"Pop" Sound Test for Hydrogen Gas - Microscale Experiment

Apparatus

Well-plate, 1 plastic pipette (with long stem), 2 pins, connecting wires, 9V dry battery, a pair of scissors, rubber band

Chemicals

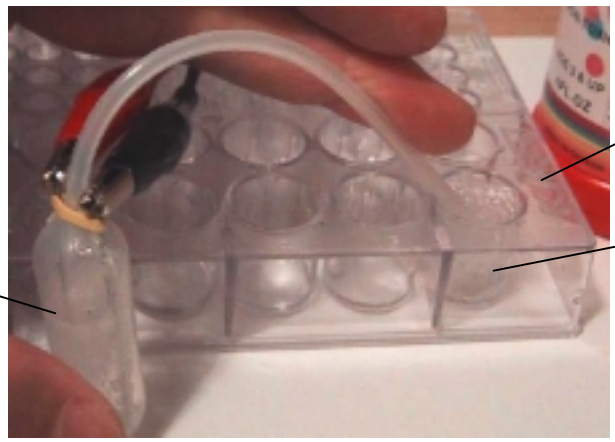
0.4 M NaOH, shampoo solution (1:1), matches

Safety Precautions

Safety spectacles should be worn. Rinse thoroughly with water if the alkali spilt on the skin. Never point a plastic pipette containing the alkali upwards as a momentary lapse of concentration can result in an accident.

Procedures

1. Half fill well F1 with the shampoo solution.
2. Fill the pipette three-quarter full with 0.4 M NaOH solution.
3. Carefully insert 2 pins into a plastic pipette (long stem). Use a rubber band to tie up the pinheads to prevent the pins from touching each other.
4. Connect the two pin electrodes to a 9V battery.
5. Pass the gases generated into the solution in well F1 as shown in the diagram below.



6. Disconnect from the battery when the surface of the shampoo solution are covered with soap bubbles.
7. Set the pipette aside and light the soap bubbles with a match.
8. Write down the equation of the electrolytic process.