

Drug Status Report

Drug: Buprenorphine related substances

A status request was received for the following substances:

Thevinone (I)

Dihydrothevinone (II)

3-O-Methylnorbuprenorphine (III)

3-O-Methoxy-N-methylnorbuprenorphine (IV)

Drug Name Status: All of the above are common names.

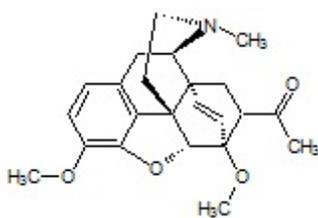
Chemical Name: I - 1-[(5a,7a)-4,5-epoxy-3,6-dimethoxy-17-methyl-6,14-ethenomorphinan-7-yl]-ethanone

II - 1-[(5a,7a)-4,5-epoxy-18,19-dihydro-3,6-dimethoxy-17-methyl-6,14-ethenomorphinan-7-yl]-ethanone

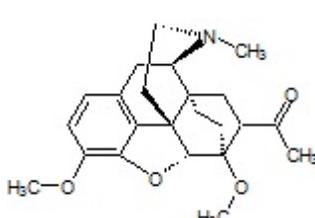
III - 7a-[(S)-1-hydroxy-1,2,2-trimethylpropyl]-6,14-endo-ethano-6,7,8,14-tetrahydronorthebaine

IV - 7a-[(S)-1-hydroxy-1,2,2-trimethylpropyl]-6,14-endo-ethano-6,7,8,14-tetrahydrothebaine

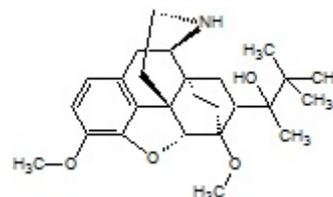
Chemical structure:



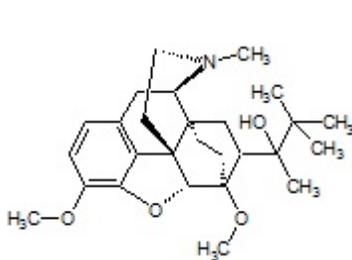
I



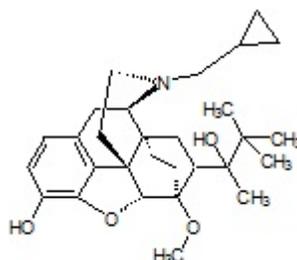
II



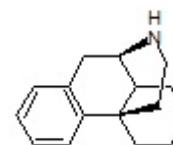
III



IV



Buprenorphine



Morphinan

Molecular Formula: I - $C_{23}H_{27}NO_4$

II - $C_{23}H_{29}NO_4$

III - $C_{26}H_{37}NO_4$

IV - $C_{27}H_{39}NO_4$

Pharmacological class / Application: morphinans

International status:

US: The substances are not listed on the schedules to the CSA and is not mentioned on the DEA website. Buprenorphine is listed on Schedule III to the CDSA; therefore, the analogue provisions of the CSA do not apply. However, in the CSA, narcotic drug is defined as, "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." As these substances may be considered narcotic drugs under this definition, it is necessary to consult the DEA to determine the status of these substances.

United Nations: The substances are not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: Buprenorphine (structure above) is subitem 10(1) of Schedule I to the CDSA, "Morphinans, their salts, derivatives and salts of derivatives." This family of substances includes substances that all contain the core structure of morphinan (structure above). On this basis, substances I to IV may be considered to be morphinans and therefore included in item 10 of Schedule I. Substances I and II are also derivatives of thebaine, subitem 1(4) of Schedule I, so they could be considered to be included in item 1 of Schedule I.

Recommendation: Substances I to IV are included in item 10 of Schedule I to the CDSA and are controlled substances.

January 15, 2009