

Name: _____

Pure Substances vs. Mixtures Investigation

Purpose: 1) Identify the nature of pure substances and mixtures 2) Recognize properties of pure substances and mixtures

Pre-Investigation: Answer the following questions based on your current knowledge.

- 1) What is a mixture?

- 2) What types of mixtures are there?

- 3) What is a pure substance?

- 4) What are the two types of pure substances?

- 5) When is it important to have pure substances?

- 6) What are some properties (physical or chemical) of pure substances and mixtures that would help you identify or separate them? (List 3)

Part I: Examine some examples of pure substances and mixtures that can be found at home, in grocery stores, or hardware stores. Complete the table with as much information as possible.

Name	Pure Substance or Mixture? Why do you think do?

Part II A: The samples labeled with an “A” are pure substances. List them here.

7) How might you show that these samples are pure substances? In other words, what makes these pure substances pure?

8) Observe the demonstration by your teacher. **Separation of a pure substance.** Write your observations!!!

Part II B: The samples labeled with a “B” are mixtures. List them here.

9) How might you show that these samples are mixtures? In other words, what makes them mixtures?

10) Observe the demonstration by your teacher. **Separation of a mixture.** Write your observations!!

Part II C: Observe the two different groups of mixtures. List the items in group 1.

Group 1

11) What do the items in group 1 have in common?

12) What type of mixtures are in group 1, heterogeneous or homogeneous? How do you know?

List the items in group 2.

Group 2

13) What do the items in group 2 have in common?

14) What type of mixtures are in group 2, heterogeneous or homogeneous? How do you know?