

DRUG ANALYSIS LAB

For this lab, you will perform various tests on drugs:

1. Over the counter drugs (aspirin, Tylenol, alka seltzer) and unknown drugs A and B
2. Identification of marijuana (microscopic examination and reaction with HCl)
3. Identification of illicit drugs (LSD and cocaine)
4. Identification of heavy metal poisons (lead and mercury) and unknown heavy metal

Materials – You write

Procedure:

You will follow the procedures given to you by your instructor and those explained in the criminalistic kit student guides. **You do not need to write out procedures on your lab report.**

Calculations and data: You must make your own data tables for the following data:

1. Over the counter drugs – You need observations for each of the following:
 - a. Reaction with water
 - b. Color of water after addition of Universal indicator, pH using pH paper
 - c. Reaction with HCl
 - d. Color with Ferric nitrate
2. Marijuana – microscopic sketch of leaves, reaction with HCl acid (look at under binocular microscopes)
3. Illicit drugs – reaction of cocaine with Scott's Reagent and LSD with Van Urk reagent. Observation of LSD under UV light.
4. Metal poisoning – reaction of lead, mercury, and unknown metal with potassium chromate

***NOTE – data should be neat and professional in appearance. It should be organized and easy for the reader to understand.**

Lab Questions:

1. What is the identity of unknowns A and B? What is the identity of the unknown heavy metal?
2. You tested 3 over the counter drugs; explain one test you could use to identify each of the 3 drugs. What are you testing with? What indicates a positive for that drug?

3. Which reagent gives a positive test for cocaine? LSD? What is the color of a positive test for each drug?
4. Explain why alka seltzer fizzes when introduced to water.
5. Write the chemical reaction showing the hydrolysis of aspirin.
6. What are some physical symptoms of lead and mercury poisoning?
7. What are some natural sources of lead that can poison people?
8. Why would some headache sufferers prefer ibuprofen over aspirin?

Conclusions and Final Summary: Do not repeat the procedure here. Discuss the concepts associated with this lab, state specific scientific conclusions, and relate to the real world of criminal investigation.