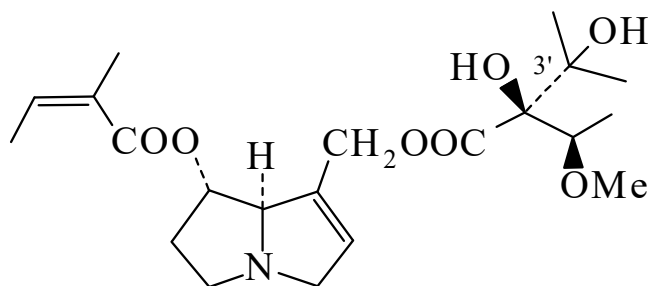




>>Entry Name: Lasiocarpine



CAS Registry Number: 303-34-4

Molecular Formula: $C_{21}H_{33}NO_7$

Molecular Weight: 411.494

Accurate Mass: 411.225704

Percentage Composition: C 61.30%; H 8.08%; N 3.40%; O 27.22%

Biological Source: Major alkaloid from *Heliotropium europaeum*, *Heliotropium lasiocarpum*, *Heliotropium arbainense*, *Heliotropium curassavicum*, *Heliotropium eichwaldii*, *Heliotropium indicum* and other *Heliotropium* spp. (Boraginaceae)

Use/Importance: Antineoplastic agent. Hepatotoxin, causes liver damage in grazing animals. Shows activity against hepatoma and sarcoma 45

Physical Description: Plates (petrol)

Melting Point: Mp 95.5-97°

Optical Rotation: $[\alpha]_D^{16} -3.5$ (c, 2.0 in EtOH). $[\alpha]_D^{16} +0.9$ (c, 6.3 in $CHCl_3$)

Calculated Log P Data: Log P 0.46 (calc)

Hazard & Toxicity: Carcinogenic. Highly toxic

>>Derivative: N-Oxide

Synonym(s): Lasiocarpine N-oxide

CAS Registry Number: 127-30-0

Molecular Formula: $C_{21}H_{33}NO_8$

Molecular Weight: 427.494

Accurate Mass: 427.220619

Percentage Composition: C 59.00%; H 7.78%; N 3.28%; O 29.94%

Biological Source: From *Heliotropium europaeum* (Boraginaceae)

Physical Description: Prisms or needles

Melting Point: Mp 134-135 dec.° (variable)

Optical Rotation: $[\alpha]_D^{17} +13.1$ (c, 4.97 in EtOH)

>>Derivative: $O^{3'}$ -Ac

Synonym(s): Acetyllasiocarpine

CAS Registry Number: 57538-10-0

Molecular Formula: $C_{23}H_{35}NO_8$

Molecular Weight: 453.531

Accurate Mass: 453.236269

Percentage Composition: C 60.91%; H 7.78%; N 3.09%; O 28.22%

Biological Source: From *Heliotropium europaeum* (Boraginaceae)

Physical Description: Noncryst.

Optical Rotation: $[\alpha]_D^{20} -0.9$ (c, 2 in EtOH)

>>Derivative: $O^{3'}$ -Ac, N-oxide

Synonym(s): 3'-Acetyllasiocarpine N-oxide

Molecular Formula: $C_{23}H_{35}NO_9$

Molecular Weight: 469.531

Accurate Mass: 469.231184

Percentage Composition: C 58.84%; H 7.51%; N 2.98%; O 30.67%

Biological Source: Alkaloid from aerial parts of *Heliotropium hirsutissimum* (Boraginaceae)

Physical Description: Gummy solid

Optical Rotation: $[\alpha]_D^{20} +10$ (c, 0.27 in $CHCl_3$)

Other Data: Named 4'-Acetyllasiocarpine N-oxide in the lit.