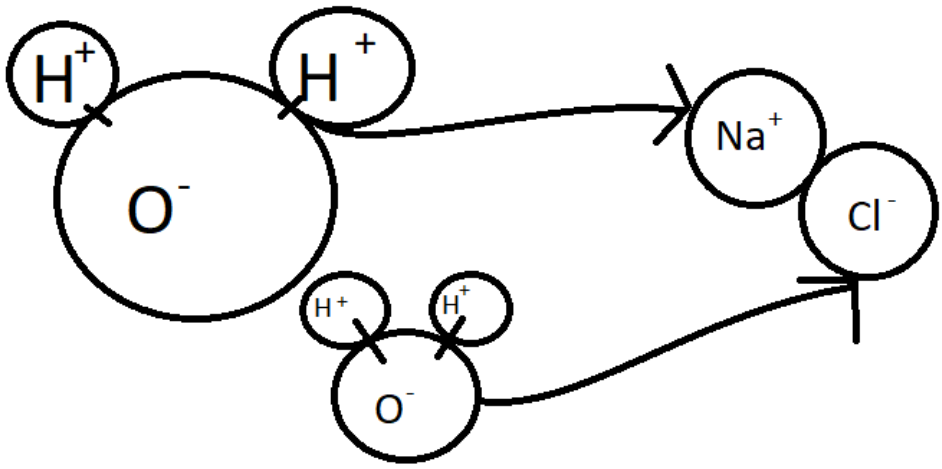
Colton Short
Lab Report 5.2

Research Question:
What behavior do Ionic and Covalent Compounds exhibit when combined as a mixture?

Procedures:
Same as Lab 5.2 in the Book.

Observations:
After Shaking, the Salt was dissolved in the water. But, it was just piled up on the bottom of the test tube with the oil in it.

Conclusion:
Salt is an Ionic Compound, With its formula being NaCl. Na is the metal Sodium, and Cl is the nonmetal Chlorine. Water Is a Polar covalent compound. Both compounds are held together by positive and negative charges, and they will be attracted to each other. Water separates the salt molecules; we see that the salt is dissolved.



The oil is a Nonpolar covalent compound, so it has no charges. It is not attracted by the charges in Ionic or Covalent Compounds. Thus, it did not dissolve the salt.

This experiment Demonstrates ‘Like Dissolves Like.’

This Means:

1.
Polar Covalent Compounds are compatible, and will dissolve each other.

2.
Polar Covalent and Ionic Compounds are compatible, and will dissolve each other.

3.
Nonpolar Covalent Compounds are compatible.

4.
Nonpolar Covalent Compounds are incompatible with Polar Covalent and Ionic Compounds

Vocabulary:

1.
An Ionic Compound is a chemical compound composed of ions held together by ionic bonding.

2.
Covalent compounds are formed when two nonmetal atoms create a covalent bond by sharing valence electrons.

3.
A Polar Covalent Bond exists when atoms with different electronegativities share electrons in a covalent bond.

4.
Covalent compounds in which there is no electronegativity difference are known as non-polar covalent compounds.

5.
Immiscibility is the property where two substances are not capable of combining to form a homogeneous mixture.

6.
A mixture is a material made up of two or more different chemical substances which are not chemically bonded.

7.
A suspension is a heterogeneous mixture of a fluid that contains solid particles sufficiently large for sedimentation.