Miniature Electrolysis of Water

Purpose

To show the electrolysis of water and the Hydrogen and Oxygen gases produced during the process in a small setup.

Materials

Tupperware bowl electrolysis apparatus Ring stand with ring clamp

0.5 M Potassium Sulfate

9V Battery

Procedure

1. In the Tupperware bowl, pour approximately 125mL of 0.5M Potassium Sulfate solution. This should fill the bowl halfway.
2. Place the 9V battery on the base of the ring stand and position the Tupperware bowl on top of the ring above the battery. Adjust the height so that the thumb tacks on the bottom of the bowl can easily contact the battery while the bowl sits on the ring. Also make sure bubbles appear from the inside of the bowl at each thumb tack.
3. Take the lid of the bowl and fill the test tubes with 0.5M Potassium Sulfate to the very top. With the lid in one hand and the bowl in the other, quickly overturn the test tubes and submerge them in the solution in the bowl. The test tubes should be mostly filled with liquid. Make sure NOT to close the lid all the way down on the bowl

Additional Information

1. Do not let the electrodes touch, and if the process is working there should be bubbles at each electrode.
2. Make sure to quickly empty the bowl when done with the experiment. Leaving it for too long will rust the tacks.

Disposal

Potassium sulfate solution can be written up with UI# 19498