Health Canada
Santé Canada

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

Substance: Kynurenine

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 is not structurally similar to any of the substances listed in the schedules to the CDSA.

Prepared by: _____ Date: _____
Evelyn C 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

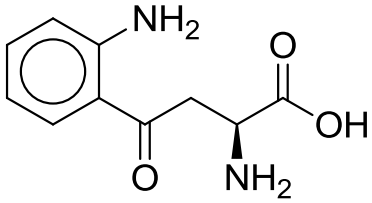
Drug: Kynurenine

Drug Name Status: Kynurenine is the common name.

Chemical Name: α,2-Diamino-gamma-oxo-benzenebutanoic acid

Other Names: α-2-Diamino-gamma-oxobenzenebutyric acid

Chemical structure:



Molecular Formula: $C_{10}H_{12}N_2O_3$

Pharmacological class / Application: Non-proteinogenic amino acid

CAS-RN: 343-65-7

International status:
US: Kynurenine 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: Kynurenine is not listed in the Schedules to the CDSA. The substance has been reported in the scientific literature to be a non-proteinogenic amino acid that is involved in various biochemical signalling pathways and disease states[i]. It is also a major metabolite of tryptophan[ii]. Kynurenine is not structurally similar to any of the substances included in the Schedules to the CDSA.

Recommendation: Kynurenine is not included in the schedules to the CDSA and is not a controlled substance.

Date: November 23rd, 2012.

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[i] Kleijn LHJ et al. (2012) A concise preparation of the non-proteinogenic amino acid L-kynurenine, Tetrahedron Lett. **53**:6430-6432.
[ii] Stone TW and Darlington LG,. (2002) Endogenous kynurenines as targets for drug discovery and development. Nat Rev Drug Disc. **1**:609-620