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

Substance: beta-Methylfentanyl

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 has the core structure of the fentanyls and therefore is included under item 16 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: Evelina Rutkowski, OCS
Drug Status Report

**Drug:** beta-Methylfentanyl

**Drug Name Status:** beta-Methylfentanyl is the common name.

**Chemical Name:** (S)-N-phenyl-N-(1-(1-phenylpropan-2-yl)piperidin-4-yl)propionamide

**Other Names:** β-Methylfentanyl; beta-Methyl fentanyl

**Chemical structure:**

![Chemical structure diagram](image)

**Molecular Formula:** C\textsubscript{23}H\textsubscript{30}N\textsubscript{2}O

**Pharmacological class / Application:** Fentanyl

**CAS-RN:** 79146-56-8

**International status:**

US: beta-Methylfentanyl 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: beta-Methylfentanyl is not listed specifically in the CDSA. A review of the current family of fentanyls revealed that substances included under item 16 of Schedule I to the CDSA all contain the following root structure:

![Chemical structure diagram](image)

R=ethyl group substituted variously at the 1 and 2 position
\[ R_1 = \text{hydrogen, methoxymethyl or carboxylate alkyl ester} \]
\[ R_2 = \text{phenyl or substituted phenyl} \]
\[ R_3 = \text{alkyl} \]
\[ R_4 = \text{hydrogen or alkyl} \]

Note, however, that the pharmacological activities of the substances were not considered in the earlier reviews.

According to above root structure, beta-Methylfentanyl would be considered to contain all the essential structural elements of fentanyls. Given that the substances has the core structure of the fentanyls, the substance must be included under the heading “Fentanyls, their salts, derivatives, and analogues and salts of derivatives and analogues, including” of item 16 of Schedule I to the CDSA. In addition, the isomer of beta-Methylfentanyl, alpha-Methylfentanyl, is listed as sub-item 16(8) of Schedule I to the CDSA.

**Recommendation:** beta-Methylfentanyl is included under item 16 of Schedule I to the CDSA and is a controlled substance.

**Date:** June 18th, 2012.