Drug Status Report

**Drug**: 14-Hydroxymorphinone

**Drug Name Status**: 14-Hydroxymorphinone is a common name

**Chemical Name**: 7,8-Didehydro-4,5-alpha-epoxy-3,14-dihydroxy-17-methyl-morphinan-6-one

**Chemical structure**: 

![Chemical structure of 14-Hydroxymorphinone and 14-Hydroxymorphine](image)

**Molecular Formula**: C$_{17}$H$_{17}$NO$_4$

**Pharmacological class / Application**: opioid

**International status**:

US: The drug is not included specifically in the Schedules to the CSA. It is not mentioned on the DEA website.

The term "narcotic drug" is defined in the CSA as “any of the following whether produced directly or indirectly by extraction from substances of vegetable origin, or independently by means of chemical synthesis, or by a combination of extraction and chemical synthesis:

(A) Opium, opiates, derivatives of opium and opiates, including their isomers, esters, ethers, salts, and salts of isomers, esters, and ethers, whenever the existence of such isomers, esters, ethers, and salts is possible within the specific chemical designation.”

Opiate is also defined in the CSA as “any drug or other substance having an addiction-forming or addiction-sustaining liability similar to morphine or being capable of conversion into a drug having such addiction-forming or addiction-sustaining liability.

The opiates are listed on Schedules I and II to the CSA. DEA would need to confirm whether 14-Hydroxymorphinone is on I or II.

United Nations: The opiates are included in Schedules I and II to the 1961 convention. The
status of 14-Hydroxymorphinone would need to be verified with the INCB.

Canadian Status: Item 1 of Schedule I to the CDSA is “Opium poppy (Papaver somniferum), its preparations, derivatives, alkaloids and salts” and includes morphine and its “salts, derivatives and salts of derivatives”.

There follows a list of many opiates some of which are structurally very similar to 14-hydroxymorphinone. In 2006, 14-hydroxymorphine (structure above) which is not listed specifically in item 1 of Schedule I was reviewed and declared to be included in item 1. 14-Hydroxymorphinone is the 3-oxo derivative of this substance; it must be considered to be included in item 1 of Schedule I.

Recommendation: 14-Hydroxymorphinone is included in Item 1 of Schedule I to the CDSA and is a controlled substance.

April 23, 2008