

# Renshen Zaizao Pills (*Renshen Zaizao Wan*) – 人参再造丸

## Sample source

Commercially available Renshen Zaizao Pills

## Chemical reference substances

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

## Preparation of test solution

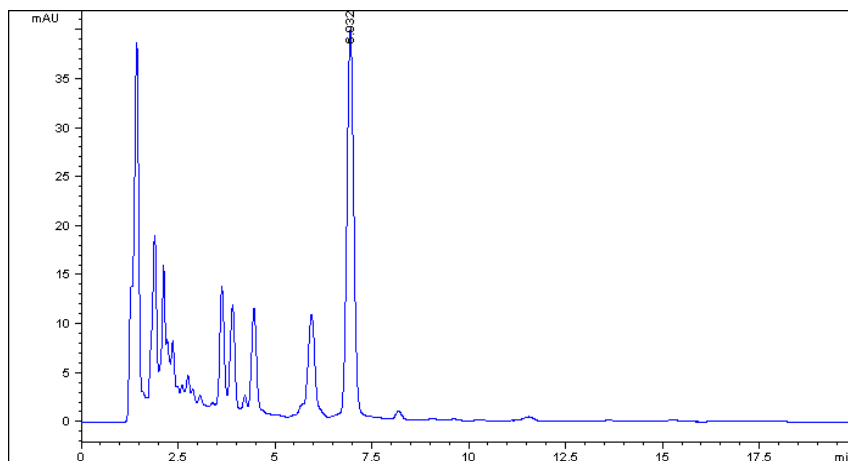
Cut the pills into pieces, mix well, accurately weigh 5 g in a stoppered conical flask, accurately add 50 mL of a mixture of hydrochloric acid and methanol (1:100), stopper tightly and weigh. Treat ultrasonically for 30 minutes, allow to cool, weigh again, replenish the lost weight with a mixture of hydrochloric acid and methanol (1:100), shake well and filter. Accurately measure 25 mL of the filtrate, concentrate to about 10 mL, and apply to a neutral alumina column. Elute with 25 mL of ethanol, and collect the eluent in a 50 mL volumetric flask, dilute with ethanol to volume, shake well, filter through a millipore membrane (0.45  $\mu\text{m}$ ) and use the filtrate as the test solution.

## Chromatographic conditions

- Column: ZORBAX XDB C18 4.6 $\times$ 150 mm, 5  $\mu\text{m}$  (993967-902)
- Column temperature: 25  $^{\circ}\text{C}$
- Mobile phase: acetonitrile-0.05 mol/L potassium dihydrogen phosphate (28:72)
- Detector wavelength: 345 nm
- Flow rate: 1.0 mL/min
- Injection volume: 5  $\mu\text{L}$

## 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 variable wavelength 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		6.932	39.23	478.1	7558	1.03