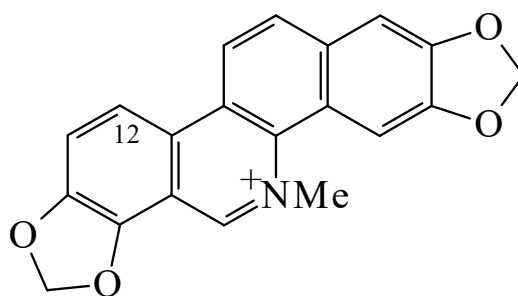




>>Entry Name: Sanguinarine

ENTRY UNDER REVIEW

Synonym(s): 13-Methyl[1,3]benzodioxolo[5,6-*c*]-1,3-dioxolo[4,5-*i*]phenanthridinium(1+), 9Cl. 5-Methyl-2,3:7,8-bis(methylenedioxy)benzo[*c*]phenanthridinium(1+). Pseudochelerythrine. ψ -Chelerythrine



CAS Registry Number: 2447-54-3

Molecular Formula: C₂₀H₁₄NO₄⁽⁺⁾

Molecular Weight: 332.335

Accurate Mass: 332.092284

Percentage Composition: C 72.28%; H 4.25%; N 4.21%; O 19.26%

Biological Source: Alkaloid from a wide variety of genera in the Papaveraceae (*Argemone*, *Bocconia*, *Chelidonium*, *Dicranostigma*, *Eschscholtzia*, *Glaucium*, *Hunnemannia*, *Hylomecon*, *Hypecoum*, *Macleaya*, *Meconopsis*, *Papaver*, *Platystemon*, *Romneya*, *Sanguinaria*, *Stylomecon*, *Stylophorum*), Fumariaceae (*Corydalis*, *Dicentra*, *Fumaria*), Rutaceae (*Zanthoxylum*), and Sapindaceae (*Pteridophyllum*). Anesthetic, antifungal agent

Use/Importance: Potent cytotoxic agent functioning by DNA intercalation and uncoupling of oxidative phosphorylation. Inhibitor of alanine aminotransferase and of human plasma diamine oxidase. Antimicrobial and antiinflammatory agent showing antiplaque activity. Anaesthetic, antifungal agent. Has been used in toothpastes and oral rinses.

adulterant for mustard oil in India, has been linked to development of glaucoma. Banned by FDA

Solubility: BERDY SOL: Sol. MeOH, CHCl₃

Calculated Log P Data: Log P 0.01 (uncertain value) (calc)

UV: [neutral] $\lambda_{\max}$ 234 (); 284 (); 324 () (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 234 (ϵ 31500); 283 (ϵ 33100); 325 (ϵ 14100) (EtOH) (Berdy)

Hazard & Toxicity: LD₅₀ (rat, ipr) 18 mg/kg ; BERDY HAZD : LD₅₀ (mus, ivn) 22 mg/kg , LD₅₀ (mus, ipr) 18 mg/kg , LD₅₀ (mus, scu) 112 mg/kg , LD₅₀ (mus, ivn) 16 mg/kg

>>Derivative: Chloride

Synonym(s): Sanguinarium chloride, INN, USAN

CAS Registry Number: 5578-73-4

Molecular Formula: C₂₀H₁₄ClNO₄

Molecular Weight: 367.788

Accurate Mass: 367.061136

Percentage Composition: C 65.31%; H 3.84%; Cl 9.64%; N 3.81%; O 17.40%

Physical Description: Orange needles (dil. HCl)

Melting Point: Mp 277-280 dec.° (273-274°, 284-289° dec.)

Aldrich: 30745-9

Fluka: 84480

Sigma: S5890

>>Derivative: Pseudocyanide

Molecular Formula: C₂₁H₁₄N₂O₄

Molecular Weight: 358.353

Accurate Mass: 358.095358

Percentage Composition: C 70.39%; H 3.94%; N 7.82%; O 17.86%

Melting Point: Mp 244-245° (236-237°)

>>Derivative: 12-Hydroxy

Synonym(s): 12-Hydroxysanguinarine. 10-Hydroxysanguinarine

CAS Registry Number: 131984-74-2

Molecular Formula: C₂₀H₁₄NO₅⁽⁺⁾