

J46-3511-W0 Cloud Bottle

【Purpose】

This compact product is suitable for carrying out experiments of cloud generation. Using PET bottle and air pump we can perform experiments like cloud generation, thermal expansion and contraction (adiabatic heating and cooling).

【Specification】

Black air pump (heat resistance up to 60°C) x 1
 PET bottle (350ml) x 1
 Liquid crystal (LCD) thermometer
 (measurement range 10 - 32°C) x 1

【Usage Instructions】

Cloud Generation Experiment

Put a few drops of water (ethanol can be used as well) in the PET bottle and close the air pump cup tightly until it clicks. Squeeze the air pump several times to get more air inside the bottle. When you got inside the bottle enough air that you are not able to squeeze the pump anymore, stop squeezing, hold the pump in one hand and release the lock on the air pump. You will hear sound "pop", the air inside the bottle will be released, and you can observe cloud formed inside for a while.

Temperature Change Due to Contraction or Expansion Experiment

By looking at the internal LCD thermometer we can observe change in temperature caused by air compression and expansion. Start squeezing the pump, and observe the change in temperature of the LCD thermometer when compressing the air inside the bottle or the change in temperature after releasing the lock on the air pump (adiabatic heating and cooling).

【Warning】

- * This product is intended only for above mentioned experiments. Do not use for any other purpose.
- * Do not tear off the LCD thermometer from the plastic cover.
- * After use, wipe off moisture from the LCD thermometer, and let the inside of the bottle dry.
- * Do not store in place under direct sunlight, ultraviolet rays, and fluorescent lamp light. As well as in place with high temperature or high humidity. It may damage the LCD thermometer.

Cloud Generation Experiment

Put a few drops of water with air and...

If we release the air?



Temperature Change Due to Contraction or Expansion Experiment

Close the air pump and put air in?

If we release the air?

