Health Canada
Santé Canada

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

Substance: Normorphine-6-glucuronide

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 morphine and must be included under item 1 of Schedule I to the CDSA.

Prepared by: _____ Date: _____
Zack Li

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

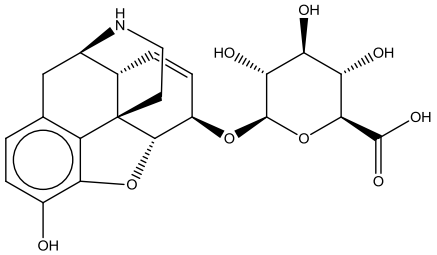
Drug: Normorphine-6-glucuronide

Drug Name Status: Normorphine-6-glucuronide is the common name.

Chemical Name: beta-D-Glucopyranosiduronic acid, (5alpha,6alpha)-7,8-didehydro-4,5-epoxy-3-hydroxymorphinan-6-yl

Other Names: Morphinan, beta-D-glucopyranosiduronic acid deriv

Chemical structure:



Molecular Formula: $C_{22}H_{25}NO_9$ **CAS-RN:** 65060-95-9

Pharmacological class / Application: Pharmaceutical-related substance

International status:

US: Normorphine-6-glucuronide 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: Normorphine-6-glucuronide is not listed specifically in the CDSA. The substance has been shown to be a derivative of the morphine[1], which is currently listed as sub-item 1(3) "Morphine (7,8-didehydro-4,5-epoxy-17-methylmorphina-3,6-diol) in Schedule I to the CDSA under the heading "Opium Poppy, its preparations, derivatives, alkaloids and salts". As a derivative of morphine, the substance must be included under item 1 of Schedule I to the CDSA.

Recommendation: Normorphine-6-glucuronide is included in item 1 of Schedule I to the CDSA and is a controlled substance.

Date: May 22nd, 2012.

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[1] Yeh, SY et al. (1977) Isolation and identification of morphine 3- and 6-glucuronides, morphine 3,6-diglucuronide, morphine 3-ethereal sulphate, normorphine and normorphine 6-glucuronide as morphine metabolites in humans, J Pharm. Sci. **66**:1288-1293.