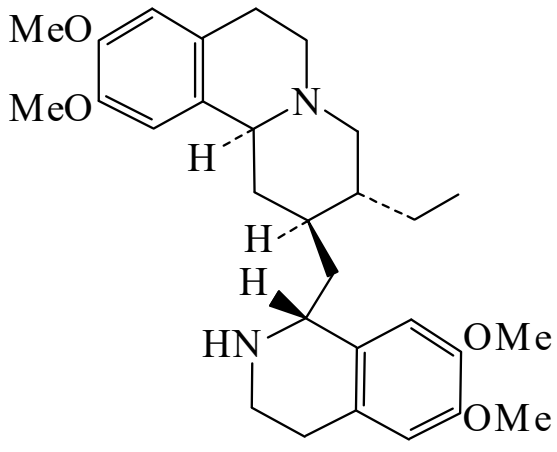
>>**Entry Name: Emetine,** BAN
Synonym(s): 6',7',10,11-Tetramethoxyemetan, 9CI. Ipecine. Methylcephaeline. NSC 33669



Absolute
conf guration

Type of Compound Code(s): XA4050 XA1150 XA2400 XA1950 VX3690

Molecular Formula: $C_{29}H_{40}N_2O_4$
Molecular Weight: 480.646
Accurate Mass: 480.298808
Percentage Composition: C 72.47%; H 8.39%; N 5.83%; O 13.31%
Use/Importance: Inhibitor of RNA, DNA and protein synthesis. Orally-active emetic. Amoebicide, general parasiticide, shows antiviral, antineoplastic and antibacterial activity. Also shows neuromuscular and cardiovascular effects. *A. lamarckii* has been extensively used in Indian medicine and the biochemistry of Emetine has been comprehensively studied. 2,3-Didehydroemetine is a v. active amoebicide
Calculated Log P Data: Log P 4.55 (calc)

>>**Variant:** (–)-form

CAS Registry Number: 483-18-1
Type of Compound Code(s): XA0960
Molecular Formula: $C_{29}H_{40}N_2O_4$
Molecular Weight: 480.646
Accurate Mass: 480.298808
Percentage Composition: C 72.47%; H 8.39%; N 5.83%; O 13.31%
Source/Synthesis: Alkaloid from *Alangium lamarckii, Cephaelis acuminata* (biosynthesis), *Psychotria granadensis* and *Psychotria ipecacuanha* (Alangiaceae, Rubiaceae). The occurrence of emetine in the common ivy, *Hedera helix* (Araliaceae) and in the roots of *Borreria verticillata* (Rubiaceae) remains unconfirmed
Physical Description: Amorph.
Melting Point: Mp 74° (efferv.) (sinters at 70°)
Optical Rotation: $[\alpha]_D$ –46.55 (c, 1.16 in $CHCl_3$). $[\alpha]_D$ –22 (EtOH). $[\alpha]_D$ –26 ($CHCl_3$). $[\alpha]_D$ –50 ($CHCl_3$)
Solubility: BERDY SOL: Sol. MeOH, $CHCl_3$; fairly sol. H_2O, hexane
Calculated Log P Data: Log P 4.55 (calc)
Other Data: Pharmacol. active isomer
Hazard & Toxicity: Severe skin and eye irritant. Adverse systemic effects by ingestion and intravenous routes. Cumulative poison. Cardiotoxic. Reported fatal dose approx. 2 g. LD_{50} (rat, orl) 68 mg/kg

>>**Derivative:** Hydrochloride (1:2)
Synonym(s): Emetine hydrochloride, USAN. Emetinal. Encol. Erketin. Hemometina

CAS Registry Number: 316-42-7
Physical Description: Needles + $7H_2O$
Melting Point: Mp 255 dec.° (sinters at 235°)
Hazard & Toxicity: Skin, eye and respiratory tract irritant. Local and cumulative systemic effects when used therapeutically. Cardiotoxic, nephrotoxic, hepatotoxic. LD_{50} (rat, orl) 0.012 mg/kg. LD_{50} (rat, ipr) 17 mg/kg

Fluka: 45160
Sigma: E2375

>>**Derivative:** Hydrobromide (1:2)

Physical Description: Needles + $4H_2O$
Melting Point: Mp 250-260° (sinters at 245°)

>>**Derivative:** Hydroiodide (1:2)

Physical Description: Needles + $3H_2O$ (EtOH)
Melting Point: Mp 235-238° (sinters at 230°)