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

Substance: Meconin

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

- Controlled X
- Not Controlled ☐

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

- The substance is a metabolite of narcotine (noscapine) and is controlled under Item 1 of Schedule I to the CDSA.

Prepared by: _______________________________ Date: _________________
Vincent Marleau

Verified by: _______________________________ Date: _________________
Mark Kozlowski

Approved by: _______________________________ Date: _________________
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: “third party information removed as per agreement with applicant”
Drug Status Report

Drug: Meconin

Drug Name Status: Meconin is the common name.

Chemical Name: 6,7-Dimethoxyphthalide

Other Names: 6,7-dimethoxyisobenzofuran-1(3H)-one

Chemical structure:

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\begin{array}{c}
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Molecular Formula: \( \text{C}_{10}\text{H}_{10}\text{O}_{4} \)

CAS-RN: 569-31-3

Pharmacological class / Application: Pharmaceutical-related substance

International status:

US: Meconin is not listed specifically in the Schedules to 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: Meconin is not currently listed in the schedules to the CDSA. The substance has been reported in the scientific literature to be a metabolite of noscapine\(^1\)

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\(^1\)El-Haj, BM et al. (2007) GC-MS detection and tentative characterization of two noscapine metabolites in human urine and their potential as markers for opium and illicit heroin use, Foren. Toxicol. 25:22-29.
and is often used in forensic analysis as a marker for the illicit use of heroin use\textsuperscript{2}. Noscapine is currently excluded from Schedule I to the CDSA and is listed as sub-item 1(35) “Narcotine (6,7-dimethoxy-3-(5,6,7,8-tetra-hydro-4-methoxy-6-methyl-1,3-dioxolos [4,5-g]isoquinolin-5-yl)-1(3H)-isobenzofuranone). While narcotine (noscapine) is specifically excluded from the CDSA, the heading of item 1 of Schedule I is “Opium Poppy (Papaver somniferum), its preparations, derivatives, alkaloids and salts including.”. As a metabolite of narcotine, meconin is considered included under item 1 of Schedule I to the CDSA as a derivative of narcotine. It is noteworthy that the derivatives of the substances specifically excluded from item 1 of Schedule I to the CDSA eg. apomorphine, naltrexone and naloxone have been considered captured under item 1 of Schedule I to the CDSA.

**Recommendation:** Meconin is included in Item 1 of Schedule I to the CDSA and is a controlled substance.

**Date:** May 11th, 2012.

\textsuperscript{2}Trathen, B. et al. (2009) Validity of noscapine and papaverine metabolites as markers of heroin misuse in the context of diamorphine treatment. A survey of urine samples from nonsubstance misusing patients prescribed diamorphine, J. Substance Use, 14:133-138.