Drug Status Report

Drug: (S)-(-)-1,2,4-Butanetriol

Drug Name Status: (S)-(-)-1,2,4-Butanetriol is the common name.

Chemical Name: (S)-(-)-1,2,4-butanetriol

Other Names: (S)-(-)-1,3,4-butanetriol; (S)-butane-1,2,4-triol

Chemical structure:

![Chemical structure of 1,4-butanediol and 1,4-butanediol](image)

Molecular Formula: C₄H₁₀O₃

Pharmacological class / Application: fine chemical

International status:

US: The substance is not listed on the schedules to the CSA 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. The drug is not listed on the Green List - List of Psychotropic Substances under International Control.

Canadian Status: 1,2,4-Butanetriol is a chiral compound that is a widely used chemical reagent in the organic synthesis of a variety of compounds which range from pharmaceuticals, such as antivirals¹, antibacterial² and cationic lipids³, to elastomers⁴. The substance also exists as its

¹Yamada-Onodera, K. et al. (2007) Production of optically active 1,2,4-butanetriol from corresponding racemate by microbialic stereoinversion, J. Biosci. Bioeng. 103:494-496.

²Borsuk, K. et al. (2001) Six-membered cyclic sulfites derived from glucofuranose and 1,2,4-butanetriol, Chirality, 13:533-540.


individual enantiomers i.e. (S)-(−) and (R)-(+) 1,2,4-butanetriol.

1,2,4-butanetriol is not currently listed in any of the Schedules to the CDSA. While the substance is similar in structure to 1,4-butanediol, which is listed specifically as a Class A precursor as item 19 in Part 1 of Schedule VI to the CDSA, 1,2,4-Butanetriol and its separate enantiomers are not included under item 19 of Part 1 of Schedule VI.

Recommendation: 1,2,4-butanetriol is not included in the schedules to the CDSA and is not considered a controlled substance.

April 16th 2010