THE HIDDEN IMPACT OF METHAMPHETAMINE LABORATORIES:

why insurers, property managers and owners need to be sure that site remediation is done right
Imagine the sinking feeling a property investor has when they learn that their nest-egg has been used as a meth lab. Or the distress felt by a family who have moved into their new rental home, only to experience a variety of health problems including breathing difficulties and nausea.

The increasing clandestine production of the drug methamphetamine has become a serious problem for the Australian community.

For insurers, property owners and property managers, testing and cleaning has also become a huge and expensive burden.

The facts are:

- Long after the offenders have moved on, the effect of meth lab contamination remains a threat.
- Contaminated homes can affect residents and make homes unsafe to live in.
- Real estate agents are now commonly testing for meth lab evidence at the end of lease periods.
- Despite the serious risks, there are currently no laws or obligation on landlords to test for contamination.

Once contamination is discovered, it’s crucial that the clean-up process is done properly. Properties need to be made safe and habitable for residents. They also need to be restored to maintain their value for landlords and homeowners.

**Insurance cover for property damage from meth labs**

In response to the growth in meth lab contamination, a few insurance companies have adjusted their insurance premiums. Some insurers are offering landlord cover for chemical contamination as a result of the ‘manufacture, storage or distribution of any controlled drug’.

In New Zealand, the nation’s largest insurer IAG\(^1\) reports that it receives up to 80 claims a month, and pays out NZ$914 million a year to cover meth-related damage.

Whatever the cover, it’s clear that an efficient clean-up can also save money for the insurer.

**A few facts about methamphetamine (‘ice’):**

- Methamphetamine is a highly addictive drug.
- According to the NSW Drug Squad’s Chemical Operation Unit\(^2\) (also known by their nickname “The Lab Rats”), at least 1.3 million people in Australia have tried ice.
- The National Drug Strategy Household Survey 2016\(^3\) found that most meth/amphetamine users used ‘ice’ as their main form of illicit drug - increasing from 22% of recent meth/amphetamine users in 2010 to 57% in 2016.

In their Illicit Drug Data Report 2015-16\(^4\), the Australian Criminal Intelligence Commission (ACIC) found the following:

- There were 575 detections of clandestine meth laboratories in 2015–16
- Around 68% of these detections were in residential locations
- While the majority of detected laboratories continue to be run by addicts, the proportion of industrial scale laboratories increased in 2015–16
- The ACIC estimates that only 1 in 10 meth labs are detected
THE END PRODUCT

- For thousands of years, the ephedra shrub was used in China, Pakistan, India and the Americas to make teas that help to open airways and treat asthma, congestion and coughs.
- In 1887, ephedrine (a type of amphetamine) was first isolated from the ephedra plant.
- Amphetamine was first synthesised in Germany in 1887.
- In 1919, a Japanese chemist discovered a simpler, faster process for making crystallised methamphetamine. They also found that it was water-soluble.
- It was used in the late 1920s as a ‘pick-me-up’ and as relief for many ailments, from depression to decongestion.
- Methamphetamines were used in World War II by the Nazis to keep their infantry, sailors and airmen fighting. In one four-month period in 1940, the German military consumed more than 35 million meth tablets. High doses were also given to Japanese Kamakaze pilots. It was again used by soldiers during the Vietnam War to help them sustain longer periods of action.
- The 1970 Controlled Substance Act (USA) controlled the legal manufacture of injectable methamphetamine. As a result, illegal meth labs sprang up all over the country.
- Before the 1970s, Australian drugs were regulated by state Poisons Acts.
- The drug is made legally in the USA and sold by the name of Desoxyn. It’s used in the treatment of ADHD and for weight control.
A TYPICAL LABORATORY SET-UP

A home lab

A mobile lab

A commercial lab

A professional lab
1. Contamination

The methamphetamine manufacturing process requires the use of hazardous chemicals. These are often corrosive (acids), explosive, flammable (solvents) and toxic.

Methamphetamine hydrochloride is a persistent salt that attaches to household surfaces and absorbed into porous materials such as carpeting and upholstered furniture.

Toxic droplets and particulates from the methamphetamine production process deposit chemicals and methamphetamine residues on interior surfaces including: walls, ceilings, floors, doors, cabinets, and furniture.

These residues remain in the fabric unless removed by decontamination.

Contaminants can also affect the air quality within these premises.

In some cases, contamination isn’t obvious.

### Chemical Contaminants

![Red phosphorus](image1)

![Anhydrous Ammonia](image2)

![Acids](image3)

![Solvents](image4)
2. Fire damage
Meth labs can be the cause of fatal fires or explosions. Not only are they a danger to those involved in drug production, they can be a serious threat to the health of fire fighters and medical personnel who may be called to attend to an accident or fire.

3. Hazardous waste
The clandestine nature of the cooking process, often in confined, poorly ventilated spaces—combined with the illegal storage and dumping of chemical wastes down kitchen sinks, toilets and stormwater drains—can damage a property and render it uninhabitable and riddled with health and safety risks.

HEALTH RISKS

The process of making of the drug is a dangerous one.

The main hazards to people and property are:
- Chemical burns to skin, eyes, respiratory tract.
- Toxic substances – many carcinogenic products are used.
- Burns through fire /explosion during cooking.
- Secondary production of gases such as Ammonium and Phosphine gas.

Even when the makers of the drug are long gone, it can be hazardous for people to live or work in the building. It's also hazardous for clean-up personnel.

The health consequences of short term exposure include:
- Nausea
- Dizziness
- Fatigue
- Headaches

Long term exposure to the residues of manufacture may lead to chronic illness, risking the health of residents and visitors to the premises.

Exposure has also been linked to: neurochemical changes in areas of the brain that are associated with learning, cognitive function, behaviour, motor activity and changes in avoidance responses.

Physiological and behavioural/developmental effects of exposure include: violent behaviour, depression, irritability, hallucinations, mood swings, paranoia and sleep disorders that are associated with the exposure to amphetamine-type stimulants.
1. TESTING AND ANALYSIS OF THE DAMAGE

The initial detection, hazard assessment and evaluation of a property suspected to be the site of a clandestine meth lab is done by the police.

When the restorations team is enlisted to clean up an affected property, the first step is to properly assess the damage. A qualified occupational hygienist or environmental consultant may be engaged to assist with site assessment and remediation. A site assessment should involve both indoor and outdoor areas.

Common issues faced include:

- Staining and discoloration of surfaces.
- Porous materials, such as carpets and soft furnishings, will always require removal.
- Heating, Ventilating and Air Conditioning (HVAC) systems need cleaning and/or replacing.
- The ability for the clean-up team to decontaminate can be affected by limited access to enclosed areas.
- Lighting and electrical items often require replacement.
- Grout lines can be affected where contaminants have penetrated these surfaces.
- Residues have penetrated painted plasterboard surfaces.

THE DECONTAMINATION PROCESS

- Metal corrosion often results from acidic gas vapours condensed on cooler metal surfaces causing corrosion and pitting.

Often plastics degrade and discolor due to solvent gas vapour attack

Metal light fittings corrode due to gases given off during manufacture
The testing and analysis process

**Pre-clean test** - Predictive testing can assist in the first stages of a site inspection. It’s fast, economical and gives an indication of whether contaminants are present or not. Entire rooms can be tested quickly, determining the extent of the contamination.

**Laboratory Swab Testing** - 100cm² squares of material are marked and taped to the wall. An alcohol swab is wiped across surface several times in each direction. The swab is then placed in a marked container for laboratory submission and analysis.

![Typical laboratory report](image)

Here’s a typical laboratory report...
2. THE CLEAN-UP

Once an occupational hygienist determines whether the site is high or low risk, a Remediation Plan is developed.

A low-risk lab site is one where it’s clear that the quantity of drug manufactured was low, where the premises was only used for a short period of time and where there’s little or no evidence of spillage or staining.

A high-risk site is one where there’s evidence of large drug quantities processed over a longer period of time, where a fire or explosion has occurred and there’s evidence of dumping of toxic materials.

Prioritising materials to be cleaned

During the clean-up, many contaminated items need to be discarded. These may include soft furnishings such as mattresses, carpet, curtains and blinds, upholstered and plastic furniture and food preparation surfaces.

Other low value personal items will also need to be thrown away including clothing, children’s toys, toothbrushes, kitchen items, books and household paper items.

High-value items and items that have low contamination may be salvaged with or without cleaning. These include photographs, large appliances (cleaned inside and out), electronics and garage and garden tools.

Safety is #1

The safety of clean-up personnel and visitors to the site is important. Personal Protective Equipment (PPE) should be worn by the remediation team in accordance with the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011.

PPE includes:

- foot protection – boots (either lace up or of a rubber or ‘gum’ boot design; made in chemical-resistant materials) and disposable latex or plastic overshoes.

- skin and clothing protection - disposable coverall suits with an integrated hood (these come in various dust and chemical-resistant materials; one-off use only).

What equipment do we use?

Decontamination usually involves a multi-step clean-up process including stripping out and demolition of the property interior.

3. CLEARANCE

Predictive testing during and after cleaning can determine if all residues have been removed.

Following a final post-clean analysis, we apply for a Provision of Clearance for Occupancy.

For this to happen, residual contaminants must be below 0.5ug/100cm².

There is no Australian standard or legislation in place for what’s considered a ‘safe’ level of residue in a previously contaminated building.

The most commonly used benchmark for clean-up is the Australian Crime Commission’s Clandestine Drug Laboratory Remediation Guideline 2011. Yet according to a NSW Health Department report, “these guidelines do not provide practical guidance on how to undertake site remediation and apply these guidelines within a clandestine laboratory setting.” As a result, each Australian state has drawn-up its own guidelines for use by regulatory agencies, environmental health officers and other authorities and consultants.
Advanced Buildings provides comprehensive and cost-effective remediation services for properties affected by methamphetamine contamination.

For more information on our 24/7 services, or advice on how to deal with property clean-up and restoration, contact us on 1300 87 86 87.