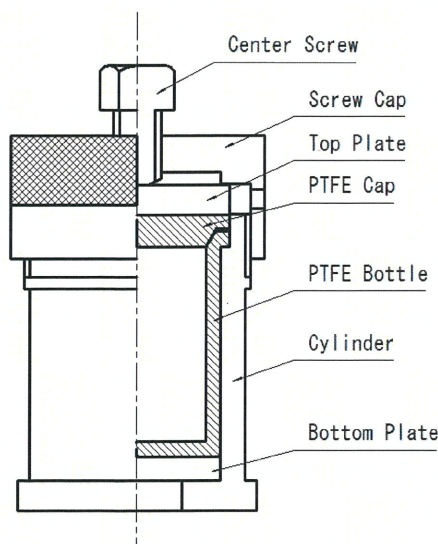


Instruction Manual of the Sealed Decomposition Vessels

Model: HU-25 / -50 / -100

Thank you for purchase our sealed decomposition vessels, which help you in digesting any intractable sample rapidly by means of acid pressure decomposition. Read this instruction manual for a proper use keeping it beside the vessels.



Closing procedure

Take a sample into a PTFE Bottle and add a suitable acid or mixture of acids. Put a PTFE Cap onto the bottle and place them into a Cylinder. Put a Top Plate and close the vessel with a Screw Cap by hand tightening. Tighten a Center Screw further by use of a torque wrench with a recommended torque of 18~22 N·m to close the vessel completely.


Caution *1:  Please never tighten Screw Cap with a tool tightly.

Caution *2: When a new PTFE Bottle is used for the first time, it shall be closed tightly to overcome PTFE's elasticity regardless of the recommended torque.


Caution *3: The tightening after the second, please use the torque wrench. Every excessive loading on the Center Screw during usual use may shorten the lifetime of the vessel.

Opening procedure

Allow to cool the vessel down to room temperature. Turn the Center Screw anticlockwise before loosening the Screw Cap. Remove the Screw Cap and take the PTFE Bottle by pushing up the Bottom Plate inside the Cylinder. Open the PTFE Cap and take out the solution. If the PTFE Cap makes contact with the PTFE Bottle closely, deform the bottle slightly by gripping its body with pliers for removing the cap.

Caution *4:  Always wear safety glasses, acid-resistant gloves, heat-resistant gloves and other appropriate protection during operations.

Caution *5:  Do not open the vessel until it cools down.

Caution *6:  The operation of opening shall be done in a draft chamber, a glove box and a well ventilated

 **Warnings**

- Use the vessel below 230 °C for preventing from breaking it.
- SUS Cylinder is to withstand pressure limit, 15MPa.
- Maximum charge of a sample should not exceed 500 mg in dried weight. Begin a preliminary test with smaller amounts of a sample and acids before regular decomposition.
- If a large amount of reaction gas may generate, preliminary digestion without the PTFE cap shall be done in a well-ventilated place.
- Do not expose directly the vessel to a hot jet in a circulatory oven.
- Try not to use perchloric acid. Use it at a minimum, if necessary.
- Never charge explosive materials.
- Display a sign such as “Heat hazard” to call attention to those who around the oven or the hot vessel in heating period.
- Be aware of sharp edges of metallic parts of the vessel.

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