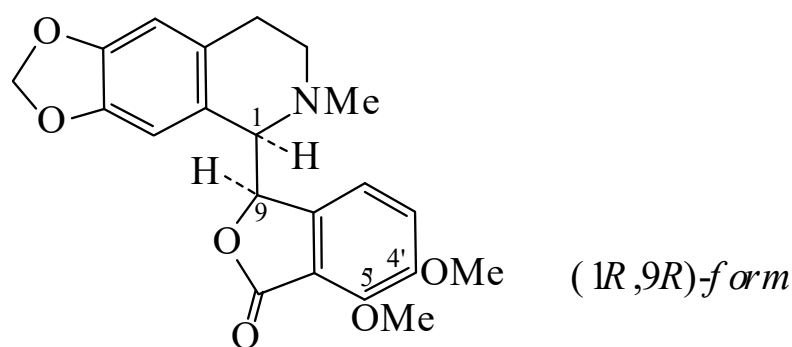




>>Entry Name: Hydrastine
ENTRY UNDER REVIEW



Molecular Formula: C₂₁H₂₁NO₆

Molecular Weight: 383.4

Accurate Mass: 383.136889

Percentage Composition: C 65.79%; H 5.52%; N 3.65%; O 25.04%

Biological Source: All 4 stereoisomers as well as both racemates have been isol. from plants. Other spp. from which hydrastine(s) of unspecified config. have been isol. include *Corydalis fimbriifera*, *Stylomecon heterophylla*, *Berberis laurina* and *Hydrastis canadensis* (Fumariaceae, Papaveraceae, Berberidaceae)

Use/Importance: Antihypertensive agent. Antibacterial, sedative agent. Has been used clinically to treat uterine haemorrhagia. Claimed use in ophthalmology for pupil dilation and topical anaesthesia

Calculated Log P Data: Log P 2.76 (uncertain value) (calc)

Other Data: Some stereoisomers may be artifacts

>>Variant: (1R,9R)-form

Synonym(s): (–)-α-Hydrastine. Stylophylline

CAS Registry Number: 4370-85-8

Molecular Formula: C₂₁H₂₁NO₆

Molecular Weight: 383.4

Accurate Mass: 383.136889

Percentage Composition: C 65.79%; H 5.52%; N 3.65%; O 25.04%

Biological Source: Alkaloid from *Stylomecon heterophylla* and *Hydrastis canadensis* (Papaveraceae)

Melting Point: Mp 162-163.5°

Optical Rotation: [α]_D –141 (c, 1.0 in CHCl₃)

>>Variant: (1R,9S)-form

Synonym(s): (–)-β-Hydrastine

CAS Registry Number: 118-08-1

Molecular Formula: C₂₁H₂₁NO₆

Molecular Weight: 383.4

Accurate Mass: 383.136889

Percentage Composition: C 65.79%; H 5.52%; N 3.65%; O 25.04%

Biological Source: Alkaloid from *Hydrastis canadensis* and *Berberis laurina* (Papaveraceae, Berberidaceae)

Physical Description: Cryst. (EtOH)

Melting Point: Mp 133-135°

Optical Rotation: [α]_D –68 (CHCl₃)

Solubility: BERDY SOL: Sol. MeOH, CHCl₃; poorly sol. H₂O

Hazard & Toxicity: Adverse human effects by ingestion. Causes convulsions and gastro-intestinal disturbance. LD₅₀ (rat, ipr) 104 mg/kg

Sigma: H2751

>>Derivative: O^{4'}-De-Me

Synonym(s): Isohydrastidine

CAS Registry Number: 76851-95-1

Molecular Formula: C₂₀H₁₉NO₆

Molecular Weight: 369.373

Accurate Mass: 369.121239

Percentage Composition: C 65.03%; H 5.18%; N 3.79%; O 25.99%

Biological Source: Alkaloid from *Hydrastis canadensis* and *Corydalis pseudo-adunca* (Papaveraceae, Fumariaceae)

Physical Description: Cryst. (EtOAc/hexane)

Melting Point: Mp 163-166°

Optical Rotation: [α]