Separating Fact from Fiction

... a comprehensive training in drug testing
Topics to be Covered

- Dilution
- Collection Deception / Adulterants
- Screening vs. Confirmation
- Urine, Hair & Oral Fluid
- New THC Use vs. Residual
- Synthetic Drugs
- Drug Facts
- Q & A
What is the #1 way to beat a drug test?

**Dilution**
- Consuming large amounts of ANY fluid an hour prior to the drug test
- Diuretics such as coffee, tea or any drink containing caffeine

**Interpreting Diluted Test Results**
- A Creatinine level less than 20 mg/dL is consistent with dilution
- A Creatinine level less than 2 mg/dL is not consistent with human urine
Medical Causes for Dilute Urines

- Diabetes Insipidus (Anti Diuretic Hormone, ADH)
  - Central
  - Nephrogenic
- Anorexia Nervosa or other muscle wasting syndromes
- Kidney Disease
- Diuretics
- Pharmaceutical Toxicity
  - Lithium, other
What adulterants work in masking drugs in urine?

**Additives**
- These products are ADDED to the specimen after it’s been produced
- Following strict observed collection procedures is essential

**Ingestible**
- There are absolutely NO products, solutions, powders, liquids or chemicals that will mask drug use by consuming them
- Consuming vinegar, bleach, Golden Seals or pickle juice will NOT mask drugs in the urine – it will only make you very sick!
Inexpensive methods used to initially identify the presence of various substances in the sample
Tests are conducted using instruments designed to provide a fast and broad look at drug classes
Results ARE NOT legally defensible
A positive is considered a “PRESUMED POSITIVE”

Screening

Immunoassay, ELISA & CEDIA

Methods are used to identify the actual molecule by the chemical fingerprint of the drug and not just the drug class
Quantitative levels are provided
A Certifying Scientist reviews the screening and confirmation data to identify any abnormalities prior to releasing the result
Results ARE legally defensible
Urine
- Abundant specimen
- Cost effective
- Drug stability
- No special supplies required (other than a vial)
- Longer detection window
- Large test menu
- Same gender collector
- Has the most adulterants available

Hair
- Difficult collection process and small menu
- Cost prohibitive
- Drug stability — does not detect light use
- Special collection supplies required
- Longer detection window
- Collector gender is not an issue
- Has fewer adulterants available

Oral Fluid
- Cost prohibitive
- Drug stability issues
- Special collection supplies
- Shorter detection window
- Collector gender is not an issue
- Has fewer adulterants available

Urine, Hair & Oral Fluid Testing
Which One is the Best?
ORAL SCREENS

• METHAMPHETAMINE
• AMPHETAMINE
• BARBITURATES
• OPIATES
• CANNABINOIDs
• COCAINE
• BENZODIAZEPINES
• METHADONE
• PROPOXYPHENE
• PHENCYCLIDINE
• ETHANOL
5 PANEL HAIR TEST

- COCAINE, MARIJUANA, OPIATES (CODEINE, MORPHINE & 6-MAM HEROIN METABOLITE), AMPHETAMINES (METHAMPHETAMINE & ECSTASY), AND PHENCYCLIDINE (PCP).

5 PANEL HAIR TEST + EXTENDED OPIATES

- COCAINE, MARIJUANA, OPIATES (CODEINE, MORPHINE & 6-MAM HEROIN METABOLITE, OXYCODONE, HYDROCODONE, HYDROMORPHONE), AMPHETAMINES (METHAMPHETAMINE & ECSTASY), AND PHENCYCLIDINE (PCP).
SPICE/K2

- Mimic the effects of THC but at a much higher potency
- Several different analogs; JWH is the most common series
- Analog JWH-073 stays in the system similar to THC
- UR-144 and XLR-11 most popular
- Norchem test 20 different metabolites.

- Developed as a Marijuana alternative
- Mass produced in China as a liquid and then transported to the U.S.
- Sold in the U.S. as potpourri or an herb after being sprayed with the drug and labeled “Not For Human Consumption”

- Binds to the receptors of the brain more aggressively
- Can be MANY more times as potent than THC
- Hallucinogen, depressant, slurred speech, agitation and addictive, kidney failed and strokes.
Actual Product
IMPORTANT NOTICE: MADHATTER herbal blend does NOT CONTAIN any JWH 015, JWH 018, JWH 019, JWH 073, JWH 200, JWH 250, HU 210, HU 211, CP 47, 497, CP 47, 497 (C8), STIMULANT BZP OR TEMPP.

www.wildincense.com

CAUTION:
For fragrance purposes only.
Not for human consumption.
Keep out of reach of children and pets.
DO NOT BURN.

www.fairly-legal-incense.com

DOES NOT CONTAIN:
AM-2201 JWH-081, JWH-019, JWH-018, JWH-073, JWH-015, JWH-200, JWH-250, HU-210, HU-211, CP 47, 497, CP 47, 497-C8 (Homologue), Delta-THC

Previous bags are counterfeited please visit our website for more information

most be 18 or older
BATH SALTS

- Synthetic stimulants mimic the effects of Methamphetamine and Cocaine but at a much higher potency
- Currently testing for 4 different compounds
- Injected, inhaled or smoked

- Two of the compounds were developed as an anti-depressant and diet pill in the 1930’s and used by the Soviet Union
- Mass produced in China as a powder and then transported to the U.S.
- Sold in the U.S. as bath salts but in very small quantities in proportion to the cost

- Binds to the receptors of the brain
- Can be MANY more times as potent as Methamphetamine and Cocaine
- Stimulant, elevated mood, euphoria, delusions, severe agitation/aggression
MOLLY

Molly—slang for “molecular”—refers to the pure crystalline powder form of the club drug MDMA (3-4 methylenedioxymethamphetamine), which in pill form is known as ecstasy. Molly, which is usually purchased in capsules, has seen a surge in interest in the past few years, being celebrated frequently by popular music artists. MDMA in any form produces energy and euphoria in users but also may dangerously affect body temperature and cause confusion, depression, and sleep problems.
SOME DRUGS TO LOOK FOR
KROKODIL
SYNTHETIC DRUG
is a derivative of morphine that is 10 times more powerful, it has a fast-acting opioid effects, such as sedation and painkilling.

Krokodil, named for the scaly green appearance of skin once gangrene sets in, rose to popularity in Russia due to a heroin shortage. Also known as desomorphine, the budget drug (roughly one-tenth the cost of heroin) is made from codeine tablets combined with substances like gasoline, paint thinner or lighter fluid.
The effects of Kratom have been reported to feel like codeine or other mild opiates. This could be because the active alkaloids (7-hydroxymitragynine and mitragynine) act on opiate receptors. You feel both stimulation and sedation at the same time. You can feel relaxed and calm yet you can work harder and longer. The most enjoyable effect is the euphoria which is similar to codeine or hydrocodone. Some possible negative effects are reported to be bitter taste, Dizziness, nausea and/or vomiting at higher doses, and a feeling of heat in your body. Onset takes between 10-30 minutes and the effects last between 2-5 hours with about 2-5 hours of mild after effects.
THC

- Hallucinogen
- Legal in the state of Colorado & Washington
- Used for pain management, appetite stimulant and several other conditions
- Detected in the urine for approximately 2 days to 3 weeks depending on the severity of the use after the last dose

- It can be ingested in several different ways.
  - Smoking – E Cig or rolled.
  - Edible
  - Dabs
  - Wax

- THC is fat soluble and is stored in the body’s fat cells. This causes the drug to be detected longer if the person is heavy set or a frequent user
- Second hand smoke will NOT cause a person to test positive on a drug test
- Hemp oil does contain THC but very little
E-CIG
**How do I determine new THC/Marijuana use?**

<table>
<thead>
<tr>
<th>Mr. Heavy Pot Smoker</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Specimen</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Specimen</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Specimen</th>
</tr>
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<tbody>
<tr>
<td>Collection Date</td>
<td>8/30/2013</td>
<td>9/8/2013</td>
<td>9/18/2013</td>
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<tr>
<td>THC Level</td>
<td>350</td>
<td>450</td>
<td>180</td>
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**New Use?**

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Specimen</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Specimen</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Specimen</th>
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</thead>
<tbody>
<tr>
<td>Creatinine Level</td>
<td>52</td>
<td>150</td>
<td>20</td>
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<tr>
<td>THC/CR Ratio</td>
<td>6.7</td>
<td>3.0</td>
<td>9.0</td>
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</tbody>
</table>
• Depressant
• Prescribed for pain management as well as cough suppressant
• Detected in urine for approximately 2-4 days after the last dose

• Only high doses will cause oxycodone to screen positive for opiates in urine. An oxycodone test must be ordered to test for it specifically
• Methadone will NOT test positive for opiates
• Poppy seeds can test positive for morphine.
• Hydrocodone will cause it to metabolize into hydromorphone

• Heroin must be tested for specifically as a separate test. The metabolite 6-AM, is only present in the body for approximately 6-12 hours after last dose.
HOW TO DETERMINE HEROINE USE?

• ONLY THE PRESENCE OF 6-AM (ABOVE CUTOFF) IS UNEQUIVOCAL PROOF OF RECENT HEROIN USE.

• THE PRESENCE OF ONLY MORPHINE AND CODEINE ALSO COULD BE EXPLAINED BY THE USE OF THESE TWO MEDICATIONS

• IN ADDITION TO 6-AM, THE URINE OF HEROIN USERS TYPICALLY CONTAINS HIGH CONCENTRATIONS OF MORPHINE AND LOW CONCENTRATIONS OF CODEINE.

• THE PRESENCE OF ALL THREE IS THE TEXTBOOK PATTERN OF RECENT HEROIN USE.
ETG/ETS

• ETG AND ETS ARE THE BIOMARKERS FOR ALCOHOL CONSUMPTION
• ETS IS THE MOST STABLE WITHOUT POTENTIAL MEDICAL ISSUES BEING CONSIDERED
• ETS IS THE **ABSOLUTE** BIOMARKER FOR ALCOHOL CONSUMPTION
• DIABETES DOES NOT HAVE AN IMPACT ON ETG AND ETS
• GLUCOSE FERMENTATION IS NO LONGER AN ISSUE
• **DETECTION WINDOW OF UP TO 80 HOURS**
If you’re testing for ethanol alcohol, you’re missing something!

Testing for the EtG metabolite detects alcohol consumption up to 80 hours in urine.
Testing ethanol
Alcohol: 2 positives
Testing EtG: 20 positives

Data collected at SRL, Tacoma, WA by Toivola et al.
METH/AMPHETAMINE

- Stimulant
- Can be prescribed – typically for narcolepsy, ADHD and obesity
- Detected in urine for approximately 1-3 days after the last dose

- Amphetamine (commonly prescribed as Adderall) will NEVER have a level of methamphetamine at the confirmation level
- Methamphetamine metabolizes into amphetamine

- Over the counter medicines which contain ephedrine or pseudoephedrine will cause the meth/amp screen to be positive but will NEVER confirm for either substance
- Vicks inhaler (including generics) can confirm positive for methamphetamine. An additional test called D vs L must be performed to determine the source of the positive
COCaine

- Stimulant
- Is used in facial surgeries to constrict the blood vessels
- Detected in urine for approximately 2-4 days after the last dose

- Cocaine is screened by Immunoassay and confirmed by LC/MS/MS
- Screening cut off is 300 ng/ml. The confirmation cut off is 150 ng/ml

- Cocaine is only dispensed by a physician. Nothing will cause a false confirmation positive for cocaine
- Lidocaine will not cause a cocaine positive
ANY QUESTIONS?