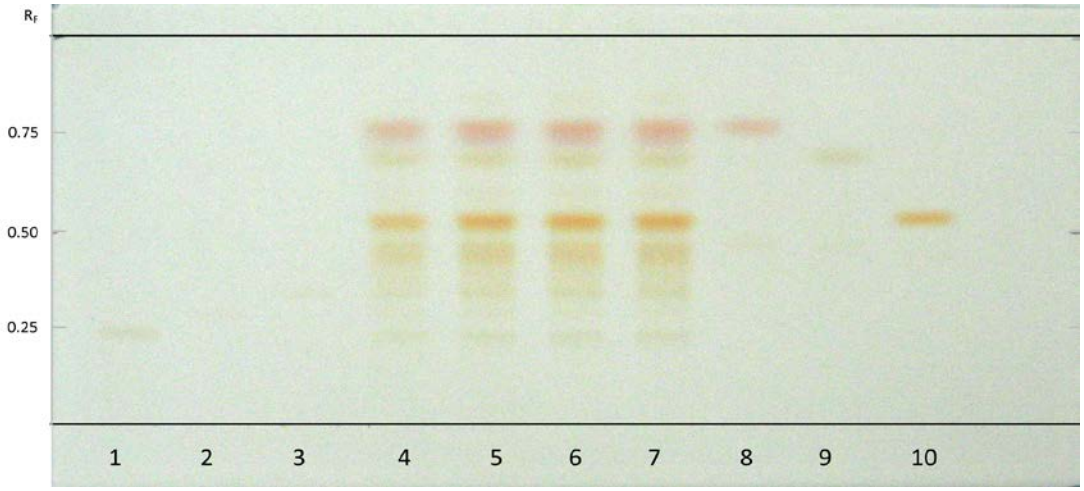
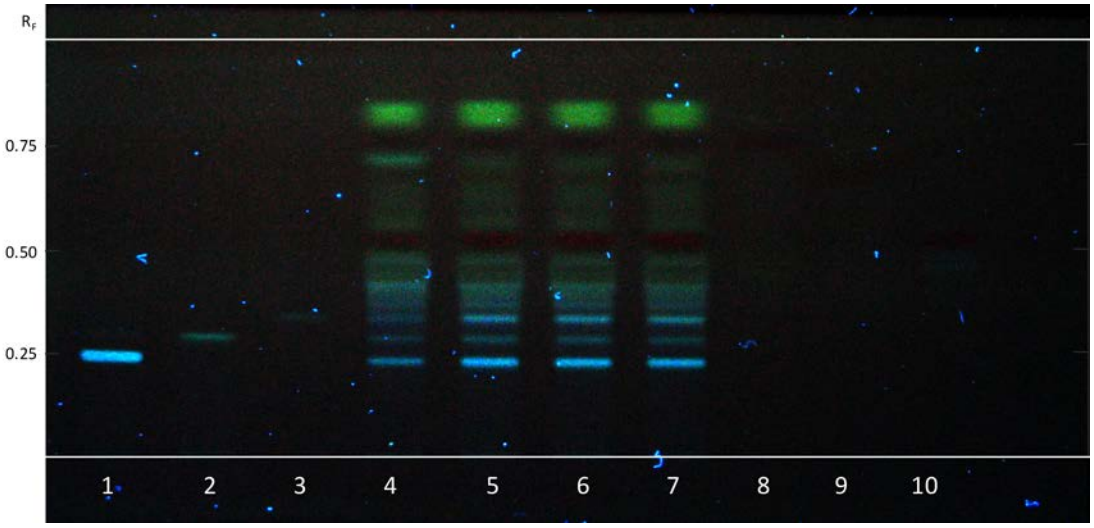
Salvia miltiorrhiza Root and Rhizome — Identification

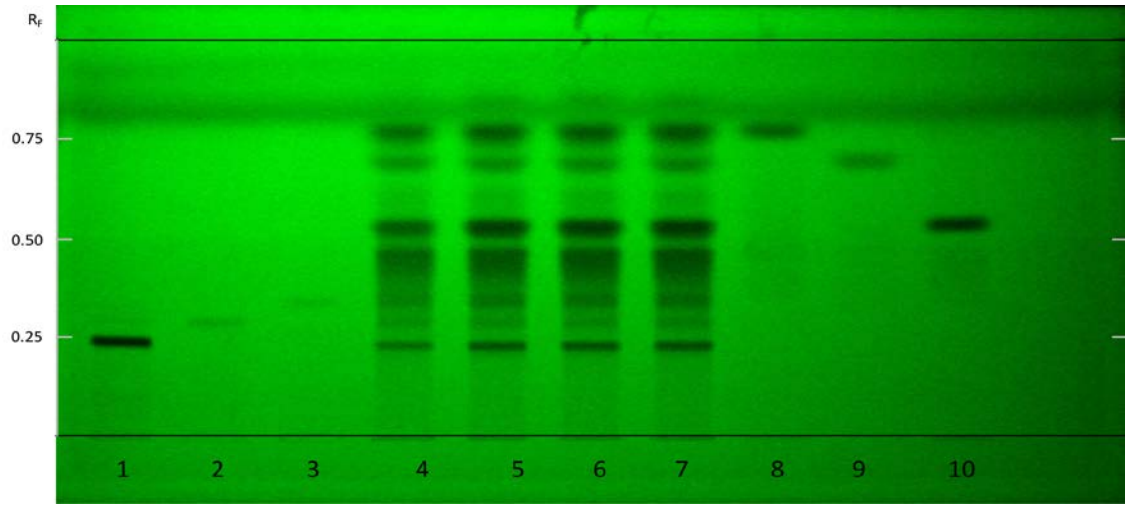
Thin-Layer Chromatography



A



B



C

Typical HPTLC Chromatograms

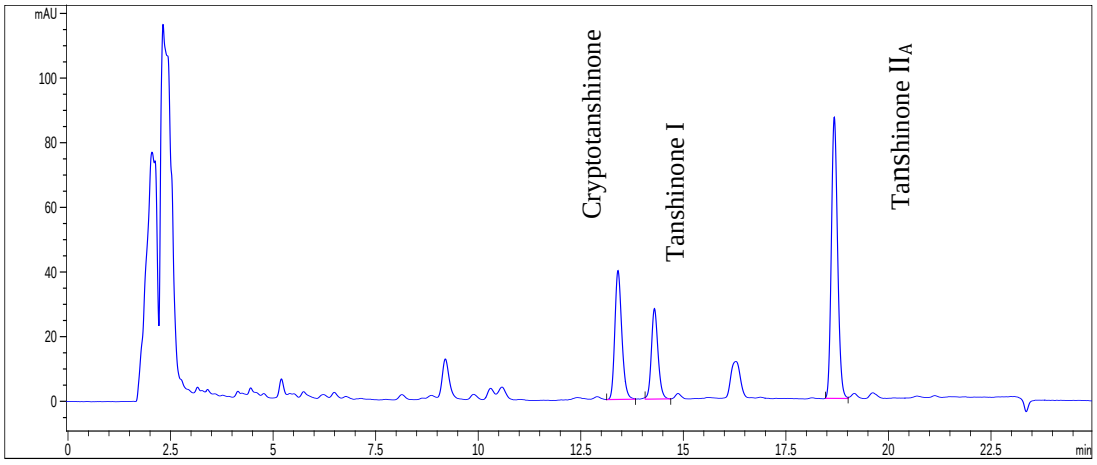
These chromatograms are supplied for information only

Track assignment: 1) USP Salvianolic acid B RS (1.5 mg/mL); 2) lithospermic acid (0.1 mg/mL); 3) rosmarinic acid (0.1 mg/mL); 4-7) *Salvia Miltiorrhiza* Root and Rhizoma, commercial samples; 8) USP Tanshinone II_A RS (0.5 mg/mL); 9) tanshinone I (1.3 mg/mL); 10) cryptotanshinone (0.8 mg/mL)

Sample solutions:	according to the monograph
Standard solutions:	in alcohol
Plate:	HPTLC, Si 60 F_{254}
Saturation time:	20 minutes
Application volume:	5 µL, as 8-mm bands
Relative Humidity:	about 33%
Temperature:	25°
Developing solvent system A:	ethyl acetate, chloroform, toluene, formic acid, and methanol (8:6:4:4:1)
Developing solvent system B:	hexane and ethyl acetate (4:1)
Development:	Develop the chromatograms in *Developing solvent system A* until the solvent front has moved up about 40% of the plate. Remove the plate, and allow to dry. Develop the chromatograms

	in *Developing solvent system B* until the solvent front has moved up about three-fourths of the plate.
Detection:	dry, examine under (A) visible light, (B) UV light at 366 nm, and (C) UV light at 254 nm

HPLC (Tanshinones)



Representative chromatogram of *Content of Tanshinones* in *Salvia Miltiorrhiza* Root and Rhizome

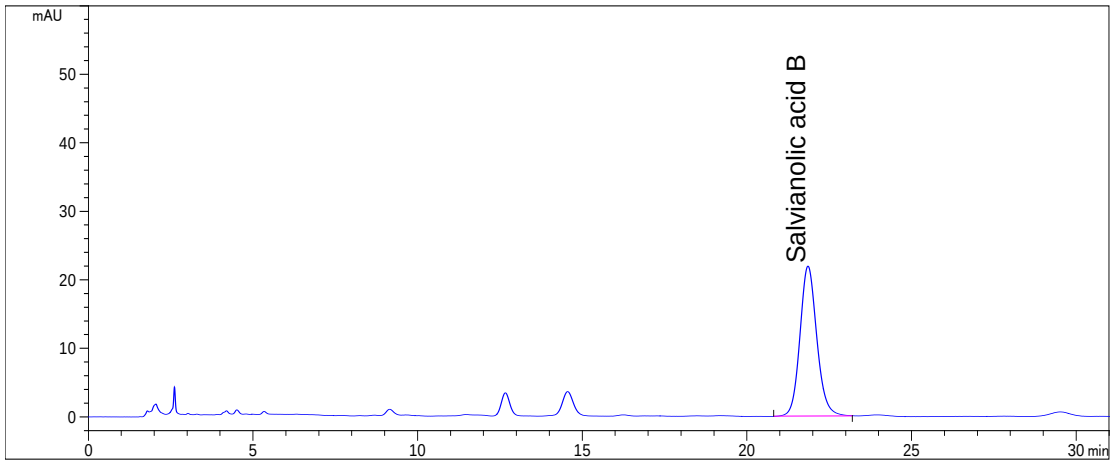
This chromatogram is supplied for information only

Solutions preparation:	according to the monograph
Detector:	UV, 270 nm
Column:	4.6-mm × 25-cm; 5-µm packing L1 (Similar to Zorbax Extend C18)
Column temperature:	25°±1
Flow rate:	1.0 mL/min
Injection volume:	10 µL
Solution A:	0.02% phosphoric acid in water
Solution B:	acetonitrile
Mobile phase:	see *Table 1*

Table 1

Time (min)	Solution A (%)	Solution B (%)
0	39	61
6	39	61
20	10	90
20.5	39	61
25	39	61

HPLC (Salvianolic acid B)



Representative chromatogram of *Content of Salvianolic acid B* in *Salvia Miltiorrhiza* Root and Rhizome

This chromatogram is supplied for information only

Detector: UV, 286 nm

Column: 4.6-mm × 25-cm; 5 µm packing L1 (similar to ZORBAX SB C_{18})

Column temperature: 25°±1

Flow rate: 1.2 mL/min

Injection volume: 10 µL

Mobile phase: 0.1% phosphoric acid in water and acetonitrile (78:22)