

Cleaning Up Hazardous Chemicals at Methamphetamine Laboratories

Human health hazards can remain after the seizure of a clandestine methamphetamine laboratory. Local health departments are responsible for dealing with human health hazards. This fact sheet summarizes current Wisconsin Department of Health Services (DHS) recommendations for the cleanup of chemical residues at former meth lab sites. Contact the Department for further assistance when dealing with high production meth labs. For more information on how to recognize a meth lab, contact the Narcotics Bureau of the Wisconsin Division of Criminal Investigations.

What is methamphetamine?

Methamphetamine, an illegal substance also known as “meth,” “speed,” “crank,” “crystal,” and “ice”, is a potent synthetic drug that is a stimulant of the central nervous system. The effects of meth are similar to those of cocaine. It gives the user a “rush” or intense feeling of pleasure that lasts longer than cocaine. Meth is an increasingly popular drug that can be injected, snorted, taken orally, or smoked. Long-term use leads to physical dependence. Meth may give a person periods of high energy and rapid speech. Many chronic meth users also experience severe depression, delusions, hallucinations, paranoia, and violent behavior.

For this reason, you should never enter an active meth lab. Contact your local law enforcement immediately.

Meth is often made in makeshift laboratories, such as rented apartments or hotel rooms. During the production of meth, a property can become contaminated with hazardous chemicals, and there is a strong risk of fire or explosion.

What chemicals is meth made from?

There are many different chemical "recipes" for “cooking” meth. Each uses different ingredients. Many chemicals used in meth labs are also common in homes. However, the poor handling and disposal of these chemicals, as well as mixing incompatible compounds, can create hazards. Common household chemicals used in meth labs include flammable and volatile solvents such as methanol, ether, benzene, methylene chloride, trichloroethane, and toluene. Other common household chemicals include muriatic acid, sodium hydroxide, table salt, and ammonia.

Meth-related chemicals not commonly found in large amounts in homes include anhydrous ammonia, red phosphorous, iodine, and reactive metals. Other hazardous chemicals can be formed during the “cooking” process.

Many chemicals may contaminate a property after cooking meth. Carpeting, wallboard, ceiling tile, or fabric may absorb spilled or vaporized chemicals. Furniture or draperies may become contaminated. Outdoor disposal sites may also require evaluation and cleanup.

What happens after a meth lab is discovered?

When a meth lab is discovered, the local law enforcement agency and/or the Division of Criminal Investigations, is responsible for making arrests and seizing the lab. Evidence is removed from the site, and chemical hazard consultants are brought in by law enforcement to remove containers of hazardous chemicals related to the operation of the meth lab. Officials may also screen indoor air. Law enforcement may call child protective services if children are involved.

Once containers of chemicals and equipment related to the meth lab have been removed, the health department evaluates the property for long-term exposure risks from residual chemicals. Additionally, the Department of Natural Resources may assess environmental impacts from outdoor chemical spills or improper waste disposal.

Next steps for a local health department after a lab seizure

Before entering a former meth lab, call the local law enforcement agency and/or the Wisconsin Division of Criminal Investigations to get information on the seizure. Ask about: the amounts and types of chemicals used in the meth production; whether there was evidence of solvent use, chemical spills, or unusual odors; where the production was occurring; whether it was a low or high production lab* ; and the general level of sanitation existing on the property.

When visiting a site, especially the first time, have a member of local law enforcement or the Division of Criminal Investigations familiar with the case accompany you. The officer should be able to describe the situation, and can help in the event of unexpected encounters with occupants or visitors.

Will exposure to chemicals in a meth lab result in harmful health effects?

While still in operation, or prior to a seizure, there is a high risk for acute exposure to harmful chemicals in meth labs. If you discover an **active** meth lab, do not attempt to enter. Contact your local law enforcement agency immediately.

Many of the chemicals used in the “cooking” process can be harmful. Short-term exposures to high concentrations of chemical vapors that may exist in a functioning meth lab can cause severe health problems or even death. For this reason, meth “cookers”, their families, and first responders are at highest risk of acute health effects from chemical exposure, including lung damage and chemical burns to different parts of the body. Heating solvents inside a building can create a highly flammable situation; meth labs are often discovered when fire fighters respond to a blaze.

After the police seize a meth lab, there is usually only a low exposure risk to chemical residues, but this contamination needs to be cleaned up. Also, properties often have serious

* Contact DHS for more assistance before proceeding in cases of high production labs.

sanitation and safety issues, such as physical and electrical hazards. Sanitation issues can complicate the assessment of chemical hazard risk. Any evaluation needs to consider the overall condition of the property.

Residues of methamphetamine and other chemicals remaining at a former meth lab are a concern for people who later use the property. For this reason, local health departments should thoroughly assess the property for hazards prior to allowing it to be re-inhabited, especially if by children.

When a meth lab is discovered in a multiple-unit dwelling, neighbors may be concerned about their exposure to hazardous chemicals while the lab was still active. Neighbors’ risk for exposure is usually very low, but it is important to address any nearby residents’ concerns.

Exposures to children and child decontamination

When a meth lab is seized and arrests are made, children residing at the meth house are taken into protective custody. Chemical exposures to these children are a concern, and there are conflicting opinions over the need to formally decontaminate children when there are taken into custody. DHS concurs with the recommendations of the Scientific and Medical Research Working Group of the National Alliance for Drug Endangered Children. See <http://www.nationaldec.org/> and click on “National Medical Protocol” for these recommendations.

What kind of protective equipment can prevent chemical exposure?

After the meth lab has been declared safe by law enforcement for entry, but before lab chemicals and equipment are removed, only authorized people should enter the property. These people should wear, at a minimum, protective eye, hand and foot covering. Disposable gloves (e.g. latex or nitrile) and a disposable protective jumpsuit (e.g. Tyvek) are recommended. If toxic fumes or vapors are suspected, only trained professionals should

enter and clean the building with appropriate safety equipment.

How can a meth lab be cleaned up?

There are currently no national regulations on exactly how to cleanup former meth labs and situations are different in each meth lab. The Department has worked with other national and state agencies to provide the following meth lab cleanup procedures that will protect the public and be practical for property owners.

Sometimes scrubbing and painting is all that is necessary to restore a former meth lab to a safe living environment. Sometimes, contamination is so broad and extensive that the inside of the building needs complete renovation. Across the U.S., the response to cleaning up former meth lab properties ranges from minor cleaning to complete demolition of buildings. Some meth labs require soil and/or groundwater cleanup as well, depending on the extent of how and where chemical wastes were managed.

Property owners are responsible for proper cleanup and costs. Owners who decide to clean buildings on their own should be aware that household building materials and furniture may absorb contaminants and, in some cases, give off fumes. Private cleanup contractors can be hired to conduct building cleanup as well.

Is sampling needed at former labs?

There is currently no national or state consensus on sampling at former meth lab buildings. Although many states have adopted cleanup standards that are based on the lowest detection of meth, DHS currently recommends that sampling is usually not needed. A thorough common-sense cleanup (which might include repair or disposal of some surfaces or appliances), followed by a visual assessment and walk-through, is just as effective at providing an acceptable cleanup for residential buildings.

If chemicals have been dumped or spilled on the ground, in a septic system, or in surface water, the Department of Natural Resources will assess the need for environmental sampling. The DNR has specific guidelines to address environmental contamination.

General guidelines for building cleanup

General sanitation. General sanitation issues such as filth, squalor, and pests often complicate the assessment process at meth labs.

Air out the building. After law enforcement officials seize a lab, professionals trained to handle hazardous materials remove lab waste and any bulk chemicals. During this removal, every effort is made to air out the building for the safety of the removal crew. For security reasons, the building is usually closed upon their departure. The short-term airing-out may not be sufficient to clear the indoor air of solvents that were spilled and remain inside. The building may need to be aired out for several days before and during cleaning. Exhaust fans can be set up, if needed, to circulate the air. During this time, the building should remain off limits to occupants unless it is necessary to make short visits to the property.

After cleaning and airing-out the building, it should be re-checked for staining and odors, both indicators of residual contamination. If odors and stains remain, more extensive cleanup steps should be taken.

Remove and dispose of contamination.

During the meth “cooking” process spilled chemicals may have contaminated household items. Remove, double-bag, and properly dispose of any items that are visibly contaminated, especially with red, brown, or yellow stains.

If you find suspicious containers or lab equipment at the property, do not handle them. Some items may have been accidentally left behind by law enforcement. Leave the area and contact your local law enforcement agency or fire department.

Absorbent materials, such as carpeting, drapes, clothing, furniture, etc., can accumulate dust or splattered chemicals during “cooking.” These materials should be considered for disposal, even if an odor or discoloration is not present.

Inspect surfaces, remove or clean as needed. Surfaces such as walls, counters, floors, and

ceilings, are porous and can adsorb contamination from meth preparation. This contamination can easily spread to nearby rooms where meth was not “cooked.” Thorough cleanup is important, especially for food preparation surfaces.

If a surface has visible contamination, staining, or gives off odors, complete removal and replacement of the surface is recommended. This could include removal and replacement of wallboard, floor coverings and counters.

Appliances where meth was stored or prepared, such as refrigerators, kitchen ranges, or ovens, should be discarded.

Wear gloves, protective clothing with long sleeves, and eye protection while cleaning. Ventilation of the building should be continued throughout the cleaning process.

Inspect plumbing. Waste products may have been dumped down sinks, drains, and toilets. These waste products can collect in drains, traps, and septic tanks and give off fumes.

If a strong chemical odor is coming from household plumbing, do not attempt to address the problem yourself. Contact a plumbing contractor for professional assistance. Let the contractor know that the property is a former meth lab and inform him/her of the types and quantities of chemicals that may have been flushed down the drains. The amounts of chemicals dumped in soil or septic systems are usually not enough to cause environmental damage. If you suspect the septic tank or yard may be contaminated, contact the local health department or DNR for advice.

Repaint surfaces. After a surface has been cleaned, painting that surface should be considered, especially where contamination was found or suspected.

Painting makes a barrier between residual contamination not removed by cleaning and anyone who may come in contact with those surfaces. Painting will cover up and “lock” the contamination onto the surface, reducing the chance of it being released into the air.

Summary steps for building cleanup:

1. Contact your local law enforcement agency to determine what chemicals were present at the time of seizure.
2. Have local law enforcement personnel accompany you when visiting the site.
3. Thoroughly ventilate the building before and during cleanup.
4. Until a former meth lab is cleaned, do not enter the area without foot and hand protection (shoes and gloves) at a minimum.
5. Remove visibly contaminated items or items that have a chemical odor or red, yellow, or brown stains.
6. Clean all surfaces using household cleaning methods and proper personal protection.
7. Leave plumbing cleaning to the experts.
8. Air out the building for 3 to 5 days.
9. If odors or staining remain, have the building evaluated by a professional.

Should testing be done after cleanup?

Testing can be done after cleanup, but at this time the Department of Health Services does not consider it necessary. The cleaning procedures outlined in this document, when followed correctly, should be adequate for reducing any health hazard risk. If you are dealing with a high production meth lab, call the Department for more assistance. Division of Criminal Investigations will determine if the site was a high production lab.



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