Anabel Paine
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Ionic and Covalent Compound Lab

RQ:

What is the difference between ionic and covalent compounds experimentally?
How can we break the bonds of compounds?

INTRO:

A covalent bond happens during the sharing of electrons between two atoms. To make a covalent bond, there has to be an almost equal or very low difference in the volume of electronegativity between the participating atoms. An ionic bond occurs due to the permanent transfer of one or more electrons from one atom to another. To form an ionic bond, there has to be a huge difference in the value of electronegativity between the participating atoms.

1. Pour approximately 150 mL of H20 into each beaker.
2. Put one rounded spatula full of sugar into one beaker of H20 and mix thoroughly.
3. Put one rounded spatula full of baking soda into the other beaker of H20 and mix thoroughly. (Being certain to use the second spatula)
4. Prepare your battery with leads.
5. Stick the battery with the attached leader into sugar H20 first. Observe and record
6. Stick the battery with leads into the baking soda solution next. Observe and record

While it was in the sugar water, nothing happened. While it was in the baking soda, something happened. Ionic compounds conduct electricity. Covalent compounds do not. You can test using elective current. Baking soda is the ionic. (The picture is attached)

1. Compound- a chemical substance composed of identical molecules that are composed of atoms from more than one element held together by chemical bonds.
2. Chemical reactor- an enclosed volume in which a chemical reaction takes place.
3. Ionic compound- compounds made of ions that form charged particles when an atom gains or loses electrons.
4. Covalent compound- a compound whose atoms are bonded together through a covalent bond
5. Electrolysis- chemical decomposition produced by passing an electric current through a liquid or solution containing ions.
6. Mixture- a substance made by mixing other substances together
7. Solution- a homogeneous mixture of two or more substances in relative amounts that can be varied continuously up to what is called the limit of solubility.