Drug Status Report

**Drug:** (-)-Chloropseudoephedrine hydrochloride

**Drug Name Status:** Chloropseudoephedrine hydrochloride is the common name

**Chemical Name:** (1R, 2R)-1-phenyl-1-chloro-2-(methylamino) propane, hydrochloride

**Other Names:** (1R, 2R)-1-chloro-N-methyl-1-phenyl-propan-2-amine, hydrochloride

**Chemical structure:**

![Chemical structure of (-)-Chloropseudoephedrine hydrochloride](image)

**Molecular Formula:** C_{10}H_{14}ClN.HCl

**Pharmacological class / Application:** Precursor of methamphetamine

**International status:**

US: Chloropseudoephedrine hydrochloride is not listed specifically in the Schedules to the CSA. However, the use of (-)-chloropseudoephedrine in the illicit manufacture of L-methamphetamine has been reported on the DEA website[^1] and chloropseudoephedrine is controlled as a precursor in various states in the US including for example California, Massachusetts and Colorado.

United Nations: Chloropseudoephedrine hydrochloride is not included in the UN Red List - List of Precursors and Chemicals Frequently Used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances under International Control.

Canadian Status: Chloropseudoephedrine is an intermediate in the illicit manufacture of methamphetamine from pseudoephedrine via the “Emde” route, where it is directly reduced over

a catalyst to form methamphetamine\textsuperscript{2,3}.

\[ \text{Pseudoephedrine} \rightarrow \text{Chloropseudoephedrine} \rightarrow \text{Methamphetamine} \]

\textit{Synthesis of methamphetamine via the “Emde” route}

The catalytic reduction of (-)-chloropseudoephedrine via the Emde route is expected to yield \textit{l}-methamphetamine, which is known to produce psychoactive effects that are short-lived compared to \textit{d}-methamphetamine and therefore generally not considered to be a drug of high abuse potential\textsuperscript{4}. It is noteworthy, however, that the pharmacological properties and abuse potential of racemic methamphetamine is similar to that of \textit{d}-methamphetamine.

Chloropseudoephedrine hydrochloride is not listed specifically in the Schedules to the CDSA. While it is an intermediate in the synthesis of methamphetamine, it is neither a salt of pseudoephedrine nor a salt of ephedrine. As such, the substance cannot be included in Item 16 of Schedule VI “Pseudoephedrine, its salts and any plant containing pseudoephedrine or any of its salts”, nor be included under Item 4 of Schedule VI “Ephedrine, its salts and any plant containing ephedrine or any of its salts” to the CDSA.

Recommendation: Chloropseudoephedrine hydrochloride is not included in any of the Schedules to the CDSA and is not a controlled substance.

January 18\textsuperscript{th} 2010.


\textsuperscript{3}http://www.erowid.org/archive/rhodium/chemistry/chloroephedrine.txt