

CLANDESTINE LABORATORY ASSESSMENT AND MANAGEMENT

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Will Jones presented this paper to the Environmental Health Association's Perth conference in September 2017. Some of the content is tailored to a West Australian audience though the paper's conclusions would generally speaking apply throughout Australia.

WHAT ARE CLAN LABS?

Clandestine drug laboratories, also known as clan labs, are sites where illegal drugs are manufactured in secret, usually with improvised materials and methods.

Chemicals used in these laboratories, together with their products, wastes, and residues, can be toxic and harmful to human health.

The Illicit Drug Data Report 2015–16, (Australian Criminal Intelligence Commission, 2017) shows that the majority of clan labs in Western Australia are used to produce methamphetamine (commonly known as ice), a trend that is replicated across the country.

State/ Territory	ATS (excluding MDMA)	MDMA	Homebake heroin	Cannabis oil extraction	PSE ^a extraction	GHB/ GBL	Other ^b	Unknown ^c	Total ^d
NSW	57	10	0	0	0	3	12	1	83
Vic	69	3	0	8	5	0	8	51	144
Qld	121	3	0	10	9	5	22	81	251
SA	50	0	0	7	1	3	1	12	74
WA	31	1	5	1	1	0	3	0	42

- a. Pseudoephedrine.
- b. 'Other' refers to the detection of other illicit manufacture.
- c. 'Unknown' includes seized substances which were unable to be identified or are awaiting analysis.
- d. Total may exceed the number of clandestine laboratory detections due to multiple drug production types being identified in a single laboratory.

Clandestine laboratories by type - IDDR 2015-16 (ACIC, 2017)

The majority of clan labs are addict-based labs (66.5%) and other small-scale labs (16.1%), with the majority of these (68.5%) occurring within residential properties. Even a small-scale lab will contaminate a building, making it unfit for habitation. This results in a widespread and often unidentified contamination risk within the residential property sector.

THE NUMBERS

The year 2015–16 reported the lowest number of clandestine laboratories in Western Australia since 2007-2008 (ACIC, 2017). From its peak in 2010-11 there has been a 76% reduction in clan labs, a trend that is mirrored, albeit to a lesser extent in other states.

However, while clan lab numbers decreased, border detections of methamphetamine remained high with 3,017 detections; the second highest on record. Of these 86.9% were detected in international mail, indicating the impact of the international drug trade via the dark web on Australian drug markets.



ATS border detections by importation method - IDDR 2015-16 (ACIC, 2017)

Year	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
2006–07	49	72	132	51	37	9	1	5	356
2007–08	51	76	121	69	30	2	1	6	356
2008–09	67	84	148	65	78	0	7	0	449
2009–10	82	113	297	71	118	1	12	0	694
2010–11	87	63	293	75	171	11	2	1	703
2011–12	90	99	379	58	160	15	7	1	809
2012–13	105	113	330	56	136	9	8	0	757
2013–14	98	114	340	80	96	5	11	0	744
2014–15	99	161	236	71	84	5	10	1	667
2015–16	83	144	234	69	40	1	3	1	575

Clandestine laboratory detection by state - IDDR 2015-16 (ACIC, 2017)

While the reduction in clan lab numbers is certainly encouraging, the reality is that by their own estimates, police still only detect between 5-10% of all operational labs.

This means (based on ACIC 2015-16 figures) there were between 400-800 active clan labs in WA in 2015-16. While this is much better than a few years ago, it is still a disturbingly high number.

Of greater concern is that, if this detection rate is extrapolated using detection data back to 2006-2007, there are between 9,000 and 19,000 contaminated properties within WA which have not yet been detected or remediated.

THE RISKS

There are many risks associated with active clan labs including chemical, biological and physical hazards.

Common Hazards in Active Clan Labs:

- Chemical drug residues,
- Airborne contaminants,
- Caustic substances,
- Carcinogens and volatile chemicals,
- Flammable liquids,
- Explosive gases,
- Poor housekeeping and insanitary living conditions,
- Poorly maintained structures,
- Risks from drug affected occupants and criminal gangs.

It may seem like common sense, but should you detect or even suspect an active clan lab, the safest action is to stay out and contact Police.

What may not be so obvious are the risks from former lab sites. The chemical residues left behind in these sites can cause serious health and psychological issues for future occupants of a property.

Methamphetamine residue is the primary contaminant in former clan lab sites and can have significant negative health impacts, particularly during early development. As a result, infants and pregnant women are considered most susceptible to the long-term impacts of clan lab contamination.

Disturbingly, methamphetamine residue may be widely spread beyond the original manufacturing location, contaminating an entire property including bedrooms and living areas.

In fact, it is not just the manufacture of these chemicals that can place individuals at risk, heavy smoking of ice can result in residues within a property that may persist for many years. The health impacts of methamphetamine residue include:

During Pregnancy:

- Placental disruption,
- Foetal distress,
- Premature birth,
- Cleft palates,
- Low birth weight,
- Heart problems,
- Withdrawal symptoms after birth.

Infants & Children:

- Mental and physical development problems,
- Feeding problems,
- Abnormal sleep patterns,
- Neurological abnormalities – autism type behaviours, ADHD.

LEGISLATION & GUIDELINES

Within Australia we operate under the Federal Guidelines “Clandestine Drug Laboratory Remediation Guidelines”. The Western Australian Department of Health also published the “Guidelines for Notification and Risk Management after Detection of a Clandestine Drug Laboratory”.

These guidelines set a Health Investigation Level (HIL) of 0.5µg/100cm² for methamphetamine. Any detection above this level results a property being considered unfit for habitation under the *WA Health Act 1911* and not suitably clean under the *Residential Tenancies Act 1987*.

Before the premises may be reoccupied, professional remediation is required to remove all residual toxins. This cleaning should be undertaken by accredited remediation firms and should be managed by an independent accredited forensic tester.

The WA Department of Health maintains a list of accredited forensic testers and remediation contractors on their website and this should be the first point of contact when faced with methamphetamine contamination in your property:

http://ww2.health.wa.gov.au/Articles/A_E/Clandestine-drug-labs

SITE ASSESSMENT AND REMEDIATION

When managing a methamphetamine contaminated site an accredited forensic tester should undertake an initial site assessment to determine the level of contamination within the property and develop an appropriate scope for the remediation.

As a minimum the forensic tester should:

- Conduct a detailed visual inspection of entire property including grounds and external structures,
- Conduct methamphetamine surface swab sampling within the living areas of the property (a minimum of 5 samples taken from within the building),
- Compared all samples to the 0.5µg/100cm² HIL for methamphetamine,
- Develop a scope of works and tender documentation for the remediation; and
- Conduct clearance sampling (validation) after the decontamination to confirm the residence is safe to reoccupy.

THE HIERARCHY OF REMEDIATION

The severity of methamphetamine contamination within a building will determine the level of remediation required. The federal guidelines outline a hierarchy of remediation, from lower levels of contamination to the most severe:

1. Clean up/Wash up:

HEPA vacuuming, scrubbing, cleaning, steam cleaning, flushing pipes, etc. Use of mildly alkaline cleaners recommended.

2. Stripping & Encapsulation:

Removal of fittings e.g. furnishings, blinds, carpets etc., sealing of walls and surfaces using oil-based or epoxy coatings.

3. Demolition:

If all else fails, demolish the building and remediate the site.

One or more of these strategies may be appropriate for any given site, and the exact techniques to be used are determined based on the results of the initial assessment and the desired outcomes for the property owner.

VALIDATION

Once remediation has been completed the site should undergo validation testing, arguably the most important step in the process.

In our experience not all the available methamphetamine tests are suitable for this validation step, and if in doubt analysis by a NATA accredited laboratory should be sought.

After the validation testing, if methamphetamine is detected above HIL then further cleaning or remediation is required, and this may involve escalating to the next level in the hierarchy.

MANAGING CONTAMINATION RISKS INTO THE FUTURE

The current management of methamphetamine contamination within residential properties in Australia is almost exclusively based on detection of clan labs by law enforcement. By their own admission this means 90-95% of labs go undetected - that's a lot of contamination with significant public health impacts that remain unaddressed.

Of particular concern is the legacy of methamphetamine contamination that is already present within residential properties across Australia. Data from New Zealand (where routine residential methamphetamine testing is now the norm) indicate that up to 50% of rental properties are contaminated with some level of methamphetamine residue.

To manage this risk effectively will require a multilayered approach across the public and private sectors, with real estate agents and residential property managers on the front line.

We believe that routine property screening is an effective public policy initiative, which can be used not only to detect methamphetamine contamination within properties, but also to manage the risk of new contamination within existing clean properties. Acknowledgment of the risk and the need for property screening is beginning to be accepted in Australia and is wholeheartedly supported by QED. A range of economical testing options now exist for the screening of residential dwellings for methamphetamine contamination. However, property screening alone is insufficient to adequately address the risks presented to both property owners and tenants.

A broader risk management program including; baseline testing, property screening, methamphetamine specific clauses in tenancy agreements, appropriate insurance policies, and professional remediation where necessary, will be required to ensure positive outcomes for property owners and tenants into the future.