [USP REFERENCE STANDARDS \(11\)](#).

[USP Triazolam RS](#)

[USP Alprazolam Related Compound A RS](#)

2-(2-Acetylhydrazino)-7-chloro-5-phenyl-3H-1,4-benzodiazepine.

$C_{17}H_{15}ClN_4O$  326.78

**Auxiliary Information** - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
TRIAZOLAM	<a href="#">Documentary Standards Support</a>	SM42020 Small Molecules 4

Topic/Question	Contact	Expert Committee
REFERENCE STANDARD SUPPORT	RS Technical Services <a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a>	SM42020 Small Molecules 4

**Chromatographic Database Information:** [Chromatographic Database](#)

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