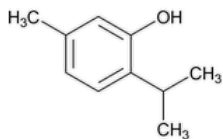


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# Thymol



$C_{10}H_{14}O$  150.22

Phenol, 5-methyl-2-(1-methylethyl)-;

Thymol;

*p*-Cymen-3-ol CAS RN®: 89-83-8.

## DEFINITION

Thymol contains NLT 99.0% and NMT 101.0% of thymol ( $C_{10}H_{14}O$ ).

## IDENTIFICATION

**Change to read:**

- **A.** ▲ [SPECTROSCOPIC IDENTIFICATION TESTS \(197\)](#), *Infrared Spectroscopy*: **197K** ▲ (CN 1-MAY-2020)
- **B.** It meets the requirements in *Specific Tests for Melting Range or Temperature* (741).

## ASSAY

### PROCEDURE

**Sample:** 100 mg

#### Titrimetric system

(See [Titrimetry \(541\)](#).)

**Mode:** Direct titration

**Titrant:** 0.1 N bromine VS

**Endpoint detection:** Visual

**Analysis:** Transfer the *Sample* to a 250-mL iodine flask, and dissolve in 25 mL of 1 N sodium hydroxide. Add 20 mL of hot dilute hydrochloric acid (1 in 2), and immediately titrate with *Titrant* to within 1–2 mL of the calculated endpoint. Warm the solution to between 70° and 80°, add 2 drops of methyl orange TS, and continue the titration slowly, swirling vigorously after each addition. When the color of the methyl orange is bleached, add 2 drops of *Titrant*, shake for 10 s, add 1 drop of methyl orange TS, and shake vigorously. If the solution is red, continue the titration, dropwise and with shaking, until the color is discharged. Repeat the alternate addition of the *Titrant* and methyl orange TS until the red color is discharged after the addition of the methyl orange TS. Each mL of *Titrant* is equivalent to 3.755 mg of thymol ( $C_{10}H_{14}O$ ).

**Acceptance criteria:** 99.0%–101.0%

## IMPURITIES

### LIMIT OF NONVOLATILE RESIDUE

**Sample:** 2 g

**Analysis:** Volatilize the *Sample* on a steam bath, and dry at 105° to constant weight.

**Acceptance criteria:** NMT 0.05%

## SPECIFIC TESTS

- [MELTING RANGE OR TEMPERATURE \(741\)](#): 48°–51°; but when melted, Thymol remains liquid at a considerably lower temperature.

**ADDITIONAL REQUIREMENTS**

- **PACKAGING AND STORAGE:** Preserve in tight, light-resistant containers.
- **USP REFERENCE STANDARDS (11).**  
[USP Thymol RS](#)

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

| Topic/Question             | Contact                                                                     | Expert Committee         |
|----------------------------|-----------------------------------------------------------------------------|--------------------------|
| THYMOL                     | <a href="#">Documentary Standards Support</a>                               | SE2020 Simple Excipients |
| REFERENCE STANDARD SUPPORT | RS Technical Services<br><a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a> | SE2020 Simple Excipients |

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

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