

### Worksheet 5 – Solutions, Electrolytes and Concentration

The name **electrolyte** is given to substances whose aqueous solutions contain **ions**, because ions are charged particles which, when they move through a solution, **conduct electricity**.

**Strong electrolytes** dissociate completely into ions. This includes the **strong acids** (HCl, HBr, HI, HNO<sub>3</sub>, HClO<sub>4</sub> and H<sub>2</sub>SO<sub>4</sub>). HF and other acids are considered weak acids.

The **strong bases** (LiOH, NaOH, KOH, RbOH, CsOH, Ca(OH)<sub>2</sub>, Sr(OH)<sub>2</sub> and Ba(OH)<sub>2</sub>) dissociate completely. Most **salts** (except HgCl<sub>2</sub> and Hg(CN)<sub>2</sub>) are strong electrolytes.

**Weak electrolytes** do not dissociate completely into ions. This includes most acids and bases, except those listed above.

**Non-electrolytes** are species which dissolve in water, but which do not dissociate. Soluble covalent compounds are covalent compounds like glucose and ammonia.

1. Categorize each of the following compounds:

<b>compound</b>	<b>acid, base, salt molecule</b>	<b>electrolyte non-, weak, strong</b>	<b>products</b>
<b>Ca(NO<sub>3</sub>)<sub>2</sub></b>			
<b>HCN</b>			
<b>Ca(OH)<sub>2</sub></b>			
<b>Li<sub>2</sub>SO<sub>3</sub></b>			
<b>H<sub>2</sub>SO<sub>3</sub></b>			
<b>H<sub>2</sub>SO<sub>4</sub></b>			
<b>HF</b>			
<b>C<sub>6</sub>H<sub>12</sub>O<sub>6</sub> glucose</b>			
<b>NH<sub>3</sub></b>			