

Answer on Question #52387, Chemistry, Other

Task:

Whenever We Combine Two Elements They Form A Complete New Substance But When We Combine Salt Or Sugar With Water, Instead Of Combining With Water, Salt Or Sugar Dissolve In Water - WHY?

Answer:

Sugar is a molecular solid with relatively weak intermolecular forces.

Salt is an ionic solid with positively and negatively charged ions.

Water has sufficient magnetic properties because of two positively charged Hydrogen atoms stucked to a negatively charged Oxygen atom.

Water molecule can break apart sugar molecules and put itself between them.

When salt dissolves in water ions from salt are released into the solution, where they become associated with the polar solvent molecules.

Water dissolves a solid when the interaction with their molecules is thermodynamically viable.

To some extent new compounds – hydrates – are formed between the solid constituents and water molecules.