Health Canada Santé Canada

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

Substance: I - Lithium carbonate
II - Lithium nitrate

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 substances are not similar to any of the substances listed in the schedules to the CDSA

Prepared by: _____ Date: May 10, 2011
Zack Li

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

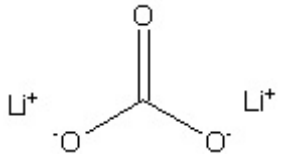
Drug: I - Lithium carbonate
II- Lithium nitrate

Drug Name Status: I - Lithium carbonate
II - Lithium nitrate are the common names.

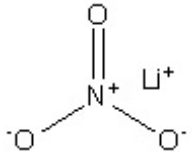
Chemical Name: I - Lithium carbonate
II - Lithium nitrate

Other Names: I - Carbonic acid, lithium salt; carbonic acid; dilithium slat; Carbolith; Duralith; Eskalith; Lithane; Lithobid; Lithonate
II - Nitric acid, lithium salt

Chemical structure:



I



II

Molecular Formula: I - Li_2CO_3; II - $LiNO_3$

Pharmacological class / Application: Lithium salts

CAS-RN: I - 554-13-2; II- 7790-69-4

International status:

US: Lithium carbonate and lithium nitrate are not listed on the schedules to the US Controlled Substances Act and are not mentioned anywhere on the DEA website.

United Nations: The substances are 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: Lithium carbonate and lithium nitrate are both salts of lithium and are not listed in the Schedules to the CDSA. Lithium carbonate is used for the treatment of neurological disorders such as manic episodes in bipolar disorder[1] but also has industrial applications, such as its use as an admixture in concrete to reduce expansion and cracks[2]. Lithium nitrate is used primarily in industry, for example, in the repair of ASR (alkali-silica reaction) affected concrete[3]. It is noteworthy that lithium and its salts are also currently regulated under Schedule F to the *Food and Drugs Regulations*.

Recommendation: Lithium carbonate and lithium nitrate are not included in the Schedules to the CDSA and are not controlled substances.

Date: May 10th, 2011

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[1]Winterfield, U., et al (2008) Monitoring parameters for children and adolescents receiving psychotropic drugs. [Suivi clinique et paraclinique des enfants et adolescents traites par medicaments psychotropes] Journal de Pharmacie Clinique, **27:** 143-154

[2]Topcu, I., et al (2008) Alkali-silica reactions of mortars produced by using waste glass as fine aggregate and admixtures such as fly ash and Li2CO3. Waste Management, **25:** 878-884

[3] Thomas, M., Stokes, D., (2004) Lithium impregnation of ASR-affected concrete: preliminary studies. Proceedings of the 12th International Conference on Alkali-Aggregate Reaction in Concrete, **1**: 659-667.