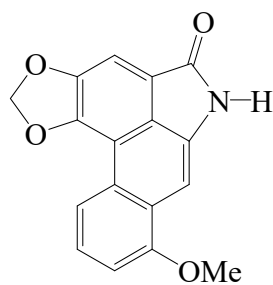




>>Entry Name: Aristolactam I

Synonym(s): 8-Methoxybenzo[*f*]-1,3-benzodioxolo[6,5,4-*cd*]indol-5(6*H*)-one, 9Cl. 10-Amino-8-methoxy-3,4-methylenedioxy-1-phenanthrenecarboxylic acid lactam. Aristolactam. Aristololactam



CAS Registry Number: 13395-02-3

Molecular Formula: C₁₇H₁₁NO₄

Molecular Weight: 293.278

Accurate Mass: 293.068809

Percentage Composition: C 69.62%; H 3.78%; N 4.78%; O 21.82%

Biological Source: Alkaloid from the roots of *Aristolochia argentina* and *Aristolochia indica*, and from the tubers of *Aristolochia rotunda*, also isol. from *Aristolochia debilis* and the Chinese drug Fang-chi (Aristolochiaceae)

Physical Description: Yellow cryst. (by subl.)

Melting Point: Mp 315-317°

>>Derivative: *N*-β-D-Glucopyranoside

Synonym(s): Aristolactam I *N*-glucoside

CAS Registry Number: 17413-41-1

Molecular Formula: C₂₃H₂₁NO₉

Molecular Weight: 455.42

Accurate Mass: 455.121634

Percentage Composition: C 60.66%; H 4.65%; N 3.08%; O 31.62%

Biological Source: Alkaloid from the roots of *Aristolochia indica* and *Aristolochia contorta* and from *Aristolochia tuberosa* (Aristolochiaceae)

Physical Description: Pale yellow needles (MeOH aq.)

Melting Point: Mp 331-333°

Optical Rotation: [α]_D²⁵ -14 (c, 0.02 in H₂O) (c, 0.11 in DMF)

UV: [base] $\lambda_{\max}$ (solvent not reported) (Derep) [neutral] $\lambda_{\max}$ 238 (ϵ 30900); 243 (ϵ 33200); 249 (ϵ 31400); 258 (ϵ 36500); 290 (ϵ 15300); 298 (ϵ 15200); 328 (ϵ 9521) (EtOH) (Derep) [neutral] $\lambda_{\max}$ 214 (); 242 (); 260 (); 290 (); 330 (); 396 () (MeOH) (Berdy)

>>Derivative: *N*-β-D-Glucopyranoside, tetra-*O*-Ac

Molecular Formula: C₃₂H₂₉NO₁₄

Molecular Weight: 651.579

Accurate Mass: 651.158809

Percentage Composition: C 58.99%; H 4.49%; N 2.15%; O 34.38%

Physical Description: Pale yellow cryst. (MeOH/CHCl₃)

Melting Point: Mp 287-289°

Optical Rotation: [α]_D²⁵ -97 (c, 0.12 in CHCl₃)

>>Derivative: *N*-[4-Hydroxycinnamoyl-(→6)-β-D-glucopyranoside]

Synonym(s): Aristolactam I *N*-(6'-*trans-p*-coumaroyl)-β-D-glucopyranoside

Molecular Formula: C₃₂H₂₇NO₁₁

Molecular Weight: 601.565

Accurate Mass: 601.158414

Percentage Composition: C 63.89%; H 4.52%; N 2.33%; O 29.26%

Biological Source: Alkaloid from roots of *Aristolochia contorta* (Aristolochiaceae)

Use/Importance: Exhibits significant antibacterial activity against gram-positive bacteria

Physical Description: Yellow needles

Melting Point: Mp 260-264°

Optical Rotation: [α]_D²⁰ -20.2 (c, 0.043 in MeOH)

UV: [neutral] $\lambda_{\max}$ 208 (); 235 (); 295 (); 390 () (MeOH) (Berdy)