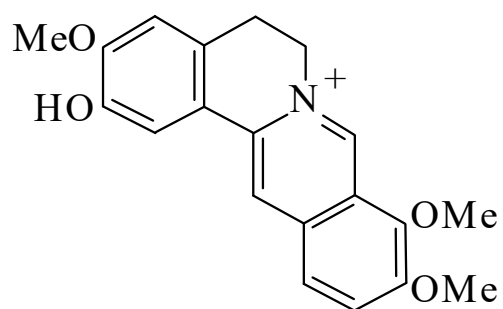




>>Entry Name: Columbamine



CAS Registry Number: 3621-36-1

Molecular Formula: C₂₀H₂₀NO₄⁽⁺⁾

Molecular Weight: 338.382

Accurate Mass: 338.139234

Percentage Composition: C 70.99%; H 5.96%; N 4.14%; O 18.91%

Biological Source: Quaternary alkaloid *Jateorhiza palmata*, several *Berberis* spp.(Menispermaceae, Berberidaceae) and some other spp. in several different families

Use/Importance: Butyrylcholinesterase inhibitor; shows anti-HIV activity. Antihypertensive agent. Possesses bactericidal, CNS depressant props.

Calculated Log P Data: Log P −0.57 (uncertain value) (calc)

UV: [neutral] λ_{max} 225 (ε 6025); 263 (ε 5750); 275 (ε 5000); 346 (ε 4500); 425 (ε 1250) (MeOH) (Berdy)

>>Derivative: Chloride

Molecular Formula: C₂₀H₂₀ClNO₄

Molecular Weight: 373.835

Accurate Mass: 373.108086

Percentage Composition: C 64.26%; H 5.39%; Cl 9.48%; N 3.75%; O 17.12%

Melting Point: Mp 239-240°

>>Derivative: Iodide

Molecular Formula: C₂₀H₂₀INO₄

Molecular Weight: 465.287

Accurate Mass: 465.043707

Percentage Composition: C 51.63%; H 4.33%; I 27.27%; N 3.01%; O 13.75%

Melting Point: Mp 228-229°

>>Derivative: Me ether

see Palmatine, [CGM49-M](#)

References:

Cava, M.P. *et al.*, *J. Nat. Prod.*, 1965, **28**, 73, (*isol, uv, ir*)

Jewers, K. *et al.*, *J.C.S. Perkin 2*, 1972, 1393, (*cmr*)

Pavelka, S. *et al.*, *Coll. Czech. Chem. Comm.*, 1976, **41**, 3157, (*uv*)

Tan, G.T., *J. Nat. Prod.*, 1991, **54**, 143, (*anti-HIV activity*)