

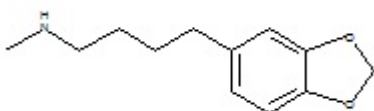
## Drug Status Report

**Drug:** 1-methylamino-4-(3,4-methylenedioxyphenyl)-butane (**I**)  
4-(3,4-methylenedioxyphenyl)-butanal (**II**)

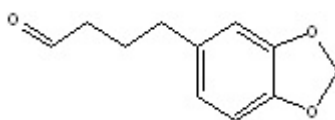
**Drug Name Status:** 1-methylamino-4-(3,4-methylenedioxyphenyl)-butane (**I**) and 4-(3,4-methylenedioxyphenyl)-butanal (**II**) are the common names.

**Chemical Name:** 1,3-benzodioxole-5-butanamine (**I**)  
1,3-benzodioxole-5-butanal (**II**)

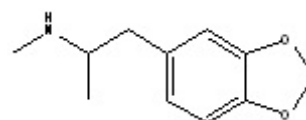
**Chemical structure:**



**I**



**II**



**MDMA**

**Molecular Formula:** **I** - C<sub>12</sub>H<sub>17</sub>NO<sub>2</sub>; **II** - C<sub>11</sub>H<sub>12</sub>O<sub>3</sub>

**Pharmacological class / Application:** unknown

**International status:**

US: The substances are not currently listed on the schedules to the US Controlled Substances Act and are not mentioned on the DEA website.

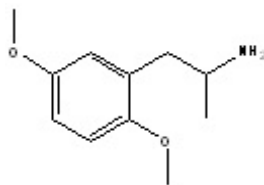
United Nations: The substance is not listed on the Yellow List - List of Narcotic Drugs under International Control nor the Green List - List of Psychotropic Substances under International Control.

Canadian Status: 1-methylamino-4-(3,4-methylenedioxyphenyl)-butane (**I**) and 4-(3,4-methylenedioxyphenyl)-butanal (**II**) are two substances intercepted and forwarded to DAS for analysis. **I** is thought to be a novel analogue of N-methyl-3,4-methylenedioxyamphetamine (MDMA) and **II** is believed to be its precursor. These substances are not currently listed in any of the Schedules to the CDSA.

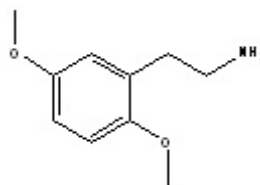
N-methyl-3,4-methylenedioxyamphetamine (MDMA) is presently listed under Item 1 (sub-item 9) of Schedule III to the CDSA under the item heading "Amphetamines, their salts, derivatives, isomers and analogues and salts of derivatives, isomers and analogues". The term "analogue" means a substance that, in relation to a controlled substance, has a substantially similar chemical structure. Over the last several years, the interpretation of the heading of item 1 of Schedule III has been used to determine the status of several substances for the purpose of application of the CDSA. Recent reviews of 2-methylamino-1-(3,4-methylenedioxy)-propiofenone and N-

methyl-1(3,4-methylene-dioxyphenyl)-2-butanamine recommended that these substances be considered to be included in the listing of amphetamines as analogues of MDMA and the status report for 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone is appended.

In contrast to the above substances, the review several phenethylamines as potential analogues of amphetamine recommended that these compounds be excluded from Item 1 of Schedule III to the CDSA. The decision was based on the fact that the amphetamines have an additional methyl group that is absent from the phenethylamine family. As an illustrative example, the structures of 4-methyl-2,5-dimethoxyamphetamine is presented along side 2,5-dimethoxyphenethylamine, the status report for which is also appended.



4-methyl-2,5-dimethoxyamphetamine (STP)



2,5-dimethoxyphenethylamine

Therefore, while **I** and **II** do contain the 1,3-benzodioxole moiety that is common to MDMA, the substances lack the additional methyl group which distinguishes these compounds from the amphetamines, as had been observed with the phenethylamines. Therefore, **I** and **II** are not considered as analogues of amphetamine and are not included under Item 1 of Schedule III to the CDSA.

Recommendation: 1-methylamino-4-(3,4-methylenedioxyphenyl)-butane (**I**) and 4-(3,4-methylenedioxyphenyl)-butanal (**II**) are not included in item 1 of Schedule III to the CDSA and are not controlled substances.

April 9<sup>th</sup> 2010.

## Drug Status Report

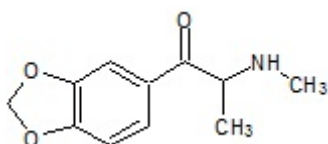
**Drug:** 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone

**Drug Name Status:** 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone is the common name

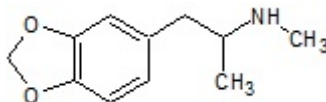
**Other Names:** Methyloone; Explosion

**Chemical Name:** N, $\alpha$ -Dimethyl-1,3-benzodioxole-5-(2-oxoethanamine)

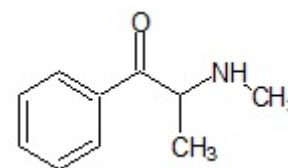
**Chemical structure:**



2-Methylamino-1-(3,4-methylenedioxy)-propiofenone



N-methyl-3,4-methylenedioxyamphetamine (MDMA)



Methcathinone

**Molecular Formula:** C<sub>11</sub>H<sub>13</sub>NO<sub>3</sub>

**Pharmacological class / Application:** stimulant

**International status:**

US: The substance is not currently listed on the US Controlled Substances Act and is not mentioned on the DEA website. However, 2-methylamino-1-(3,4-methylenedioxy)-propiofenone may be controlled in the US due to the analogue provisions in the CSA.

United Nations: The substance is 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: Item 1 of Schedule III to the CDSA is, "Amphetamines, their salts, derivatives, isomers and analogues and salts of derivatives, isomers and analogues." Subitem 1(9) is N-methyl-3,4-methylenedioxyamphetamine which is also known as MDMA and Ecstasy (structure shown above). 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone is analogous to MDMA in that it contains the same structure with an additional oxygen. 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone is therefore an analogue of MDMA and is included in item 1 of Schedule III to the CDSA. The hydrochloride salt has the same status.

The substance is also structurally similar to 2-methylamino-1-phenyl-1-propanone (methcathinone) which is listed as item 21 of Schedule III to the CDSA.

**Recommendation:** 2-Methylamino-1-(3,4-methylenedioxy)-propiofenone and its hydrochloride

salt are included in item 1 of Schedule III to the CDSA and are controlled substances.

May 8, 2007

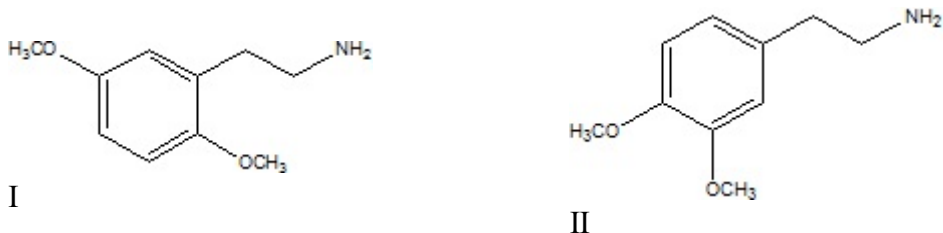
## Drug Status Report

**Drug:** 2,5-Dimethoxyphenethylamine; 3,4-Dimethoxyphenethylamine

**Drug Name Status:** I - 2,5-Dimethoxyphenethylamine and II - 3,4-Dimethoxyphenethylamine are common names

**Chemical Name:** I - 2,5-Dimethoxybenzeneethanamine; 3,4-dimethoxybenzeneethanamine

**Chemical structure:**



**Molecular Formula:** I -  $C_{10}H_{15}NO_2$ , II -  $C_{10}H_{15}NO_2$

**Pharmacological/chemical class / Application:** unknown

**International status:**

US: The substance is not listed on the US Controlled Substances Act and is not mentioned on the DEA website.

United Nations: The substance is 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: There is only one phenethylamine listed on the schedules to the CDSA. Item 24 of Schedule III, 4-bromo-2,5-dimethoxybenzeneethanamine, was added in 1997. The variety of phenethylamines can parallel the amphetamines due to the structural similarity of the two families; the amphetamines contain an additional methyl group. The phenethylamines are known to be psychoactive but have never attained the popularity of the amphetamines. The addition of 4-bromo-2,5-dimethoxybenzeneethanamine to the schedules to the CDSA may have been due to the appearance of this substance on the "street". Since 2002, several phenethylamines have been evaluated and are considered non-controlled; these include phenethylamine; 2C-I; 2C-T-7; and 2-C-T-2.

**Recommendation:** 2,5-Dimethoxyphenethylamine and 3,4-dimethoxyphenethylamine are not included in the schedules to the CDSA and are not controlled substances.

June 27, 2006