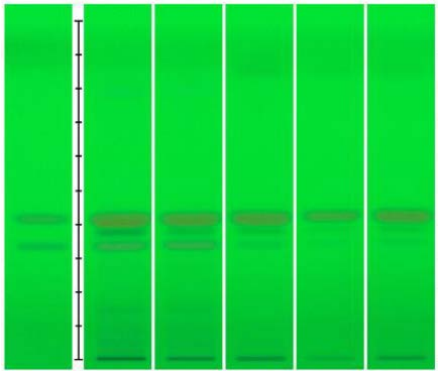
Berberis aristata Stem – Identification

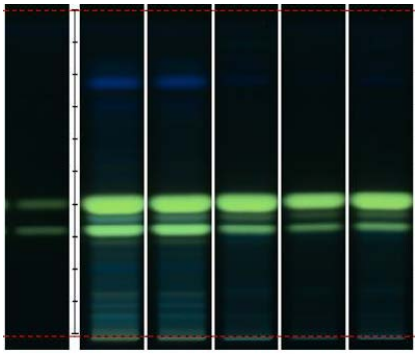
High-Performance Thin-Layer Chromatography

A



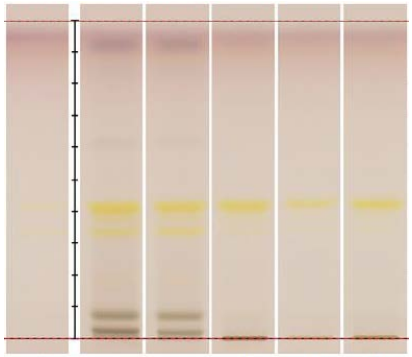
1 2 3 4 5 6

B



1 2 3 4 5 6

C



1 2 3 4 5 6

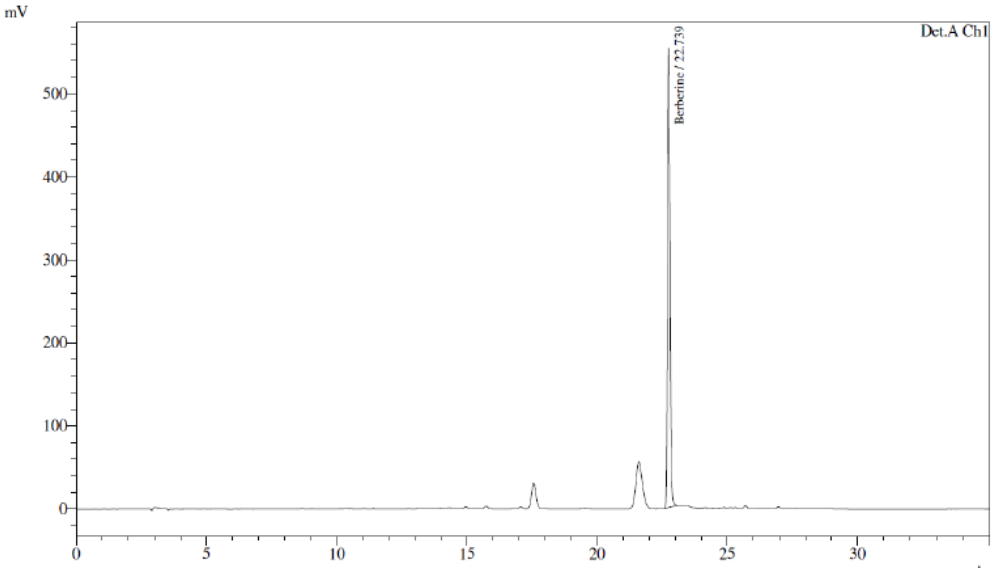
Typical HPTLC Chromatogram

These chromatograms are supplied for information only

Track assignment: 1) Palmatine Chloride, Berberine Chloride (increasing R_F); 2-3) *Berberis aristata* Stem, 4-6) *Berberis aristata* Stem Extract

Sample solutions:	according to the monograph
Standard solutions:	in methanol
Plate:	HPTLC, Silica gel 60 F_{254}, 5 µm
Application volume:	10 µL for standard solution, sample solution, as 8-mm bands
Relative Humidity:	about 33%
Developing solvent system:	ethyl acetate, formic acid, water (80:10:10)
Developing distance:	7 cm
Detection:	UV 254 nm (A) and 365 nm (B), then treat with Anisaldehyde reagent and examine under white light (C)

HPLC (Berberine)



Representative chromatogram of Content of Berberine in *Berberis aristata* Stem

This chromatogram is supplied for information only

Solution preparation:	according to the monograph
Mode:	HPLC
Detector:	UV, 348 nm
Column:	4.6-mm × 25-cm; 5-µm packing L1
Flow rate:	1.0 mL/min
Injection volume:	20 µL
Solution A:	transfer 0.6 g sodium 1-hexanesulfonate into a 1 L volumetric flask and add 900 mL of water to dissolve, then adjust pH to 2.7 with glacial acetic acid and dilute with water to volume
Solution B:	acetonitrile
Mobile phase:	see *Table 1*

Table 1

Time (min)	Solution A (%)	Solution B (%)
0	90	10
10	70	30
18	70	30
22	20	80
26	20	80
30	90	10
35	90	10