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

Substance: 2-Phenylacetoacetonitrile

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

- Controlled ☐
- Not Controlled X

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

- The substance does not display any structural similarity to those in the CDSA.

Prepared by: ___________________________ Date: ________________

Vincent Marleau

Verified by: ___________________________ Date: ________________

Mark Kozlowski

Approved by: ___________________________ Date: ________________

DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: Jacqueline Oddi, HC
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Drug Status Report

Drug: 2-Phenylacetoacetonitrile

Drug Name Status: 2-Phenylacetoacetonitrile is the common name.

Chemical Name: Benzeneacetonitrile, alpha-acetyl-

Other Names: 1-Cyano-1-phenyl-2-propanone; Acetoacetonitrile, alpha-phenyl-; alpha-Aceto-alpha-cyanotoluene; Acetoacetonitrile, 2-phenyl- (8CI); alpha-Phenylacetoacetonitrile; Acetonitrile, 2-acetyl-2-phenyl-.

Chemical structure:

\[
\begin{align*}
\text{Molecular Formula: } & C_{10}H_9NO \\
\text{CAS-RN: } & 4468-48-8
\end{align*}
\]

Pharmacological class / Application: Fine Chemical

International status:

US: 2-Phenylacetoacetonitrile 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: 2-Phenylacetoacetonitrile is not listed specifically in the CDSA. The substance belongs to the 5-aminopyrazole family and is reported in the scientific literature to display antibacterial, anti-inflammatory, and herbicidal activities.\(^1\) It is also an intermediate in the synthesis of amphetamine but it displays no structural similarities to the amphetamines. Since it does not display any structural similarities to the substances included in the CDSA, it cannot be included under the Schedules to the CDSA.

Recommendation: 2-Phenylacetoacetonitrile is not included in the Schedules to the CDSA and is not a controlled substance.

Date: July 18th, 2012.