

Name: _____

Class: _____

Date: _____

Lab - Identifying Mystery Substances

Problem: What is the mystery substance?

Part 1: Examining Known Substances

For each four white powders (baking soda, sodium thiosulfate, corn starch and baking powder) make observations for physical characteristics (appearance, odour, etc) as well as chemical characteristics (behavior in water, behavior in acid and behavior in iodine).

Procedure:

1. Place a small amount of one powder into three different wells on the spot plate.
2. Complete each of the tests below on the powder (use a different well each time)
3. Record observations in Table 1.0
4. Repeat for the remaining known substances
5. Wash spot plate as directed.

Test 1 – Appearance (Physical Properties)

1. Describe the appearance of the powder and record this in the data table.

Test 2 – Behaviour in Water

1. Use the eye dropper to add 2 drops of water to the sample

Test 3 – Behaviour in Acid

1. Use the eye dropper to add 2 drops of acid to the sample

Test 4 – Behaviour in Iodine

1. Use the eye dropper to add 2 drops of iodine to the sample

Table 1.0 – Test Results on Four Known Powders

Powder	Appearance	Behaviour in Water	Behaviour in Acid	Behaviour in Iodine
Baking Soda				
Baking Powder				
Sodium Thiosulfate				
Cornstarch				

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Next Step/Sources of Error		
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