

Drug Status Report

Drug: Betel Leaf

Drug Name Status: Betel Leaf is the common name

Other Names: *Piper betle* Linn; betel vine

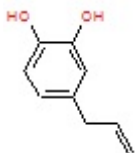
International status:

US: The substance is not currently listed on the US Controlled Substances Act and is not mentioned on the DEA website.

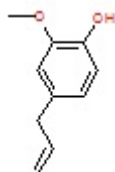
United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Betel Leaf is the leaf of the betel vine, which belongs to the genus *Piper* of the *Piperaceae* family and native to various southeast Asian countries such as India, Sri Lanka, Malaysia, Thailand and Taiwan. Betel leaf, areca nut, catechu, slaked lime, and sometimes tobacco has historically been chewed as a mixture called “betel quid” for medicinal purposes, and as a natural tonic and breath freshener¹. The leaf is also believed to have stimulant activity².

Recent studies have shown that betel leaves have antioxidant and anti-inflammatory activities, and the active components have been identified as hydroxychavicol and eugenol¹. In addition, the profiling of the components of betel leaf by mass spectrometry identified the presence of further derivatives of chavicol and allypyrocatechol as well as phenylalanine².



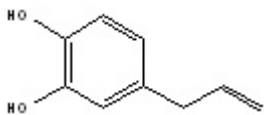
Common Name: Hydroxychavicol
Proper Name: 2-Hydroxychavicol
Chemical Name: 4-(2-propenyl)-1,2-benzenediol
CAS-RN: 1126-61-0
Molecular Formula: C₉H₁₀O₂



Common Name: Eugenol
Chemical Name: 2-Methoxy-4-(2-propenyl)phenol
Other Names: Allylguaiacol; 1-hydroxy-2-methoxy-allylbenzene
CAS-RN: 97-53-0
Molecular Formula: C₁₀H₁₂O₂

¹Pin KY. *et al.* (2010) Antioxidant and anti-inflammatory activities of extracts of betel leaves (*Piper Betle*) from solvents with different polarities, *J. Tropical Forest Sci.* **22**:448-445.

²Bajpai, V. *et al.* (2010) Profiling of *Piper betle* Linn. cultivars by direct analysis in real time mass spectrometric techniques, *Biomed. Chromatogr.* **24**:1283-1286.



Common Name: Allylpyrocatechol

Chemical Name: 4-Allyl-1,3-benzenediol

Other Names: 4-allylcatechol; 1,2-Dihydroxy-4-allylbenzene; 4-(2-Propenyl)-1,2-benzenediol

CAS-RN: 1126-61-0

Molecular Formula: C₉H₁₀O₂

Phenylalanine is an essential amino acid and is not controlled under the CDSA. Chaviol and allylpyrocatechol are bioactive phenols and are not similar to any of the substances listed in the schedules to the CDSA. Eugenol displays some structural similarity to isosafrole and safrole but cannot be included under sitem 7 nor 17 of Part A of Schedule VI to the CDSA.

Recommendation: Betel leaf is included not included in any of the Schedules to the CDSA and is not considered a controlled substance.

December 14th, 2010.