Drug testing

Contents

Chapter 1. Field Procedure: Presumptive Drug Identification Using Chemical Reagents

3. Safety Precautions

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- Wear nitrile gloves, safety goggles, and a protective apron.
- Conduct tests in a well-ventilated area or outdoors.
- Handle reagents with care; avoid skin or eye contact.
- Dispose of all materials in accordance with hazardous waste protocols.

4. Required Materials

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- Transparent glass vials or test tubes with stoppers
- Glass droppers or pipettes
- White ceramic or glass plate (for color comparison)
- Field reagent kit (see Section 6)
- Waste container for used reagents and samples

5. Sample Preparation

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1. Place a small quantity of the unknown substance (approx. match head size) into a clean, dry glass vial.
2. If the sample is a tablet or plant material, crush it gently using a clean glass rod.
3. Do **not** add any neutral liquid. The reagent itself serves as the reactive medium.

6. Reagent Overview

Table 1. Table of reagents and drug they presumably detect

Reagent	Target Substances	Expected color change
Marquis	Opiates, amphetamines, MDMA	Purple (opiates), orange-brown (amphetamines)
Mandelin	Methamphetamine, ketamine, MDMA	Green (meth), black (MDMA)
Mecke	Heroin, morphine	Blue-green to black
Scott Test (3-step)	Cocaine	Blue → Pink → Blue (layered)
Duquenois–Levine	Cannabis	Purple in chloroform layer
Simon's	Secondary amines (e.g. MDMA)	Blue

7. Testing Procedure

1. Select the appropriate reagent based on the suspected substance.
2. Add 1–2 drops of the reagent directly onto the sample in the vial.
3. Observe the reaction for up to 60 seconds until it changes the color.

8. Interpretation and Documentation

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- Compare the resulting color to the standardized reference chart provided in the reagent kit.
- Record the following:
  - Substance tested
  - Reagent used
  - Time to color change
  - Final color observed
  - Batch number of reagent
- Mark results as **presumptive only**.

9. Disposal and Decontamination

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- Neutralize used reagents with a baking soda solution before disposal.
- Rinse all glassware with distilled water and allow to air dry.
- Store reagents in sealed, labeled containers away from heat and light.

10. Training Notes

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- Include simulated samples and false positives to reinforce critical thinking.
- Emphasize the limitations of field testing and the importance of confirmatory lab analysis.
- Encourage consistent documentation and adherence to safety protocols.