Health Canada
Santé Canada

STATUS DECISION OF CONTROLLED AND NON-CONTROLLED SUBSTANCE(S)

Substance: I- Hypaconitine
II- Mesaconitine

Based on the current information available to the Office of Controlled Substances, it appears that the above substance is:

Controlled	☐
Not Controlled	X

under the schedules of the *Controlled Drugs and Substances Act* (CDSA) for the following reason(s):

- The substances are not structurally similar to any of those included in the Schedules to the CDSA
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Prepared by: _____ Date: _____
Benoit P. Séguin

Verified by: _____ Date: _____
Mark Kozlowski

Approved by: _____ Date: _____
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: Wissam Sader, OCS

Drug Status Report

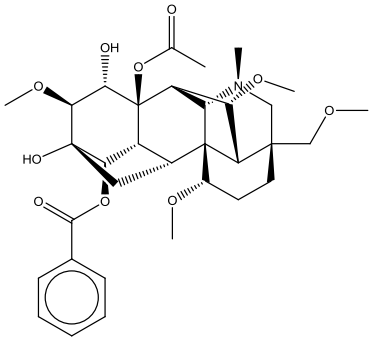
Drug:
I- Hypaconitine
II- Mesaconitine

Drug Name Status:
I- Hypaconitine
II- Mesaconitine are the common names.

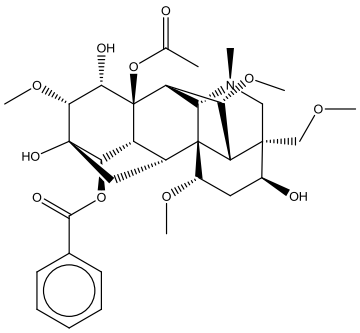
Chemical Name:
I- (1-alpha,6-alpha,14-alpha-,15-alpha,16-beta)-16,16-Trimethoxy-4-(methoxymethyl)-20-methyl-aconitane-8,13,14,15-tetraol, 8-acetate benzoate
II- (1-alpha,3-alpha,14-alpha-,15-alpha,16-beta)-1,6,16-Trimethoxy-4-(methoxymethyl)-20-methyl-aconitane-8,13,14,15-tetraol, 8-acetate benzoate-

Other Names:
I- HA; Japaconitine B1
III- MA; (1α,3α,6α,14α,15α,16β)-3,8,13,14,15-penta-hydr-oxy-1,6,16-trimeth-oxy-4-methoxy-methyl-20-methyl-acon-itan-8,14-diyl 8-acetate 14-benzoate

Chemical structure:



I



II

Molecular Formula: I- $C_{33}H_{45}NO_{10;}$ II- $C_{33}H_{45}NO_{11}$

Pharmacological class / Application: Plant alkaloid

CAS-RN: I- 6900-87-4; II- 2752-64-9

International status:

US: Hypaconitine and Mesaconitine are not listed specifically in the Schedules to the US *Controlled Substances Act* and are not mentioned anywhere on the DEA website.

United Nations: The substances are not listed on the Yellow List - List of Narcotic Drugs under International Control, the Green List - List of Psychotropic Substances under International

Control, nor the Red List - List of Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances under International Control.

Canadian Status: Hypaconitine and mesaconitine are not listed in the Schedules to the CDSA. These substances are alkaloids found in the root of the Aconitum species (Ranumculaceae), which are plants that have been used traditionally for the treatment of a range of conditions including the common cold, diarrhoea, depression and edemea[i]. Hypaconitine and mesaconitine are not structurally similar any of the substances included in the Schedules to the CDSA.

Recommendation: Hypaconitine and Mesaconitine are not included in the schedules to the CDSA and are not controlled substances.

Date: November 22th, 2012.

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[i] **Error! Main Document Only.**Yang, Y. *et al.* (2010) Determination of aconitine, hypaconitine and mesaconitine in urine using hollow fiber liquid-phase microextraction combined with high-performance liquid chromatography, J. Chromatogr. B. **878**:2811-2816.