



N.C. Department of Health and Human Services
Division of Public Health
Occupational & Environmental Epidemiology Branch
Hazardous Substances Emergency Events Surveillance
1912 Mail Service Center
Raleigh, NC 27699-1912

Clandestine Methamphetamine Laboratories Information & Safety Sheet

Injury Prevention for: *First Responders* *Firefighters* *Law Enforcement*

N.C. Department of Health & Human
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Division of Public Health
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Methamphetamine Information

Amphetamine generically refers to any member of a class of drugs that have an amphetamine base. Methamphetamine is a stimulant that can be snorted, smoked, taken orally, or injected.

Methamphetamine is the most common illicit amphetamine; it is also the most commonly synthesized controlled substance. Clandestine methamphetamine laboratories account for more than 90% of all illegal drug seizures in recent years in the United States. In 2001, there were 34 methamphetamine labs discovered in North Carolina; in 2002, to date, 66 labs have been discovered.

Street names for methamphetamine include: batu, clack beauties, chalk, copilots, crack meth, crank, cristy, crystal, dexies, drivers, glass, go, go fast, hanyak, Hawaiian salt, hearts, hiropon, ice, kaksonjae, L.A. turnarounds, leapers, meth, pep pills, quartz, shabu, speed, thrusters, ups, uppers, wake ups, wire, zip.

Making methamphetamine requires minimal training and limited amounts of equipment and chemicals that are relatively inexpensive. Most labs are located in the western and southwestern United States, but there is eastward migration.

For every pound of drug produced, 5 - 6 pounds of toxic waste are left over. Methamphetamine site clean-up can cost up to \$150,000.

Methamphetamine labs can be located almost anywhere, from urban areas to rural areas to transportation routes. Common locations include inside vehicles, motor homes, neighborhood homes, rental storage units and motel rooms.

External Recognition Cues of a Lab

- Unusual structures or assemblages of equipment, and accumulations of waste
- Fortifications, unusual security systems and/or devices, or efforts at camouflage or concealment
- Discoloration of structures, pavements or soils (bleached, tarnished, rusted or corroded)
- Strong or unusual chemical odors
- Unusual behaviors of people at the location or in the vicinity

Common Odors from Clandestine Methamphetamine Laboratories

Ether-like: Aromatic, sweet odor often accompanied by a sweet taste. Often described as "hospital odor" due to common use of ethyl ether as an anesthetic. Nasal irritant.

Solvent-like: Sweet odor from common solvents used in paint thinners, paint removers, adhesives, and cleaning fluids. Type of odor often found in an auto body shop or furniture finishing shop. Eye and nasal irritant.

Vinegar-like: Typical pungent, acrid, or sour odor found in vinegar, mayonnaise, salad dressings or pickled food. Eye irritant.

Ammonia-like: A sharp, irritating odor similar to that from wet diapers, glass cleaners, cattle feed-lots or fertilizers. Eye and nasal irritant.

Common Chemicals Used in Methamphetamine Manufacturing

Acetaldehyde
Acetic acid
Acetic anhydride
Acetone
Allyl chloride
Allylbenzene
Aluminum
Ammonia
Ammonium acetate
Ammonium formate
Ammonium hydroxide
Benzaldehyde
Benzene
Benzyl chloride
Chloroform
Ephedrine
Ethyl ether
Formamide
Freon
Hexane
Hydriodic acid
Hydrochloric acid
Iodine
Isopropanol
Lead acetate
Lithium aluminum hydride
Magnesium
Mercuric chloride
Methanol
Methylamine
Monomethylamine
N-Methylformamide
Nitroethane
Norpseudoephedrine
Palladium
Phenyl-2-propanone
Phenylacetic acid
Phenylpropanolamine
Phosphoric acid
Propiophenone
Raney nickel
Red phosphorus
Sodium
Sodium carbonate
Sodium cyanide
Sodium hydroxide
Thionyl chloride
Toluene

Methamphetamine Lab Hazards

Physical Hazards

- Dangerous suspects armed or under the influence of illicit drugs
- Defensive systems
 - Explosive devices
 - Unsafe electrical devices
 - Mechanical & electrical security devices
 - Alarm systems
 - Animals

Chemical Hazards

- Unidentified chemicals that may be flammable/combustible, reactive, corrosive or toxic
- Any/all DOT Hazard Classes of Chemicals
- Improvised/incompatible lab equipment
- Incompatible storage locations and chemical arrangements
- Containers incompatible with contents
- Improper handling practices

Environmental Hazards

- Potential for fire or explosions
- Toxic air emissions
- Soil & water contamination
- Hazardous waste accumulations
- Structures and vehicles with irreversible damage and contamination

Unique Lab Dangers

Ammonia Lab ("Nazi" Lab or "Sodium Metal" Lab) - Ephedrine reduction with lithium metal and anhydrous ammonia

- Electroplating sodium metal from molten sodium hydroxide; sodium hydroxide may cause skin or lung irritation
- Flammability and irritant toxicity hazard from concentrated ammonia atmospheres
- Reaction of water with sodium or lithium metals
- Flammable, explosive atmosphere
- Acutely reactive metals
- Acutely corrosive atmosphere

Red Phosphorus Lab ("Red P" Lab, "Tweaker" Lab, "HI" Lab, or "Mexican

National" Lab) - Ephedrine reduction with hydriodic acid and red phosphorus

- Phosphine gas production
- Conversion of red phosphorus to white phosphorus may cause fire
- Use of acid gas generators
- Exothermic/incompatible reaction of red phosphorus
- Acutely corrosive and toxic atmosphere
- Flammable, explosive atmosphere
- Oxygen deficient atmosphere

Adverse Effects from Methamphetamine Chemical Exposure

- Acute exposure to high levels of methamphetamine lab chemicals may cause shortness of breath, coughing, chest pain, dizziness, lack of coordination, tissue irritation, and burns of the skin, eyes, nose, and mouth. Acute exposure could even cause death.
- Acute exposure to lower levels of methamphetamine lab chemicals may cause the following symptoms: headache, nausea, dizziness, and fatigue.
- Corrosive substances found in methamphetamine labs irritate mucous membranes and the respiratory system and can cause skin burns if they are inhaled or come in contact with the skin.
- Solvents found in methamphetamine labs can irritate the skin, mucous membranes, and respiratory tract. Solvents may cause adverse central nervous system effects.

Injury Prevention

- Only trained personnel wearing appropriate personal protective equipment should enter a methamphetamine lab until the area has been ventilated and decontaminated. Level B protection is recommended for assessment and Level C for decontamination of methamphetamine labs.

- Ventilate the lab immediately and continually and limit your time in the lab area.
- Do not touch, smell, or open lab materials or equipment.
- Information about the chemicals likely to be encountered and protective measure that can be taken by first responders at methamphetamine-associated events can be found at

<http://www.cdc.gov/niosh/npgnpg.html> and
<http://hazmat.dot.gov/erg2000/erg2000.pdf>.

Sources

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