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

Substance: 5-(9-anthracenylmethylene) barbituric acid, 5-(anilinomethylene) barbituric acid, 1,3-dimethyl-5-(1-naphthylmethylene) barbituric acid, 1,3-dimethyl-5-(2-thienylidene) barbituric acid, 1,3-dimethyl-5-(3-indolylmethylene) barbituric acid, 5-(2-hydroxy-1-naphthylmethylene) barbituric acid, and 5-(4-hydroxy-3-methoxybenzylidene) barbituric acid

Based on the current information available to the Office of Controlled Substances, it appears that the above substance are:

Controlled X
Not Controlled □

under the schedules of the Controlled Drugs and Substances Act (CDSA) for the following reason(s):

• The above named substances have the root structure of the barbiturate family and therefore included in item 1 of Schedule IV to the CDSA.

Prepared by: ____________________________ Date: ____________
Evelyn Soo

Verified by: See email ____________________________ Date: ____________
MICHAEL LEBELLE

Approved by: ____________________________ Date: ____________
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES
Drug Status Report

Drug: 5-methyl-5-phenyl-phenobarbital

I - 5-(9-anthracenylmethylene) barbituric acid
II - 5-(anilinomethylene) barbituric acid
III - 1,3-dimethyl-5-(1-naphthylmethylene) barbituric acid
IV - 1,3-dimethyl-5-(2-thienylidene) barbituric acid
V - 1,3-dimethyl-5-(3-indolylmethylene) barbituric acid
VI - 5-(2-hydroxy-1-naphthylmethylene) barbituric acid
VII - 5-(4-hydroxy-3-methoxybenzylidene) barbituric acid are common names.

Drug Name Status:

I - 5-(9-anthracenylmethylene) barbituric acid
II - 5-(phenylamino)methylene barbituric acid
III - 1,3-dimethyl-5-(1-naphthylmethylene) barbituric acid
IV - 1,3-dimethyl-5-(2-thienyl)methylene barbituric acid
V - 1,3-dimethyl-5-(3-indolylmethylene) barbituric acid
VI - 5-(2-hydroxy-1-naphthylmethylene) barbituric acid
VII - 5-(4-hydroxy-3-methoxybenzylidene) barbituric acid are common names.

Chemical Name:

I - 5-(9-anthracenylmethylene)-2,4,6(1H,3H,5H)-pyrimidinetrione
II - 5-(phenylamino)methylene-2,4,6(1H,3H,5H)-pyrimidinetrione
III - 1,3-dimethyl-5-(1-naphthylmethylene)-2,4,6(1H,3H,5H)-pyrimidinetrione
IV - 1,3-dimethyl-5-(2-thienyl)methylene-2,4,6(1H,3H,5H)-pyrimidinetrione
V - 1,3-dimethyl-5-(3-indolylmethylene)-2,4,6(1H,3H,5H)-pyrimidinetrione
VI - 5-(2-hydroxy-1-naphthylmethylene)-2,4,6(1H,3H,5H)-pyrimidinetrione
VII - 5-(4-Hydroxy-3-methoxybenzylidene)-2,4,6(1H,3H,5H)-pyrimidinetrione

Chemical structure:
Molecular Formula:

I - C$_{19}$H$_{12}$N$_2$O$_3$
II - C$_{11}$H$_9$N$_3$O$_3$
III - C$_{17}$H$_{14}$N$_2$O$_3$
IV - C$_{11}$H$_{10}$N$_2$O$_3$S
V - C$_{13}$H$_{13}$N$_3$O$_3$
VI - C$_{15}$H$_{10}$N$_2$O$_4$
VII - C$_{12}$H$_{10}$N$_2$O$_5$

Pharmacological or Chemical class / Application: barbiturates

International status:

US: The substances are not currently listed on the US Controlled Substances Act and are not mentioned on the DEA website. However, barbituric acid derivatives are included in Schedule III to the CSA which would include the above substances.

United Nations: The substances not listed on the Yellow List - List of Narcotic Drugs under International Control. The substances are not listed on the Green List - List of Psychotropic Substances under International Control.

Canadian Status: The substances are currently not listed specifically on the CDSA. However, on the basis of their chemical structures the substances are
considered a member of the barbiturate family since they contain the characteristic root structure of the barbiturates i.e.

\[
\begin{array}{c}
\text{R}_1 \\
\text{O} \\
\text{N} \\
\text{O} \\
\text{R}_2 \\
\text{N} \\
\text{O} \\
\text{R}_3 \\
\text{R}_4
\end{array}
\]

where \( R_1, R_2, R_3, \) and \( R_4 \) are various chemical substituents that differentiate the barbiturates, and where the \( R \) groups in the case of barbituric acid are hydrogen (H). Accordingly, substances I to VII are captured under Item 1 of Schedule IV to the CDSA “Barbiturates, their salts and derivatives.”

It is noteworthy that status decisions were recently made on 5-(Anilinomethylene)-1,3-dimethylbarbituric acid (VIII) and 5-(3,5-Dichloro-2-propoxy-benzylidene)-pyrimidine-2,4,6-trione (IX) and these substances were considered to be controlled on the basis of the substance having the root structure of the barbiturate family.

Recommendation: 5-(9-anthracenylmethylene) barbituric acid, 5-(anilinomethylene) barbituric acid, 1,3-dimethyl-5-(1-naphthylmethylene) barbituric acid, 1,3-dimethyl-5-(2-thienylidene) barbituric acid, 1,3-dimethyl-5-(3-indolylmethylene) barbituric acid, 5-(2-hydroxy-1-naphthylmethylene) barbituric acid, and 5-(4-hydroxy-3-methoxybenzylidene) barbituric acid are included in item 1 of Schedule IV to the CDSA and are controlled substances.

December 3rd, 2009.