

# Huanglian Shangqing Pills (*Huanglian Shangqing Wan*)

## 黄连上清丸

### Sample source

Commercially available Huanglian Shangqing Pills

### Chemical reference substances

Berberine hydrochloride (National Institute for the Control of Pharmaceutical and Biological Products, Batch number 110713-200208)

### Preparation of test solution

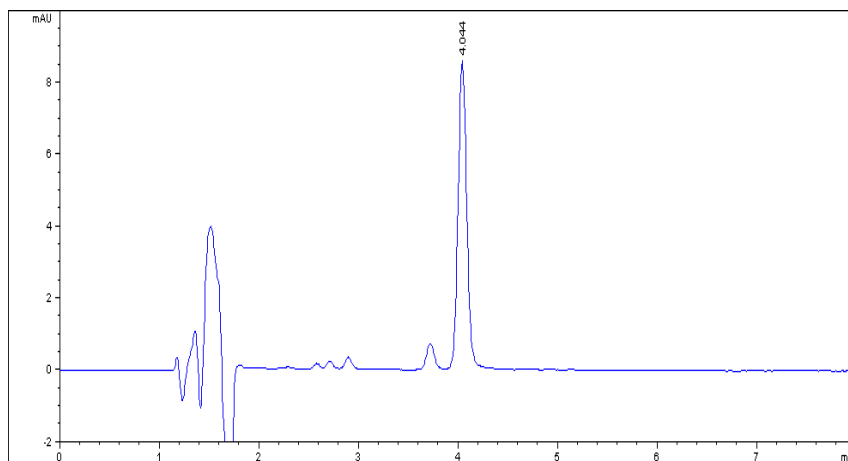
Accurately weigh 0.6 g of the pills, grind to a powder and put in a stoppered conical flask, accurately add 10 mL of a mixture of hydrochloric acid and methanol (1:100), stopper and weigh, heat in a water bath at 50 °C for 15 minutes, allow to reach room temperature, treat ultrasonically for 30 minutes, allow to reach room temperature, weigh again, replenish the lost weight with methanol, mix well, centrifugate and filter. Accurately measure 2 mL of the filtrate, evaporate to dryness at a lower temperature, dissolve the residue in a quantity of methanol and apply to a column (1 cm in diameter) packed with alkaline aluminum oxide (100-200 mesh, 8 g). Elute with 35 mL of methanol, collect the elutes and evaporate to dryness, dissolve the residue in a quantity of methanol and transfer to a 2 mL volumetric flask, dilute with methanol to volume, mix well, filter and use the filtrate as the test solution.

### Chromatographic conditions

- Column: ZORBAX SB C18 4.6×150 mm, 5 μm (883975-902)
- Column temperature: 40 °C
- Mobile phase: acetonitrile-potassium dihydrogen phosphate (35:65)
- Detector wavelength: 424 nm
- Flow rate: 1.0 mL/min

### Chromatographic system

- Agilent 1200 Series quaternary pump with vacuum degasser
- Agilent 1200 Series high-performance autosampler
- Agilent 1200 Series thermostated column compartment
- Agilent 1200 Series diode-array detector
- System control through Agilent ChemStation revision B.01.01



| Components | k'    | Ret Time (min) | Height (mAU) | Area (mAU*s) | n     | USP T <sub>r</sub> |
|------------|-------|----------------|--------------|--------------|-------|--------------------|
| Berberine  | 1.696 | 4.044          | 8.56         | 50.9         | 11184 | 1.09               |