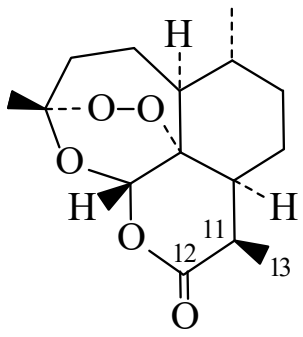
>>**Entry Name: Artemisinin,** INN
Synonym(s): Octahydro-3,6,9-trimethyl-3,12-epoxy-12*H*-pyrano[4,3-*j*]-1,2-benzodioxepin-10(3*H*)-one, 9CI. Arteannuin. Qinghaosu. Qing Hau Sau. QHS



CAS Registry Number: 63968-64-9

Molecular Formula: $C_{15}H_{22}O_5$
Molecular Weight: 282.336
Accurate Mass: 282.146725
Percentage Composition: C 63.81%; H 7.85%; O 28.33%
General Statement: Eudesmane numbering shown
Biological Source: Constit. of *Artemisia annua* (Qinghaosu)
Use/Importance: Antimalarial agent. Shows advantages for use against drug-resistant malarial strains
Physical Description: Needles
Development Status: Extensively used in China, not yet approved for use in Western countries (1993)
Melting Point: Mp 156-157°
Optical Rotation: $[\alpha]_D^{17}$+66.3
Solubility: BERDY SOL: Sol. MeOH, C_6H_6; fairly sol. hexane; poorly sol. H_2O
Calculated Log P Data: Log P 1.68 (uncertain value) (calc)
UV: [neutral] λ_{max} 0 (end) (ε) (MeOH) (Derep) [neutral] λ_{max} (MeOH) (Berdy)
Hazard & Toxicity: LD_{50} (mus, orl) 5105 mg/kg. Exp. reprod. effects ; BERDY HAZD : LD_{50} (mus, ims) 3840 mg/kg , LD_{50} (mus, orl) 4228 mg/kg

Aldrich: 36159-3
Sigma: A5430

>>**Derivative:** 12β-Alcohol
Synonym(s): Dihydroqinghaosu. Dihydroartemisinin

CAS Registry Number: 71939-50-9

Molecular Formula: $C_{15}H_{24}O_5$
Molecular Weight: 284.352
Accurate Mass: 284.162375
Percentage Composition: C 63.36%; H 8.51%; O 28.13%
Biological Source: Isol. from qinghaosu
Use/Importance: Antimalarial agent
Physical Description: Cryst. (diisopropyl ether)
Melting Point: Mp 152-154°
Optical Rotation: $[\alpha]_D^{22}$+129 (c, 0.92 in $CHCl_3$)
Calculated Log P Data: Log P 1.78 (uncertain value) (calc)

>>**Derivative:** 12β-Alcohol, Me ether
Synonym(s): Artemether, INN

CAS Registry Number: 71963-77-4

Molecular Formula: $C_{16}H_{26}O_5$
Molecular Weight: 298.378
Accurate Mass: 298.178025
Percentage Composition: C 64.41%; H 8.78%; O 26.81%
Use/Importance: Antimalarial agent
Physical Description: Cryst. (hexane)
Melting Point: Mp 86-87°
Optical Rotation: $[\alpha]_D^{25}$+163 (c, 2.58 in $CHCl_3$)
Calculated Log P Data: Log P 2.24 (uncertain value) (calc)
Hazard & Toxicity: LD_{50} (mus, orl) 1000 mg/kg. LD_{50} (mus, ims) 263 mg/kg. Exp. reprod. effects

>>**Derivative:** 12β-Alcohol, Et ether