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Chemistry

Experiment 2.2

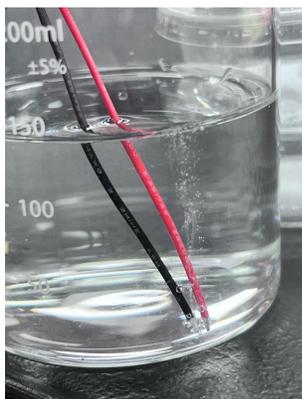
Research Question: How can we determine the difference between ionic and covalent compounds?

Introduction: An ionic bond is the transfer of 1+ electrons and can only form between metals and nonmetals, there has to be a large difference in the electronegativity. A covalent bond occurs by sharing electrons into atoms and only forms when there are non-metallic elements.

Procedure:

1. Pour approximately 100 to 150 ml of distilled H₂O in each beaker
2. mix one spatula of baking soda into one Beaker and one spatula of sugar in the other beaker
3. Prepare battery with lead attachment
4. insert led into sugar H₂O first. observe and record
5. insert leads into baking soda H₂O. observe and record

Observations: 125 ml of water into each beaker then mix the baking soda into one Beaker with one of the spoons, then using the second spoon we put sugar into the other beaker. The sugar water had wires connected to the battery in the mixture and had no reaction. we then put the wires connected to the battery into the baking soda mixture and the wire started fizzing upwards, the red LEDs had a green discoloration, this is because copper is oxygenated and therefore turned green,



Conclusion: You can experimentally find out if a compound is ionic or covalent, by using a battery and using metallic and nonmetallic substances and submerging a copper wire into pure water. When we did this the wire turned a greenish hue, this was because the wire is made out of copper and the

copper was oxygenated. The copper oxygenated because we put the wire into baking soda and pure water.