

## Lab 5.2

### **Research Question:**

What behavior does ionic and covalent compounds exhibit when combined as a mixture

### **Procedure:**

Same as in book

### **Data and Observation (Results):**

We shook the test tubes after putting salt in it. The salt dissolved in the water but piled up in the oil.

### **Conclusion:**

Salt is ionic, its formula is NaCl. Na is sodium and Cl is chlorine. Water is polar covalent. Both compounds are held together by positive and negative charges and they will be attracted to each other. Water separates the salt molecules, you see it as being dissolved. Oil is non polar covalent, it has no charges so it is not attracted by charges to ionic or covalent compounds. Thus, it did not dissolve the salt.

1. Polar covalent compounds and ionic compounds are compatible
2. Polar covalent and polar covalent compound are compatible
3. Non polar and non polar are compatible
4. Non polar is not compatible with polar or ionic

### **Vocabulary:**

#### Ionic Compound:

the compounds formed by the transfer of electrons between metals and non-metals.

#### Covalent compound:

a molecule formed by covalent bonds, in which the atoms share one or more pairs of valence electrons.

#### Polar covalent compound:

two atoms share a pair of electrons unequally because of differences in their electronegativities

#### Non polar covalent compound:

a type of chemical bond that is formed when electrons are shared equally between two atoms

#### Immiscible:

Liquids that do not mix with each other

Mixture:

a substance made by mixing other substances together.

Suspension:

a heterogeneous mixture in which the solid particles do not dissolve, but get suspended throughout the bulk of the solvent, left floating around freely in the medium.