**Electrolysis of Water**

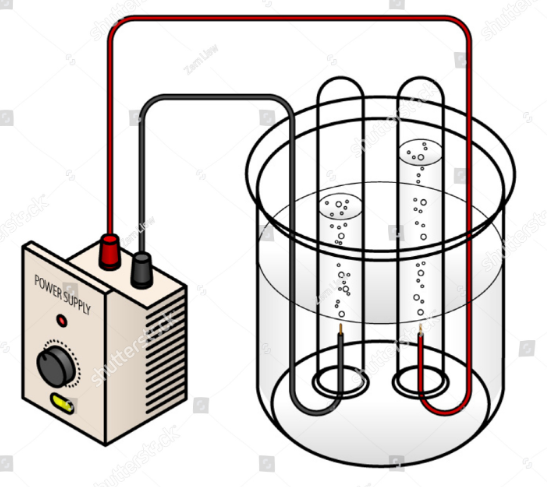
**Purpose:**

* to decompose water

**Materials and Method:**

* sodium hydroxide or sulfuric acid—only to allow for the conduction of electricity in water—not part of the chemical reaction—not a catalyst!!
* Stirring rod
* Pieces of paper towel
* Wooden splints
* Matches

**Label the diagram:**



**Observations:**

**Conclusion:**

|  |
| --- |
| **i)** |
|  |
| **ii)** |
|  |

**Questions:**

**1)** Chemical Formula of water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Molecular Structure of water

**2)** BCE for the electrolysis of water:

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**3)** Draw the BCE for the electrolysis of water:

**4)** i) What type of reaction is this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) How do you know that it is this type of reaction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**5)** What were the differences between the cathode (-) terminal and the anode (+) terminal?

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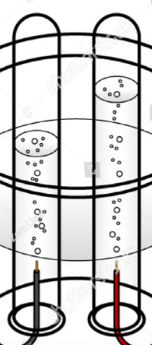
\_ii)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6)** Why were there differences between the 2 electrodes?

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**7)** Draw – blow up diagram – what was in each test tube:



**8)** Real world application of electrolysis of water: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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