HOFFMAN APPARATUS

ELECTROLYSIS OF WATER DEMONSTRATION

Place the apparatus on the bench and fill with a dilute Sodium Sulfate solution. Open the petcocks to let out the air and allow then to fill with the solution. Close the stopcocks and connect the terminals of the apparatus with the connecting leads to the power supply. Set the power supply at 30 V, 100 mA. Hydrogen will collect in the cylinder above the negative electrode and oxygen will collect above the positive electrode. Use indicator in the Sodium Sulfate solution to change the color with solution pH.

COMMENTS:

Alizarine Red (red in neutral pH solution) will turn the acidic solution yellow and the basic solution violet. At the cathode, where hydrogen gas is evolved, the solution is basic and it turns violet. At the anode, where oxygen gas is evolved, the solution is acidic and it turns yellow. The volume of the hydrogen gas produce is twice that of the volume of oxygen gas.