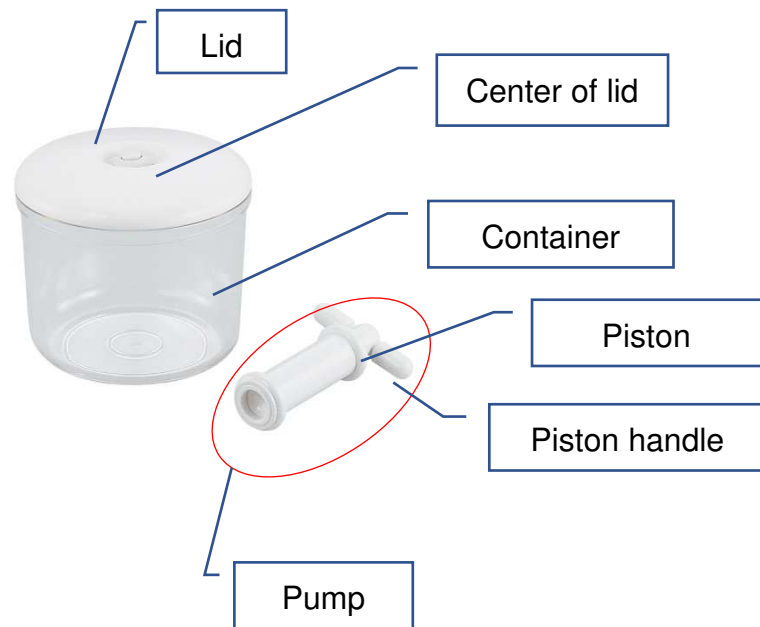


C15-6053-W0

Vacuum Container VL-2



[Product Description]

All-in-one simple vacuum vessel made of lightweight and pressure-resistant reinforced plastics that enables easier and safer handling for student lab compared with a conventional glass bell jar.

[Overall Advantages to Users]

- ✓ It is easy to create a reduced pressure state in the container by drawing out the inner air using the manually operable pump, which is included in the product.
- ✓ The lid and pump have a built-in intake/exhaust valve seat mechanism. Therefore, all a user needs to do is to directly connect the pump to the center of the lid, where the intake/exhaust valve seat, while continuously moving the piston up and down until a proper degree of vacuum is created inside the container.
- ✓ With this vacuum container, it is easy to carry out various types of vacuum experiments such as "transmission of sound", "boiling point dropping" and "inflating/deflating a marshmallow", because of the spacious capacity of the container (1800 ml) that can hold relatively large experimental materials like a beaker, while maintaining an airtight seal between the lid and container.

[Specifications]

- Size of the container: $\phi 160 \times 144$ mm
- Capacity of the container: 1800 ml
- Reachable degree of vacuum: Up to 75% of the air inside the container can be discharged.
- Material: Jar: PC (Polycarbonate)
Lid: Heat resistant Styrene
Pump (Cylinder & Piston): ABS resin

[Benefits]

[To all users]

- ✓ A mechanical or motorized pump is not needed as the pump is built into the vacuum container lid.

[To teachers]

- ✓ Hassle-free all-in-one vacuum vessel with so many possibilities for teacher demonstration because they can easily prepare for their heuristically preliminary experiments on the relevant topics.

[To students]

- ✓ The transparent body of the container allows a student to observe how an object inside changes as they evacuate the air.

[Keywords]

*Vacuum

*Reduces pressure state

*Atmosphere

*Atmospheric pressure

*Property of air

*Property of sound

*Presence/absence of air in a container

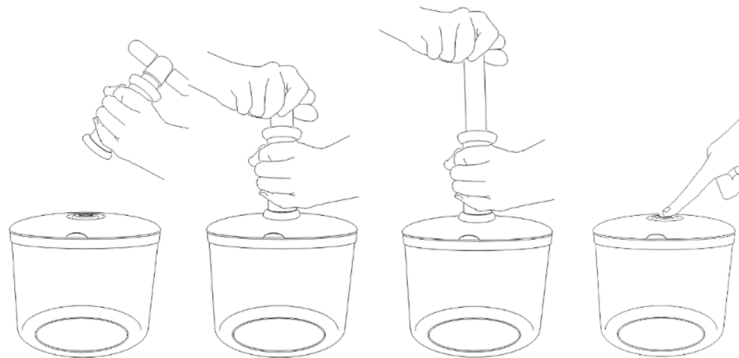
*Comparison between propagation of sound under atmospheric pressure and that under reduced pressure

[Precautions]

- Instruct students about the operating procedure and the safe ways of conducting experiments with this product prior to experiments.
- Always carry out student experiments under the supervision of a teacher/trainer.

[How to use]

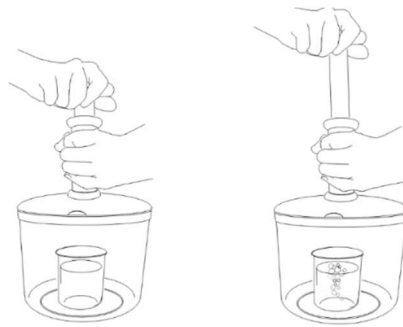
1. Connect the pump to the center of the lid where the intake/exhaust valve is seated in the center of the lid.
2. Firmly grip the pump (cylinder) and piston handle, and then continuously move the piston up and down until a proper degree of vacuum is created inside the container.
3. Press the intake/exhaust valve seat at the center of the lid with your finger to return the interior of the decompressed container to an atmospheric pressure state.



[Examples of experiment]

Boiling point dropping:

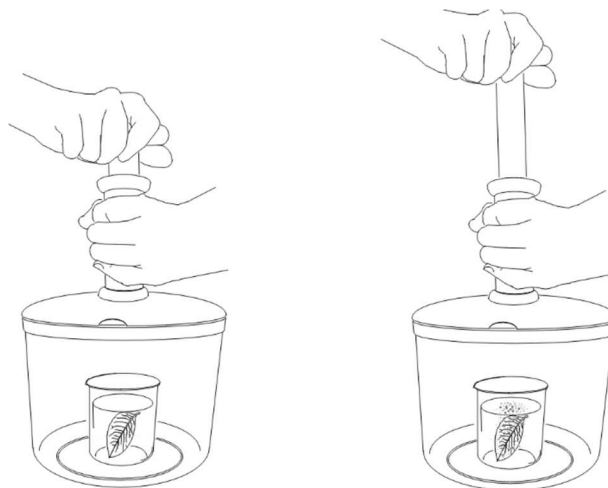
1. Pour 50 mL of hot water at 80°C into a beaker, and then put the beaker in the container.
2. Close the lid of the container and connect the pump to the center of the lid where the intake/exhaust valve is seated in the center of the lid.
3. Firmly grip the piston handle and cylinder, and then continuously move the piston up and down.
4. The water will finally start boiling at the lower temperature than its boiling point under atmospheric condition.
5. After the observation, press the intake/exhaust valve seat at the center of the lid with your finger to return the interior of the decompressed container to an atmospheric pressure state and take the beaker out of the container.



Plant Photosynthesis/Respiration:

This demonstration will show that air is stored inside a leaf for its photosynthesis and respiration.

1. Submerge a leaf of adequate size into a beaker containing water.
2. Place the beaker in the container and close the lid of the container.
3. Connect the pump to the center of the lid where the intake/exhaust valve is seated.
4. Firmly grip the piston handle and cylinder, and then continuously move the piston up and down.
5. A lot of tiny air bulbs will emerge from the underside of the leaf, technically, from its stomata.
6. After the observation, press the intake/exhaust valve seat at the center of the lid with your finger to return the interior of the decompressed container to an atmospheric pressure state and take the beaker out of the container.



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