

# Methamphetamine

**Problem:** Methamphetamine contamination is a growing problem across the United States as the number of illegal meth labs has increased to keep up with demand. Buildings where methamphetamine was manufactured are potentially contaminated with high levels of methamphetamine. Rapid testing of surfaces is required to identify which areas of the building are contaminated with methamphetamine and to monitor cleanup.

**Solution:** DataChem Laboratories, Inc. offers rapid LC/MS analysis for methamphetamine. Using cotton gauze moistened with isopropyl alcohol or methanol, wipe samples are collected from building surfaces where methamphetamine contamination is suspected. DataChem then provides rapid LC/MS analysis for methamphetamine.

## LC/MS Analysis

- ◆ FAST TAT: 2 day TAT by LC/MS
- ◆ RELIABLE: LC/MS analysis provides positive methamphetamine identification
- ◆ ACCURATE: Quantitation using deuterated methamphetamine as an internal standard
- ◆ INEXPENSIVE: \$70 for 2 day TAT; \$35 for 4 day TAT<sup>1</sup>
- ◆ SENSITIVE: Provides detection of 0.1 µg per wipe sample
- ◆ DataChem Method 9111<sup>2</sup>

<sup>1</sup>—Consultant rate quoted. One time rates are \$90 and \$45 respectively

<sup>2</sup>—Developed under contract with NIOSH

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visit us at [www.datachem.com](http://www.datachem.com)**

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Newsweek magazine (August 8, 2005) calls methamphetamine America's most dangerous drug. "It creates a potent, long-lasting high—until the user crashes and too often, literally burns.... The crystalline white drug quickly seduces those who snort, smoke or inject it with a euphoric rush of confidence, hyperalertness and sexiness that lasts for hours on end. And then it starts destroying lives." Newsweek calls attention to the dramatic surge in methamphetamine use which is no longer geographically isolated to the West but is used all across the United States. Methamphetamine use has also spread across the socioeconomic ladder and is no longer used primarily by the poor. More than 12 million Americans have tried methamphetamine, and 1.5 million are regular users!

While methamphetamine destroys the lives of addicts and users, there are other serious consequences as well. Meth-making operations have sprung up all across the country and have become a serious safety and health problem not only for the participants but for the general public who may happen to be close by and especially for law enforcement, first responders and clean-up crews. Over 8000 clandestine drug labs were seized in the US in 2003. And it is estimated that 15% of meth labs nationwide are found only after a fire or explosion. In Minnesota that figure is as high as 30-40%. The threat of injury to first responders, such as fire department, and law enforcement officials, and the endangerment of adults and children who live and work near the lab is significant. In 2002 over 1000 children were exposed to toxic chemicals from clandestine drug labs, 26 children were injured, and 2 killed. Clandestine drug labs manufacture a variety of illicit drugs including amphetamines, methamphetamine, MDMA (ecstasy), methcathinone, GHB, PCP, LSD, and fentanyl, although methamphetamine accounts for 80-90% of the total production from such labs.

Because of their illegal and secret nature, these clandestine drug labs are unsupervised, unregulated, and indifferent to health or safety concerns. They are operated with little knowledge or regard to the hazards of the chemicals or processes that are involved. The very nature of their products shows a disregard for the human health and safety. Meth labs are typically operated by persons, sometimes barely literate, with little or no chemistry training.

There are two general types of meth labs. One is the "super lab", laboratories capable of producing a pound or more in a single production cycle, which may be accomplished in as little as 24 hours. Their operators are not in it for personal use but for large profits. The other type of meth labs are independently operated small toxic labs which turn out gram amounts. In some respects super labs are safer than the small independent labs because the operators try not to cause obvious problems that will lead to their discovery. Although these small meth labs are responsible for only a portion of the total production of methamphetamine, they constitute about 90% of the labs seized. But, super labs account for up to 80% of methamphetamine produced. From a supply control perspective the super labs are the most important. But from the perspective of hazards, the small home-spun meth labs account for far more fires, explosions, hazardous waste (both illegal dumping and in cleanup), child endangerment, and hazards to fire department and law enforcement first responders.

Small meth labs are found in every environment: Urban centers, suburbs, rural farms and fields. Labs are set up in homes, rental property, farmhouses, apartments, hotels, motels, self-storage units, auto repair shops, trucks, automobile trunks, suitcases and briefcases, camp grounds, and national forests and thus become hazards in residential areas, business districts, and places of recreation, places that are occupied or visited by a large number of people that are likely to become unwitting victims of exposure. Buildings that had been used for meth labs have become so contaminated and expensive to clean up that the owner or landlord will just abandon it, whereupon the responsibility for cleanup, which can be astronomical, falls upon law enforcement agencies. In spite of some Federal help, the cleanup is taxing the budgets of many law enforcement agencies to the breaking point. Some buildings in which labs have been located are so contaminated that the building has to be demolished or turned over to fire departments for practice burns. Many states have developed re-occupancy standards for contaminated buildings, but others (e.g. Tennessee as of 2003) have not set any standards or rules for notification, forcing potential buyers to pay the cost for testing and analysis for methamphetamine prior to purchase.

To protect human health and safety, to identify contamination and to monitor cleanup of clandestine drug labs, DataChem Laboratories, Inc. has developed methods for analysis of methamphetamine and other illicit drugs. For specific information refer to DataChem Service Advisory on Methamphetamine or call your DataChem representative.

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