



Health Canada
Santé Canada



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

Substance: alpha-Acetyl-gamma-butyrolactone

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

Controlled

Not Controlled

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

- The derivatives and analogues of gamma-butyrolactone are not included under item 18 of Part 1 of Schedule VI to the CDSA.

Prepared by: _____ Date: _____
Evelyn Soo

Verified by: _____ Date: _____
Mark Kozlowski

Approved by: _____ Date: _____
DIRECTOR, OFFICE OF CONTROLLED SUBSTANCES

This status was requested by: "third party information removed as per agreement with applicant"

Drug Status Report

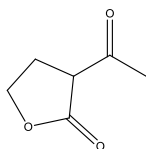
Drug: alpha-Acetyl-gamma-butyrolactone

Drug Name Status: alpha-Acetylbutyrolactone is the common name.

Chemical Name: 3-acetyldihydro-2(3H)-furanone

Other Names: 2-Acetyl-4-hydroxybutyric acid gamma lactone; 2-Oxo-3-acetyltetrahydrofuran; 3-Acetyltetrahydro-2-furanone; alpha-(2-Hydroxyethyl)acetoacetic acid gamma lactone.

Chemical structure:



Molecular Formula: C₆H₈O₃

Pharmacological class / Application: Fine chemical

CAS-RN: 517-23-7

International status:

US: alpha-Acetyl-gamma-butyrolactone 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: alpha-Acetyl-gamma-butyrolactone is not listed in the Schedules to the CDSA. The substance is used as a reagent in chemical synthesis reactions¹ and though it displays structural similarity to gamma-butyrolactone, the analogues and derivatives of gamma-butyrolactone are not included under item 18 of Part 1 of Schedule VI to the CDSA.

Recommendation: alpha-Acetyl-gamma-butyrolactone is not included in the schedules to the CDSA and is not a controlled substance.

Date: March 13th, 2012.

¹ Taskinen, E (2007) Relative stabilities and molecular structures of the isomeric enol ethers and carboxylic esters derived from alpha-acetyl-g-butyrolactone and alpha-acetyl-d-valerolactone, J. Phy. Org. Chem. **20**:539-546.