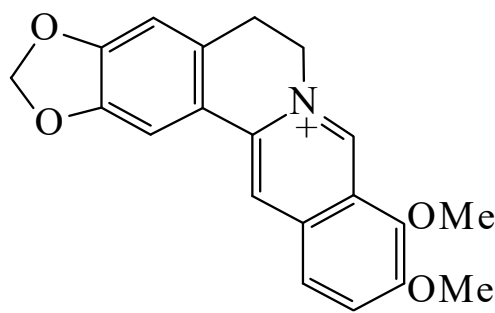




>>Entry Name: Berberine

Synonym(s): 5,6-Dihydro-9,10-dimethoxybenzo[g]-1,3-benzodioxolo[5,6-*a*]quinolizinium(1+), 9Cl. Umbellatine. Berbericine. Natural yellow 18. C.I. 75160. Majarine



CAS Registry Number: 2086-83-1

Related CAS Registry Numbers(s): 79236-58-1

Molecular Formula: C₂₀H₁₈NO₄⁽⁺⁾

Molecular Weight: 336.366

Accurate Mass: 336.123584

Percentage Composition: C 71.42%; H 5.39%; N 4.16%; O 19.03%

Biological Source: Quaternary alkaloid from many *Berberis* and *Mahonia* spp. (Berberidaceae) and very many other spp. in several different families

Biological Use/Importance: Pharmacol. extensively studied. Antiarrhythmic agent. α_2 -Adrenoceptor agonist. Cholinesterase, tyrosine decarboxylase and tryptophanase inhibitor. Shows a wide variety of pharmacol. effects including respiratory stimulation, transient hypotension. Antianaemic, anticonvulsant, antiinflammatory agent. Shows antibacterial and antifungal props. and some cytotoxic and antineoplastic activity. Possesses immunostimulant, sedative and antitrypanosomal activity. Of clinical use in treatment of gastrointestinal disorders, has been used for cholera and infantile diarrhoea

Calculated Log P Data: Log P -0.4 (uncertain value) (calc)

Hazard & Toxicity: Adverse human effects including reduced body temperature. Can cause death by central paralysis. LD₅₀ (mus, orl) 329 mg/kg

>>Derivative: Hydroxide

CAS Registry Number: 117-74-8

Molecular Formula: C₂₀H₁₉NO₅

Molecular Weight: 353.374

Accurate Mass: 353.126324

Percentage Composition: C 67.98%; H 5.42%; N 3.96%; O 22.64%

Use/Importance: Traditional dyestuff

Melting Point: Mp 145° (CHCl₃ solvate)

Other Data: Forms hydrate, Mp variable, dec. *ca.* 160°

>>Derivative: Sulfate

Synonym(s): Berisol. **Berberal**‡. Stogerin-Amp. Stopnin. NSC 5355

CAS Registry Number: 633-66-9

Extra CAS Registry Numbers(s): 6190-33-6

Molecular Formula: C₂₀H₁₉NO₈S

Molecular Weight: 433.438

Accurate Mass: 433.083139

Percentage Composition: C 55.42%; H 4.42%; N 3.23%; O 29.53%; S 7.40%

Melting Point: Mp 274°

Other Data: Not to be confused with Berberal [CSO16-Q](#)

Sigma: B3376

>>Derivative: Chloride

Synonym(s): Dirin. Kyoberin. Phelloberin. T-Up. Wakamoto. Pool Eyes

CAS Registry Number: 633-65-8

Molecular Formula: C₂₀H₁₈INO₄

Molecular Weight: 463.271

Accurate Mass: 463.028057

Percentage Composition: C 51.85%; H 3.92%; I 27.39%; N 3.02%; O 13.81%

Use/Importance: Used as fluorescent stain for heparin

Fluka: 14050

Sigma: B3251