Cinnamomum cassia Twig — Identification

Thin-Layer Chromatography
Under UV 254 nm

After dipping with derivatization reagent, under UV 366 nm

Typical HPTLC Chromatograms

These chromatograms are supplied for information only

Track assignment: 1) Cinnamaldehyde; 2) Coumarin; 3) C. verum oil; 4, 10) C. verum bark; 5, 11) C. cassia bark; 6, 9, 12, 15) C. cassia twig; 7, 13) C. bejolghota bark; 8, 14) C. burmanni bark

Sample solutions: according to the monograph, dissolved in toluene or dichloromethane (DCM)

Standard solutions: in methanol

Plate: HPTLC, Si 60 F254

Saturation Time: saturated chamber (20 min with filter paper)

Application volume: 3 µL for 1,2,3, 6 µL for 4-15, as 8-mm bands

Relative Humidity: about 33%

Developing solvent system: toluene, ethyl acetate (95:5)
Developing distance: 7 cm

Derivatization reagent: 10 mL of sulfuric acid are carefully added to an ice-cooled mixture of 170 mL of methanol and 20 mL of acetic acid. To this solution, 1 mL of p-anisaldehyde is added.

HPLC Chromatography

*1) Co-elute of coumarin and cinnamic alcohol; 2) Cinnamic; 3) Cinnamaldehyde; 4) 2'-methoxycinnamaldehyde

Representative chromatogram of Content of cinnamaldehyde in Cinnamomum cassia Twig

This chromatogram is supplied for information only

Solutions preparation: according to the monograph
Detector: UV, 290 nm
Column: 4.6-mm × 10-cm; 3.5-µm packing L1 (Agilent Zorbax SB C18)
Column temperature: 30°
Flow rate: 1.2 mL/min
Injection volume: 5 µL
Solution A: 0.01% Phosphoric acid in water
Solution B: Acetonitrile
Mobile phase: Solution A and Solution B (65:35)