

0014 - Cat's Claw for Oxindole Alkaloids by HPLC

Botanical Name: *Uncaria tomentosa*

Common Names: Cat's Claw, Una de Gato, Vilcacora

Plant Description:

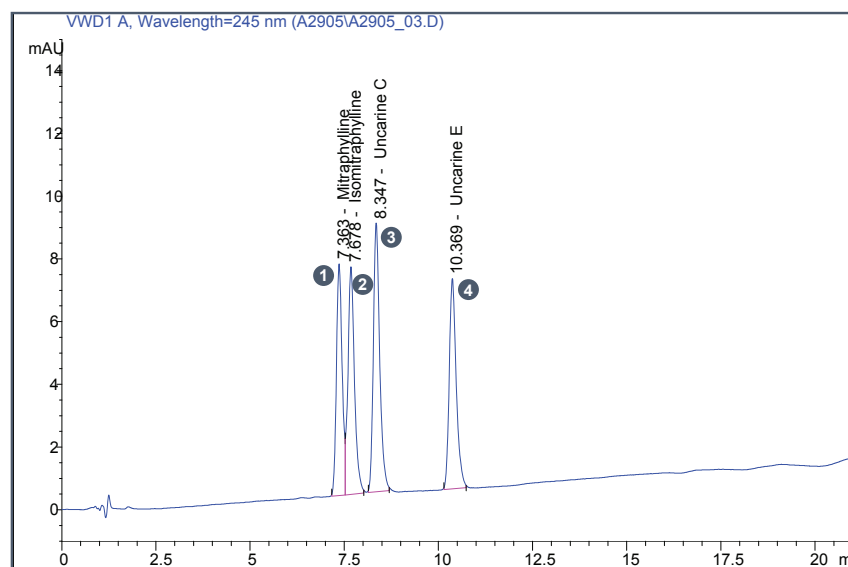
Uncaria tomentosa is a woody vine found in the jungles of Central and South America. Plants can grow up to 30m tall, climbing via claw-shaped thorns present on the vine base. The base also sprouts leaves which are elliptical with smooth edges and oppositely placed. Flowers are usually 1-2cm long, yellow in color and shaped like trumpets. Fruit capsules develop in linear or flat arrangements and are approximately 10cm long with winged seeds. The plant can reproduce through aerial dispersion of seeds or through tuber transportation.

Therapeutic Use Overview:

The parts of the plant used for medicinal purposes are the inner bark and root material produced into teas, capsules, and pure extracts. The plants chemotype determines the primary alkaloid the roots will produce. One chemotype produces tetracyclic oxindole alkaloids, while another produces mostly pentacyclic alkaloids. These pentacyclic alkaloids are responsible for the immune-strengthening properties the plant is valued for. The tetracyclic alkaloids on the other hand counteract the immune-strengthening actions as well as causing loss of coordination and sedation.



Representative HPLC Analysis: Mixed Standard Solution



Analytes:

① Mitraphylline, ② Isomitraphylline, ③ Uncarine C, ④ Uncarine E

Instrument Parameters

Column: Phenomenex Synergi Polar-RP, 150 x 3.0 mm

Detection: UV at 245 nm

Flow Rate: 0.75 mL/min

Temperature: 25°C

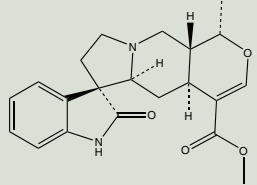
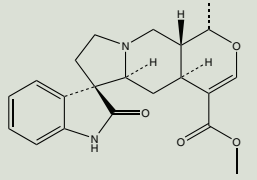
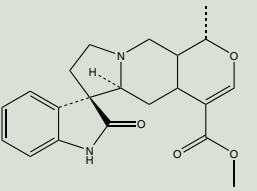
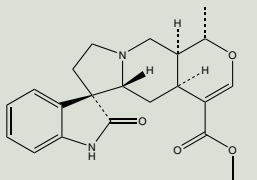
Mobile Phase A: MeOH/ACN/
Phosphate Buffer
20:20:60 v/v/v

Mobile Phase B: MeOH/ACN/
Phosphate Buffer
35:35:35 v/v/v

Gradient Program

Time (min)	%A	%B
0	85	15
20	0	100
21	0	0
28	0	0
30	85	15

Phytochemical Reference Standards

Product Description And Details	Product ID	Qty
 <p>ISOMITRAPHYLLINE Grade: P CAS#: [4963-01-3] Chemical Formula: $C_{21}H_{24}N_2O_4$ FW: 368.43</p>	ASB-00009417-005 ASB-00009417-010	5mg 10mg
 <p>MITRAPHYLLINE Grade: P CAS#: [509-80-8] Chemical Formula: $C_{21}H_{24}N_2O_4$ FW: 368.43</p>	ASB-00013955-005 ASB-00013955-010	5mg 10mg
 <p>UNCARINE C Grade: P CAS#: [5629-60-7] Chemical Formula: $C_{21}H_{24}N_2O_4$ FW: 368.43</p>	ASB-00021220-005 ASB-00021220-010	5mg 10mg
 <p>UNCARINE E Grade: P CAS#: [5171-37-9] Chemical Formula: $C_{21}H_{24}N_2O_4$ FW: 368.43</p>	ASB-00021225-005 ASB-00021225-010	5mg 10mg

Reference Standard Kits

Product Name	Contents	Product ID	Qty
CATS CLAW STANDARDS KIT	ISOMITRAPHYLLINE(P) MITRAPHYLLINE(P) UNCARINE C(P) UNCARINE E(P)	KIT-00003323-005 KIT-00003323-010	4 x 5mg vials 5 x 10mg vials
CATS CLAW HPLC KIT	ISOMITRAPHYLLINE(P) MITRAPHYLLINE(P) SYNERGI POLAR-RP 4U 150X3.0 UNCARINE C(P) UNCARINE E(P)	KIT-00003324-0HK	4 x 10mg vials

Botanical Reference Materials

Product Description	Grade	Product ID	Qty
CATS CLAW (UNCARIA TOMENTOSA) BARK	VBRM	ASB-00030981-005	5g
CATS CLAW (UNCARIA TOMENTOSA) BARK [WHOLE/CUT	VBRM	ASB-00031206-500	500mg

Additional Related Compounds

Product Description And Details	Product ID	Qty
EPICATECHIN, (-)- Grade: AHP CAS#: [490-46-0] Chemical Formula: $C_{15}H_{14}O_6$ FW: 290.27	ASB-00005125-001	1mg
	ASB-00005125-005	5mg
	ASB-00005125-010	10mg
	ASB-00005125-025	25mg
	ASB-00005125-050	50mg
UNCARINE D Grade: P CAS#: [4697-68-1] Chemical Formula: $C_{21}H_{24}N_2O_4$ FW: 368.43	ASB-00021230-001	1mg
	ASB-00021230-005	5mg