

Drug Status Report

Drug: 2-Heptanone

Drug Name Status: 2-Heptanone is the common name

Chemical Name: 2-Heptanone

Other Names: Amyl methyl ketone; methyl n-amyl ketone; Heptan-2-one

Chemical structure:



Molecular Formula: C₇H₁₄O

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: 2-Heptanone 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-Heptanone is a naturally-occurring compound that can be found in foods such as cheese and has been shown to be pheromone^{1,2}. The substance is also used as an industrial solvent³ and in electrochemical applications⁴. 2-Heptanone is not similar to any of the substances listed in the schedules to the CDSA.

¹Wang Z. *et al.* (2006) Pheromonal detection in male mice depends on signaling through type 3 adenylyl cyclase in the main olfactory epithelium, *J. Neurosci.* **26**:7375-7379.

²Shearer, DA. and Boch, R. (1965) 2-Heptanone in the mandibular gland secretion of the honey bee, *Nature*:**206**:530.

³Lynch, DW. *et al.* (1981) Inhalation toxicity of methyl n-amyl ketone (2-heptanone) in rats and monkeys, *Toxicol. Applied. Pharmacol.* **58**:341-352.

⁴Cheng, Y. And Schiffrin, DJ. A study of 2-heptanone and 2-octanone as solvents for two-phase electrochemistry: Part 2. Facilitated ion transfers, *J. Electroanal. Chem.* **429**:37-45.

Recommendation: 2-Heptanone is not included in the schedules to the CDSA and is not considered a controlled substance.

April 26, 2010.