How to...
Drug Testing/Occupational Screening

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Introduction

- Introduction
- Testing Methods and Detection Times
- Legislation and Case Law
- The AS/NZS 4308:2008
- Workplace Drug Testing Statistics
- Testing Kids for Drugs
Important Terms

- **Negative** = Normal meaning
- **Non-negative** = A positive result on a screening device that has not yet been confirmed by a laboratory
- **Positive** = Confirmation by GC/MS of the presence of the drug equal to or over the cut off level
Types of Drug Screening / Testing

- **Hair** will detect drug usage over an extended period of time over 3 months depending on hair length, more used in custody type situations.

- **Blood** will detect recent usage and is used in cases of serious accidents / fatalities / criminal nature.

- **Urine** will detect drug usage over a longer period of time. Urine testing has no relevance to impairment but will identify ‘at risk’ persons in the workplace. It is conducted according to the joint AS/NZS 4308 and is recognised as most reliable form of testing.
Types of Drug Screening / Testing

- **Saliva** will detect recent usage up to around 6-8 hours, however there is no NZ Standard for this type of testing at the moment.

- **Sweat** is early technology for detection of recent use, concerns have been raised over cross contamination issues, no industrial standard worldwide.
Workplace Testing Methods

Urine
- Detection period days
- AS/NZS 4308:2008
- Devices need to be verified
- Confirmation only on non-negative to 4308 Lab
- Can be cheated if forewarned
- No witness collection

Oral Fluid
- Detection period of hours
- Good for random testing (deterrent)
- AS 4760 only
- No devices on market currently meet this
- Cannot be cheated
- Witnessed collection
- No Accredited labs in NZ to do confirmation testing as per standard
Oral Fluid vs Urine

- Oral Fluid: 98.30% Negative, 1.70% Non-negative
- Urine: 84.80% Negative, 15.20% Non-negative

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Detection Times

- Saliva: Instant - 6 hours
- Urine: 4 hours - 8 days
- Hair: 7 days +
- Cutoff: 30 + days
Urine Detection Times

Drugs of Abuse Testing Detection Times after usage ceases. It is a complex issue as it is dependant on: Dosage, Route of administration, An individual's metabolism, other drugs, etc.

<table>
<thead>
<tr>
<th>DRUG TYPE</th>
<th>RETENTION TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>2 - 6 days</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>2 – 14 days</td>
</tr>
<tr>
<td>Cannabis</td>
<td>2 – 30 days</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2 – 5 days</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>2 - 6 days</td>
</tr>
<tr>
<td>Methadone</td>
<td>2 – 8 days</td>
</tr>
<tr>
<td>Methamphetamines</td>
<td>2 – 6 days</td>
</tr>
<tr>
<td>Opiates</td>
<td>2 - 5 days</td>
</tr>
</tbody>
</table>
Drug and alcohol use can give rise to:

- Accidents
- Fraud.
- Low productivity.
- Absenteeism.
- Staff theft.
- High staff turnover.

An actively managed drug and alcohol policy can reverse this.
Health and Safety in Employment Act 1992

• Imposes a legal obligation on employers to ensure the safety of employees while at work.

• Requires identification of and protection from hazards.

• Amendment in 2003 Defined a hazard as:

(a) an activity, arrangement, circumstance, event, occurrence, phenomenon, process, situation, or substance (whether arising or caused within or outside a place of work) that is an actual or potential cause or source of harm; and includes:

(b) a situation where a person's behavior may be an actual or potential cause or source of harm to the person or another person; and without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behavior.
Air New Zealand 2004 Judgement
EPMU and others Vs Air New Zealand

- Bill of Rights Act
- Health and Safety in Employment Act
- Human Rights Act
- Privacy Act
- Employment Relations Act
The High Court also ruled in the EPMU vs Air New Zealand it was legal to conduct drug and alcohol testing within the workplace in the following situations:

• Pre-employment or and when an employee is on an internal transfer to a safety sensitive area

• Reasonable cause (also known as reasonable grounds)

• Post incident/accident

• Random testing should only be carried out where people are employed in a safety sensitive area
Top New Zealand jockey Lisa Cropp exhausted all of her avenues of appeal over a positive drugs test.

A urine sample she supplied tested positive for amphetamine and methamphetamine.

She challenged New Zealand Thoroughbred Racing's rules of random drug tests through the courts.

The Supreme Court ruled unanimously that the rules do not infringe her human rights.
Impairment vs ‘At Risk’

- The science of toxicology in particular, cannot either predict or even report in absolute terms ‘impairment’

- Urine testing may indicate use of drugs by an employee, both beyond work and sufficient time before the recommencement of work.

- An employee that tests positive for a drug, is more likely to use a drug in the future, than one returning a negative test. As a consequence the one that has tested positive is more likely to be at risk of being impaired.

- Employers seek to identify those at risk of being impaired by a scientifically valid and accepted method to eliminate or at least reduce the risk of impairment.

*MUNZ & ors TLNZ Ltd anor AK AC 51A/07 (21 December 2007).*
Urine screening is one such process for detecting the use of drugs of abuse in the NZ workplace.

It is inexpensive, fast and identifies “at risk” persons.

It allows the Company to prove that it has provided a corrective program in an attempt to change drug-taking behaviour by persons through access to educational programs and employee assistance programs.

This process also ensures the Company has the protection of a medico legal standard the AS/NZS 4308.

A drug and alcohol policy in which the:

– key component shall be to detect the presence of drugs and / or alcohol in the system and is not a matter of on-site impairment.
The new AS/NZS 4308:2008 was Published 19 March 2008
Summary of the Standard as it applies to collectors:

• Section 2 (Details the collection of urine)

• Appendix ‘A’ (Details the screening of urine)

• Company approved collectors shall complete a course of instruction – NZQA or AQTF (Unit Standards 25458 and 25511)

• Screening devices that are used have undergone verification under appendix ‘B’ of the Standard
Company approved collectors must conduct, daily controls (1 above and 1 below on all drug classes) prior to testing at the collecting site and after each subsequent 25 specimens or new batch and carry out at least another either above or below control.

The results of all quality control tests shall be recorded in the permanent record system using ‘Control’ as a unique identifier.

The collecting agency shall have a written protocol in the event of a quality control failure.
AS/NZS 4308:2008

- All positive screens (non-negative) must be sent to an accredited 4308 lab for confirmation testing.

- Company conducting the testing has a proficiency testing program in accordance with the Standard.
## Immunoassay Screening Test Cut-Off Levels

<table>
<thead>
<tr>
<th>Drug</th>
<th>Initial Cut-off Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamine</td>
<td>300 μg/L</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>200 μg/L</td>
</tr>
<tr>
<td>Cocaine</td>
<td>300 μg/L</td>
</tr>
<tr>
<td>Cannabis</td>
<td>50 μg/L</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>300 μg/L</td>
</tr>
<tr>
<td>Opiates</td>
<td>300 μg/L</td>
</tr>
</tbody>
</table>
GC/MS will identify and confirm the presence of a drug/metabolite at the concentration equal to or greater than the cut off level concentrations.
<table>
<thead>
<tr>
<th>Compound</th>
<th>Cut-off Level (μg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>300</td>
</tr>
<tr>
<td>Codeine</td>
<td>300</td>
</tr>
<tr>
<td>6-Acetylmorphine*</td>
<td>10</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>150</td>
</tr>
<tr>
<td>Methylamphetamine</td>
<td>150</td>
</tr>
<tr>
<td>Methylene dioxy methyl amphetamine</td>
<td>150</td>
</tr>
<tr>
<td>Methylene dioxy amphetamine</td>
<td>150</td>
</tr>
<tr>
<td>Benzylpiperazine*</td>
<td>500</td>
</tr>
<tr>
<td>Phentermine*</td>
<td>500</td>
</tr>
<tr>
<td>Ephedrine*</td>
<td>500</td>
</tr>
<tr>
<td>Pseudoephedrine*</td>
<td>500</td>
</tr>
<tr>
<td>11-nor-Δ9–Tetrahydrocannabinol – 9– carboxylic acid</td>
<td>15</td>
</tr>
<tr>
<td>Benzoylecgonine</td>
<td>150</td>
</tr>
<tr>
<td>Ecgonine methyl ester</td>
<td>150</td>
</tr>
<tr>
<td>Diazepam</td>
<td>200</td>
</tr>
<tr>
<td>Nordiazepam</td>
<td>200</td>
</tr>
<tr>
<td>Oxazepam</td>
<td>200</td>
</tr>
<tr>
<td>Temazepam</td>
<td>200</td>
</tr>
<tr>
<td>7-amino-clonazepam</td>
<td>100</td>
</tr>
<tr>
<td>7-amino-Flunitrazepam</td>
<td>100</td>
</tr>
<tr>
<td>7-amino-nitrazepam</td>
<td>100</td>
</tr>
</tbody>
</table>

* These drugs may be optionally tested within each class and the specified cut-off levels shall apply.
## Comparison of Cut-Off Levels

<table>
<thead>
<tr>
<th>Drug</th>
<th>Initial Screen</th>
<th>Confirmation ASNZS4308:2001</th>
<th>Confirmation ASNZS4308:2008</th>
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<tr>
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<tr>
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<td>50 μg/L</td>
<td>15 μg/L</td>
<td>15 μg/L</td>
</tr>
<tr>
<td>Methamphetetamine</td>
<td>300 μg/L</td>
<td>300 μg/L</td>
<td>150 μg/L</td>
</tr>
<tr>
<td>Opiates</td>
<td>300 μg/L</td>
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A quick search of the internet will reveal a wide range of products that are available to help someone cheat a drugs test.

- Synthetic Urine
- Urine Detoxifier
- Real Powdered Urine
Item 819-1919

Original Whizzinator
Fake phallus with dried urine guaranteed to pass observed drug tests

“It’s no one’s fucking business what you do on your own time”

Mfr’s List $150.00
HSN Price $120.85
S&H $6.95

2:16

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Two men whose company sold a prosthetic penis that helped men cheat on drug tests have pleaded guilty in federal court.

George Wills and Robert Catalano each pleaded guilty Monday to two conspiracy counts. They owned the California-based internet company Puck Technology.

The device, called the Whizzinator, comes with a heating element and fake urine. US Attorney Mary Beth Buchanan's office says the goal of it and another device called Number 1 was to help people pass drug tests.

The devices were sold from 2005 to 2008. The men are scheduled to be sentenced in February and face up to eight years in prison, a US$500,000 fine or both.
Drug Testing

Its About Health and Safety
Workforce Statistics

- 70% of substance users hold jobs
- 1 in 3 workers are aware of drugs being sold in the workplace
- 1 in 4 workers between the ages of 18-34 have used drugs in the past year
- As Many as 13% of the NZ workforce would test positive for drugs and or alcohol
- 50% of regular P users are in work 2/3 are male European

SUBSTANCE ABUSERS ARE:

- 10 times more likely to miss work
- 1/3 less productive than their non-abusing colleagues.
- 3 times more likely to be involved in workplace accidents and will be responsible for 40% of workplace fatalities

11.3% of all people under going pre employment drug testing in the past year have returned positive results.
39% of employees asked to undergo a reasonable grounds drug test in the past year returned positive results.
• 7.8% of all people randomly tested for drugs in the workplace in the past year returned positive results.
• 24.2% or just under one in four workers tested for drugs after workplace accidents in the past year returned positive results.
600 – 1000 tests nation wide per month

10.9% positive test rate on average

Made up of:
- 70.3% Cannabis
- 20.9% Methamphetamine
- 8.8% Other

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Non-Negative Results by Age Group

- 1-20: 4%
- 21-30: 8%
- 31-40: 21%
- 41-50: 24%
- 51-60: 13%
- 61+: 4%

Total: 100%
Drug Type By Age

1 - 20

94%

THC
AMP
MAMP
OPI
BZO
COC

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Drug Type By Age

31 - 40

- THC: 62%
- AMP: 11%
- MAMP: 17%
- OPI: 7%
- BZO: 2%
- COC: 1%

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Drug Type By Age

61+

- 80% THC
- 20% AMP
Poly Drug Users

- Non Poly Tests: 86.20%
- Poly Tests: 13.80%
The Breakdown

- THC: 74.60%
- BZO/THC: 0.30%
- OPI/THC: 1.00%
- MAMP/THC: 2.20%
- AMP/MAMP/THC: 0.30%
- AMP/MAMP/THC/BZO: 0.30%
- AMP/MAMP/THC: 7.90%
- AMP/MAMP: 1.60%
- AMP/MAMP/BZO: 0.30%
- AMP/MAMP/BZO: 0.30%
- AMP/MAMP: 3.10%
- AMP: 0.30%
- COC: 0.30%
- BZO: 3.10%
- OPI: 4.70%
Overall Breath Alcohol Results

Positive: 1%

Negative: 99%
Breath Alcohol
Male v Female

Males: 98.90% Positive, 1.10% Negative
Females: 97.80% Positive, 2.20% Negative
• NZDDA is regularly called on to test kids who have been caught at school or at home using drugs.

• We take the same approach to testing kids as we do adults and require their full informed consent as well as that of the parent.

• Some schools will place the student on a random testing program similar to that used for employees.
All of the kids we have dealt with have come to attention because of cannabis use.

The youngest was 11 yrs old.

He admitted to smoking every day since 8 yrs old.

He was being supplied the cannabis by his big brother.
Questions?