Health Canada Santé Canada

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

Substance: (S)-Mecamylamine

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 substance is not structurally similar to any of those included in the schedules to the CDSA.

Prepared by: _____ Date: December 13th, 2011
Evelyn C Soo

Verified by: _____ Date: _____
Mark Kozlowski

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

This status was requested by: Brigitte Mainville, OCS

Drug Status Report

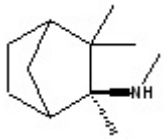
Drug: (S)-Mecamylamine

Drug Name Status: (S)-Mecamylamine is the common name.

Chemical Name: (S)-N,2,3,3-tetramethyl-2-norbornanamine

Other Names: (2S)-N,2,3,3-tetramethyl-bicyclo(2.2.1)heptan-2-amine

Chemical structure:



Molecular Formula: $C_{11}H_{21}N$

Pharmacological class / Application: Nicotinic receptor antagonist

CAS-RN: 60-40-2

International status:

US: (S)-Mecamylamine is not listed in the *US Controlled Substances Act* and is not mentioned anywhere on the DEA website.

United Nations: The substance is 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: (S)-Mecamylamine is not listed specifically in the CDSA. The substance has generally been used in the research setting to study the nicotinic acetylcholine receptors[1] and has also has been evaluated as a potential drug in smoking cessation[2] and treating neuropsychiatric

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[1]Papke, RL et al. (2001) Analysis of mecamylamine stereoisomers on human nicotinic receptor subtypes, J. Pharmacol. Expt. Ther. **297**:646-656.

[2]Rose, JE et al. (1998) Nicotine-mecamylamine treatment for smoking cessation: The role of pre-cessation therapy, Expt. Clin. Psychopharmacol. **6**:331-343.

disorders such as Tourette's syndrome and schizophrenia[3] . The substance does not display structural similarity to any of the substances listed in the CDSA.

Recommendation: (S)-Mecamylamine is not included in the schedules to the CDSA and is not a controlled substance.

Date: December 13th, 2011

[3]Bacher, I et al (2009) Mecamylamine a nictotinic acetylcholine receptor antagonist with potential for thre treatment of neuropsychiatric disorders, Expert Opin Pharmacother. **10**:2709-2721.