

Ammonia gas

Level Secondary

Concept

It is confirmed that ammonia dissolves into water very much. It is confirmed that the water solution of ammonia is base.

Materials

ammonia solution, test tube clamp, phenolphthalein, PET bottle or glass bottle with cap, injection syringes, straws, beakers, test tubes, spirit lamps, and rubber stopper.

Experiment 1

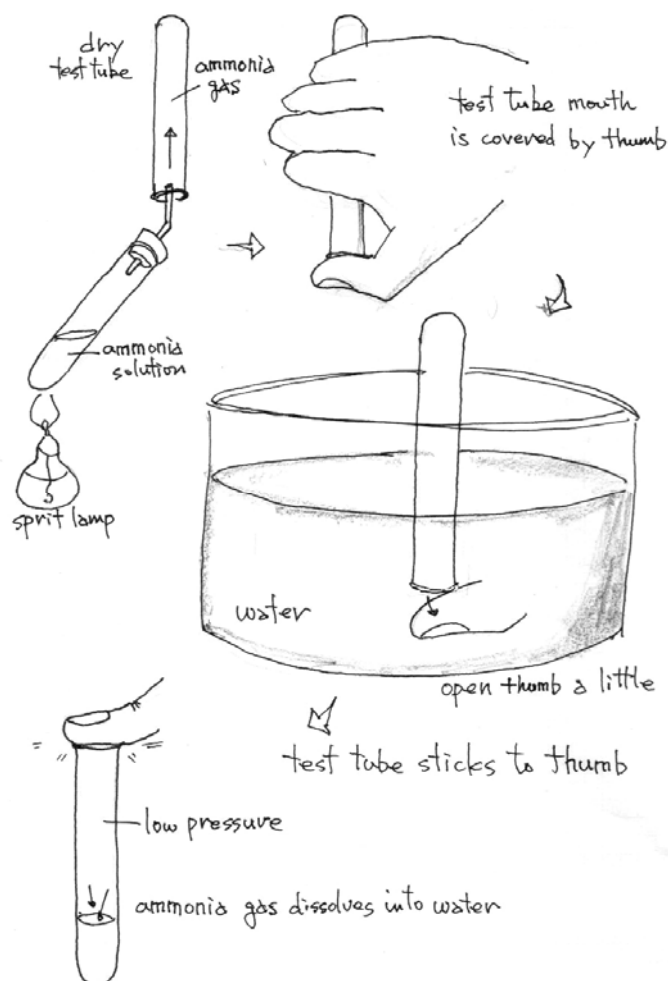
Procedure

- (1) The ammonia solution is put in the test tube, and rubber stopper with a tube is on it.
- (2) Mouth of a dry test tube is faced downward and ammonia gas is collected. The mouth of the test tube is capped by the thumb.
- (3) The thumb is opened a little in the beaker that puts water in.

Science

Ammonia gas dissolves into water.

The inside pressure of test tube becomes small, and the finger is stuck quickly to the test tube.



Experiment 2

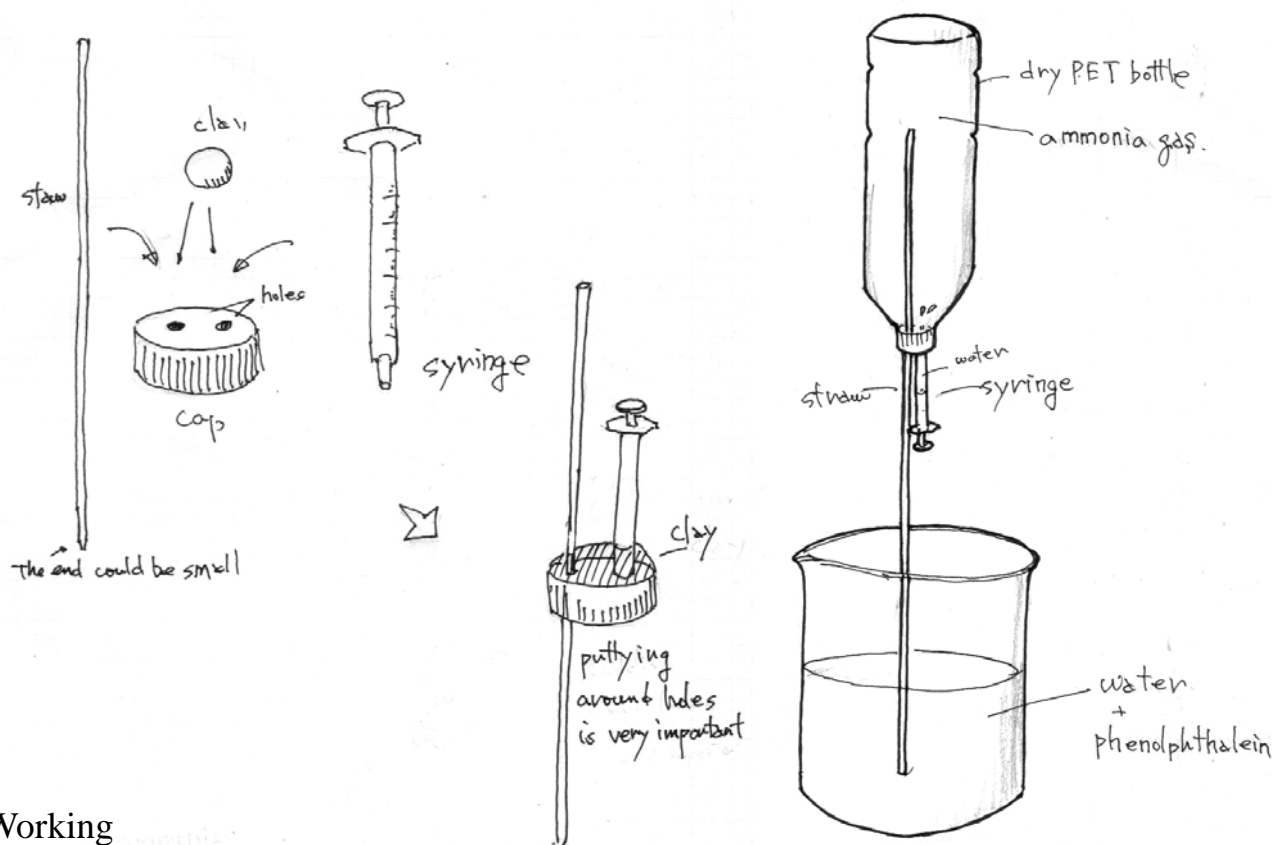
Fabrication

(1) Two holes are made for the cap of the bottle.

The straw is passed through one hole.

The injection syringe has already been passed through the hole of the cap.

(2) Surroundings of the hole are shielded with clay carefully.



Working

(1) Put water in the injection syringe.

(2) Water is put in the beaker, and the phenolphthalein is put by several drops.

(3) The mouth of a dry bottle faces downside and ammonia gas is collected inside of the bottle.

(4) The cap of the bottle is closed, and the end of straw put into the water of the beaker.

(5) The water of the injection syringe is put in the glass bottle.

Science

Because ammonia in the bottle dissolves into water, and pressure becomes small, water is sucked up.

As for water in the bottle, it becomes red because ammonia solution is base and reacts with the phenolphthalein.

