

The purpose of this lab was to determine if covalent compounds have different properties than ionic compounds. The hypothesis stated that if ionic compounds are heated, then the ionic ones will melt slower, and the covalent will melt faster. The hypothesis also stated that the ionic will dissolve better in water, the covalent will dissolve better in oil, and that electricity will flow better in ionic molecules.

Ionic compounds form crystals, conduct electricity, and have high melting points. They are made of two oppositely charged atoms. Covalent bonds, on the other hand, are made of two non-metals, and are weaker than ionic compounds, so they have low melting points and will not conduct electricity.

Four compounds were used in this experiment: salt, sugar, and two unknowns. Three different tests were conducted to determine which compounds were ionic and which were covalent. Salt melted slower than the other compounds - it melted in 1 min. Salt also somewhat conducted electricity, and it dissolved well in water, but not in oil. This shows that salt is an