**Names:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Properties of Solutions and Distilled Water Lab**

Electrolytes are chemicals that, when dissolved in water, conduct electricity.

**Purpose:**

* to determine the properties of different solutions and distilled water

**Materials:**

|  |  |
| --- | --- |
| * HCl(aq)
 | * NaOH(aq)
 |
| * NaCl(aq)
 | * dH2O
 |
| * red litmus paper
 | * blue litmus paper
 |
| * conductivity apparatus
 | * marble chips
 |
| * magnesium metal
 | * cobalt chloride paper
 |
| * chemplate
 | * power supply
 |
| * wash bottle
 | * leads
 |

**Procedure:**

* place a few drops of each bottle into chem plate wells
* test each chemical with a conductivity apparatus--rinse in between--**DO NOT CROSS CONTAMINATE**
* test each chemical with red litmus--blue litmus--cobalt chloride paper--marble chip--Mg

**Observation:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical** | **Conductivity** | **Red litmus** | **Blue litmus** | **Cobalt chloride** | **Marble chips** | **Magnesium metal** |
| **HCl(aq)** |  |  |  |  |  |  |
| **NaOH(aq)** |  |  |  |  |  |  |
| **NaCl(aq)** |  |  |  |  |  |  |
| **dH2O(l)** |  |  |  |  |  |  |

Classify each chemical and determine their properties:

**HCl(aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**NaOH(aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**NaCl(aq) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**dH2O(l) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**