

**Report Sheet**

Date \_\_\_\_\_

Name \_\_\_\_\_

Section \_\_\_\_\_

Team \_\_\_\_\_

Instructor \_\_\_\_\_

**Pre-Lab Study Questions**

1. Would you expect an organic compound to be soluble in water? Why?

2. Which is more flammable: an organic or inorganic compound?

**A. Color, Odor, and Physical State**

Name	Formula	Physical State	Odor	Melting Point	Type of Bonds?	Organic or Inorganic?
Sodium chloride						
Cyclohexane	$C_6H_{12}$					
Potassium iodide						
Benzoic acid	$C_7H_6O_2$					
Toluene	$C_7H_8$					
Water						

**B. Solubility**

In the mixture, water is the \_\_\_\_\_ layer and cyclohexane is the \_\_\_\_\_ layer.

Solute	Solubility in Cyclohexane	Solubility in Water	Organic or Inorganic?
NaCl			
Toluene			

**Report Sheet****C. Combustion**

Compound	Flammable (Color of Flame)	Not Flammable	Organic or Inorganic?
NaCl			
Cyclohexane			

From your observations of the chemical and physical properties of alkanes as organic compounds, complete the following table:

Property	Organic Compounds	Inorganic Compounds
Elements		
Bonding		
Melting points		
Strong odors		
Flammability		
Solubility		

**Questions and Problems**

- Q.1 Describe three properties you can use to distinguish between organic and inorganic compounds.
- Q.2 A white solid has no odor, is soluble in water, and is not flammable. Would you expect it to be an organic or an inorganic substance? Why?
- Q.3 A clear liquid with a gasoline-like odor forms a layer when added to water. Would you expect it to be an organic or an inorganic substance? Why?

# Report Sheet

## D. Functional Groups

Compound	D.1 Full Structural Formula	D.2 Organic Family
$\text{CH}_3\text{—OH}$		
$\text{CH}_3\text{—CH}_2\text{—CH}_3$		
$\text{CH}_2=\text{CH}_2$		
$\text{CH}_3\text{—O—CH}_3$		
$\text{CH}_3\text{—NH}_2$		
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3\text{—C—OH} \end{array}$		
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3\text{—C—CH}_3 \end{array}$		
$\begin{array}{c} \text{H} \\   \\ \text{CH}_3\text{—N—CH}_3 \end{array}$		

## Report Sheet

### Questions and Problems

Q.4 Classify the following organic compounds according to their functional groups:

