

J) Toxicology Technical Support Document, State of California, pp 2-3

This Document Indicates The Vapor Pressure Of Methamphetamine Supporting The Claim That It In
Itself Cannot Be Smelled

I. Chemical Name

A. METHAMPHETAMINE (C₁₀H₁₅N)

B. Synonyms

Methamphetamine hydrochloride solid salt form: benzeneethanamine, N-alpha-dimethyl-phenylethylamine hydrochloride, *d*-deoxyephedrine hydrochloride, *d*-desoxyephedrine hydrochloride (Merck, 1996). Trade names include Desoxyn®, Methampex®, Methedrine®, Pervitin®, Temmler® and Norodin® (Makalinao & Aguirre, 1993). Street names include Speed, Meth, Ice, Crank, Crystal, CR, Vitamin C, Go-fast, Chalk, Glass, Amps, Batu, Chicken Powder, Cristina, Croak (mixture with cocaine), Dice, Doe, LA Glass, Monster, Peanut Butter Crank, Shabu, Yaba (mixture with caffeine), Snot (Infotext, 2003; MDL, 2001; Merck, 1996; Stalcup, 2001).

II. Role in Clandestine Drug Synthesis: Methamphetamine

Methamphetamine is the final desired product in the synthesis process.

III. Chemical Description

Clandestine laboratories produce two chemical forms of methamphetamine, the free base ("methamphetamine base") and the hydrochloride salt ("methamphetamine hydrochloride"). The free base, which is the initial product of a clandestine synthesis, is a liquid at room temperature. At alkaline pH, the free base of methamphetamine is soluble in organic solvents. The hydrochloride salt is produced from the free base by bubbling hydrogen chloride gas through a solution of the free base. Methamphetamine contains one optically active carbon atom. Consequently, there are two isomeric forms of methamphetamine, called *d*-methamphetamine and *l*-methamphetamine. The *d*-isomer is more potent than the *l*-isomer, and virtually all of the methamphetamine produced by clandestine laboratories is the *d*-isomer.

A. Appearance

Methamphetamine hydrochloride is usually found as a yellow or white crystalline powder; however, "street" grade methamphetamine may be found in a variety of colors (Stalcup, 2001; Turkington, 2000). Methamphetamine hydrochloride may also be found as "ice," a large, usually clear crystal of high purity. Methamphetamine base is a yellow to brown liquid (Turkington, 2000).

B. Taste

Methamphetamine hydrochloride has a bitter taste (Makalinao & Aguirre, 1993).

C. Odor

Methamphetamine hydrochloride is odorless (Turkington, 2000). Methamphetamine base has a sharp biting odor resembling geranium leaves (HSDB, 2002; Turkington, 2000).

D. Odor Threshold

Methamphetamine hydrochloride (MDL, 2001): Not applicable.

Methamphetamine base: Not available.

E. Irritancy Threshold

Methamphetamine hydrochloride (MDL, 2001): Not available.

Methamphetamine base: Not available.

F. Odor Safety Class

Methamphetamine hydrochloride (MDL, 2001): Not applicable.

Methamphetamine base: Not available.

G. Vapor Density

Methamphetamine hydrochloride (MDL, 2001): Not applicable.

Methamphetamine base: Not available.

H. Vapor Pressure

Methamphetamine hydrochloride (MDL, 2001): Not applicable.

Methamphetamine base: 0.163 mmHg @ 25° C (Neely & Blau, 1985).

IV. Containers and Packaging

A. Commercial Products

d-Methamphetamine is a controlled substance in the United States (Drug Enforcement Agency, Schedule C). It is only available by prescription for legitimate medical uses. *l*-Methamphetamine is used in Vicks® Vapor Inhaler as a nasal decongestant (PDR, 2002).

B. Pharmaceutical Use

d-Methamphetamine hydrochloride (Desoxyn®) is prescribed for obesity (short-term treatment) and Attention Deficit Disorder with Hyperactivity (ADHD).

V. Chemical Hazards

A. Reactivity

Methamphetamine hydrochloride is stable at normal temperatures and pressure (MDL, 2001).

B. Flammability

Methamphetamine hydrochloride is a slight fire hazard. Dust in air may ignite or explode (MDL, 2001). Hazardous combustion or decomposition products include carbon monoxide, carbon dioxide, and nitrogen oxides. Combustion of methamphetamine hydrochloride may produce hydrogen chloride gas (Sigma, 2002).

C. Chemical Incompatibilities

Methamphetamine is incompatible with strong oxidizing agents (Sigma, 2002; MDL, 2001).