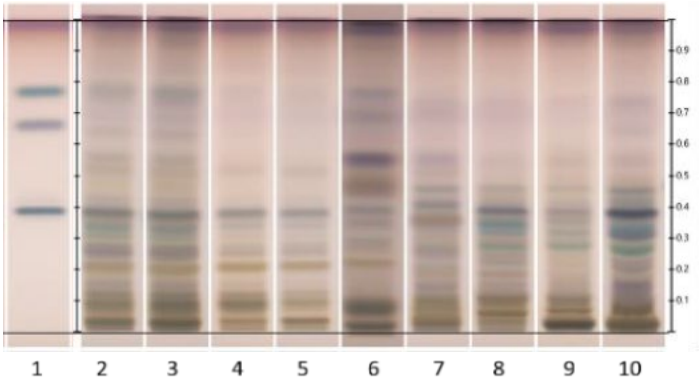
Digitalis purpurea Leaf – Identification

High-Performance Thin-Layer Chromatography



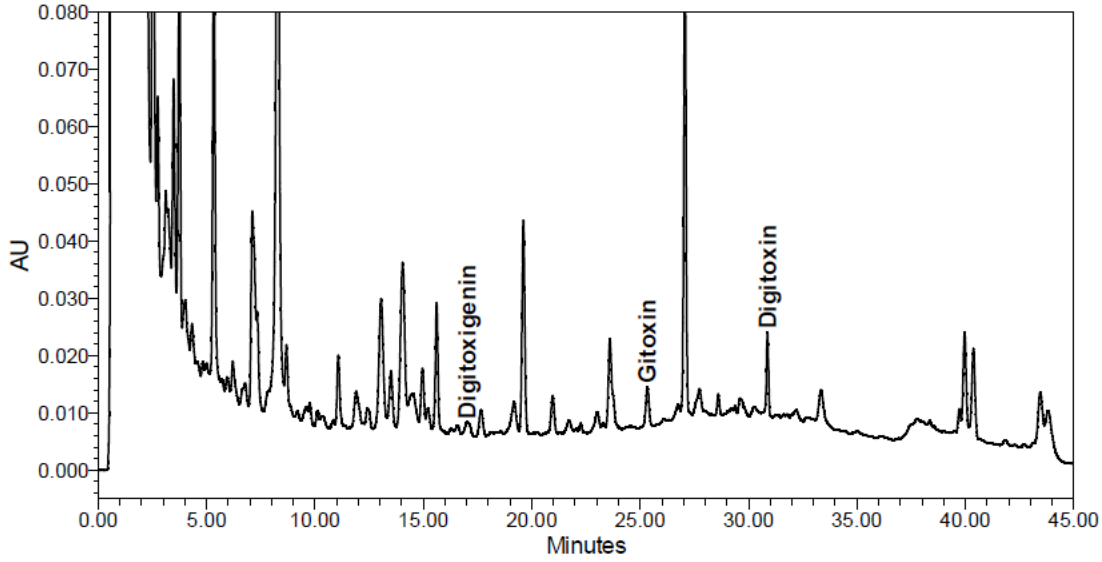
Typical HPTLC Chromatogram

These chromatograms are supplied for information only

Track assignment: 1: Purpureaglycoside A, Digoxin, Digitoxin, with increasing R_F; **2-5**: *Digitalis purpurea* Leaf; **6**: USP Digitalis RS; **7-10**: *Digitalis lanata* Leaf.

Solution preparation:	according to the monograph
Plate:	HPTLC, Si 60 F_{254}
Application volume: bands	2 µL for standard solution and 5 µL sample solution, as 8-mm
Developing solvent system:	ethyl acetate, 98% formic acid, glacial acetic acid, water (100:11:11:26)
Developing distance:	7 cm
Derivatization reagent 1:	natural product reagent: dissolve 1.0 g of 2-aminoethyl diphenylborinate in 100 mL of methanol
Derivatization reagent 2:	anisaldehyde reagent: to 170 mL of cold methanol, add 20 mL of glacial acetic acid and 10 mL of sulfuric acid and mix well, let cool to room temperature, and add 1 mL of anisaldehyde
Detection:	heat the plate at 100° for 3 min and let cool to room temperature, then treat the plate treat with *Derivatization reagent 1* and dry for 2 min, then treat the plate with *Derivatization reagent 2* and heat at 100° for 3 min, examine under white light.

UHPLC



Representative chromatogram of *Digitalis purpurea* Leaf

This chromatogram is supplied for information only

Solution preparation: according to the monograph

Mode: LC

Detector: UV, 220 nm

Column: 2.1-mm × 5-cm; 1.7 µm packing L1 (similar to Waters Acquity BEH C18)

Flow rate: 0.2 mL/min

Injection volume: 3 µL

Solution A: water

Solution B: acetonitrile

Mobile phase: see *Table 1*

Table 1

Time (min)	Solution A (%)	Solution B (%)
0	80	20
23.0	70	30
30.0	60	40
35.0	60	40
44.0	40	60
44.1	80	20
50.0	80	20