

0024 - Gentian for Iridoids by HPLC

Botanical Name: *Gentiana lutea*

Common Names: Great Yellow Gentian, Yellow Gentian, Bitter Root, Bitterwort, Centiyane, Genciana

Plant Description:

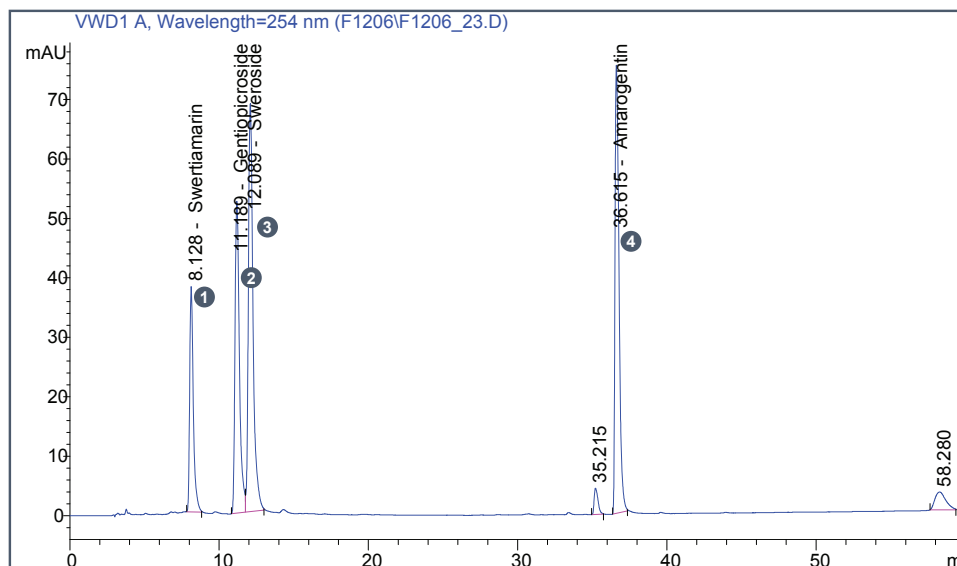
Gentiana lutea is a species of flowering plants belonging to the gentian family, a genus with approximately 400 species. A cosmopolitan genus, plants can grow throughout the world in appropriate habitats. Typical growth is between 1-2m, with bright yellow flowers extending from a central stalk. The entire plant contains biologically active compounds, lending to the remarkable bitterness the plant is purported to possess.



Therapeutic Use Overview:

Gentiana lutea roots contain some of the most bitter compounds known and are used as a scientific basis for measuring bitterness. The compounds possess a wide range of medicinal properties and when taken internally act upon the digestive system to stimulate appetite as well as enhance digestion activity. Extracts from the plant are also used as flavorings, giving foods a unique flavor that only these extracts can impart.

Representative HPLC Analysis: Mixed Standard Solution



Analytes:

① Swertiamarin, ② Gentiopicroside, ③ Sweroside, ④ Amarogentin

Instrument Parameters

Column: Phenomenex Jupiter 5µ C18, 250 x 4.6 mm, 300Å; S/N: 185229-1

Detection: UV-Vis @254 nm

Flow Rate: 1.1 mL/min

Injection Volume: 10 µL

Temperature: 28°C

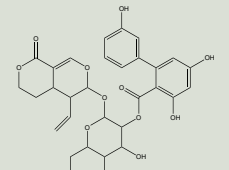
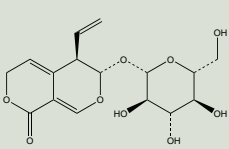
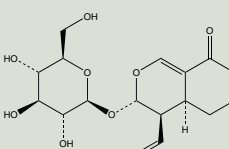
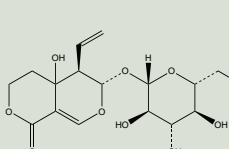
Mobile Phase A: HPLC Grade Acetonitrile

Mobile Phase B: 0.03% H₃PO₄ in Milli-Q Water

Gradient Program

Time (min)	%A	%B
0	10	90
5	10	90
15	13	87
22	13	87
32	23	77
45	38	62
55	45	55
60	10	90

Phytochemical Reference Standards

Product Description And Details	Product ID	Qty
 <p>AMAROGENTIN Grade: P CAS#: [21018-84-8] Chemical Formula: C₂₉H₃₀O₁₃ FW: 586.54</p>	ASB-00001650-010 ASB-00001650-025	10mg 25mg
 <p>GENTIOPICROSIDE Grade: P CAS#: [20831-76-9] Chemical Formula: C₁₆H₂₀O₉ FW: 356.33</p>	ASB-00007130-005 ASB-00007130-010 ASB-00007130-025	5mg 10mg 25mg
 <p>SWEROSIDE Grade: P CAS#: [14215-86-2] Chemical Formula: C₁₆H₂₂O₉ FW: 358.34</p>	ASB-00019435-010 ASB-00019435-025	10mg 25mg
 <p>SWERTIAMARIN Grade: P CAS#: [17388-39-5] Chemical Formula: C₁₆H₂₂O₁₀ FW: 374.34</p>	ASB-00019440-005 ASB-00019440-010 ASB-00019440-025 ASB-00019440-101	5mg 10mg 25mg 1kg

Reference Standard Kits

Product Name	Contents	Product ID	Qty
GENTIAN BITTERS STANDARDS KIT	AMAROGENTIN(P) GENTIOPICROSIDE(P) SWEROSIDE(P) SWERTIAMARIN(P)	KIT-00007115-010	4 x 10mg vials

Botanical Reference Materials

Product Description	Grade	Product ID	Qty
GENTIAN (GENTIANA LUTEA) ROOT	BRM	ASB-00031099-005	5g

Additional Related Compounds

Product Description And Details	Product ID	Qty
GENTIOPIGROSIDE Grade: RG CAS#: [20831-76-9] Chemical Formula: $C_{16}H_{20}O_9$ FW: 356.33	ASB-00007131-005 ASB-00007131-100	5mg 100mg
HOMOORIENTIN(ISOORIENTIN) Grade: SH CAS#: [4261-42-1] Chemical Formula: $C_{21}H_{20}O_{11}$ FW: 448.38	ASB-00008320-005 ASB-00008320-010	5mg 10mg
ISOVITEXIN Grade: SH CAS#: [38953-85-4] Chemical Formula: $C_{21}H_{20}O_{10}$ FW: 432.38	ASB-00009635-005	5mg
MANGIFERIN Grade: P CAS#: [4773-96-0] Chemical Formula: $C_{19}H_{18}O_{11}$ FW: 422.35	ASB-00013092-010 ASB-00013092-025 ASB-00013092-050	10mg 25mg 50mg
PROTOCATECHUIC ACID Grade: P CAS#: [99-50-3] Chemical Formula: $C_7H_6O_4$ FW: 154.12	ASB-00016306-100	100mg