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

Substance: 2b-Carbomethoxy-3b-(4-fluorophenyl)-N-(3-tributyltin-E-allyl)nortropane

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

- Controlled
- Not Controlled

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

- The chemical is currently not listed specifically on the CDSA.
- The chemical has been referred to as cocaine analogues probably because they share a tropane core structure with cocaine
- The substance is not a derivative of ecgonine

Supporting document(s) attached: X

Prepared by: ____________________________ Date: __________
SHEREEN KHAN

Verified by: See email ____________________________ Date: __________
MICHAEL LEBELLE

Approved by: ____________________________ Date: __________
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES
Drug Status Report

**Drug**: Tropane related substances

2b-Carbomethoxy-3b-(4-fluorophenyl)-N-allyl nortropane (I)
2b-Carbomethoxy-3b-(4-fluorophenyl)-N-(3-iodo-E-allyl) nortropane (II)
2b-Carbomethoxy-3b-(4-fluorophenyl)-N-(3-tributyltin-E-allyl) nortropane (III)

**Drug Name Status**: The above names are common names.

**Chemical Name**: (I)
3-(4-Fluorophenyl)-8-[2-propenyl]-8-azabicyclo[3.2.1]octane-2-carboxylic acid methyl ester

(II)
3-(4-Fluorophenyl)-8-[(2E)-3-(iodo-2-propenyl)]-8-azabicyclo[3.2.1]octane-2-carboxylic acid methyl ester

(III)
3-(4-Fluorophenyl)-8-[(2E)-3-(tributyltin-2-propenyl)]-8-azabicyclo[3.2.1]octane-2-carboxylic acid methyl ester

**Chemical structure:**

![Chemical structure I](image1)

![Chemical structure II](image2)

![Chemical structure III](image3)
Molecular Formula: (I) \( \text{C}_{18}\text{H}_{22}\text{FNO}_2 \)
(II) \( \text{C}_{18}\text{H}_{21}\text{FINO}_2 \)
(III) \( \text{C}_3\text{H}_{54}\text{FNO}_2\text{Sn} \)

Pharmacological class / Application: dopamine transporter ligand

International status:

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

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

Canadian Status: The chemicals are currently not listed specifically on the CDSA. The chemicals have been referred to as cocaine analogues probably because they share a tropane core structure with cocaine. The structures of tropane and ecgonine, the root structure of coca alkaloids, are shown below.

![Tropane](image1.png)

![Ecgonine](image2.png)

Item I (2) of the Schedule to the CDSA is: “Coca (Erythroxylon), its preparations, derivatives, alkaloids and salts, including:
I.2.(1) Coca leaves
I.2.(2) Cocaine (Benzoylmethylecgonine)
I.2.(3) Ecgonine (3-Hydroxy-2-tropane carboxylic acid)”.

The substances I, II and III are not derivatives of ecgonine. A decision was made in May, 2003 that other similar substances in this class were also not controlled substances.

Recommendation: Based on the information available, substances I, II and III are not included in the schedules to the CDSA and are not controlled substances.

January 17, 2006