

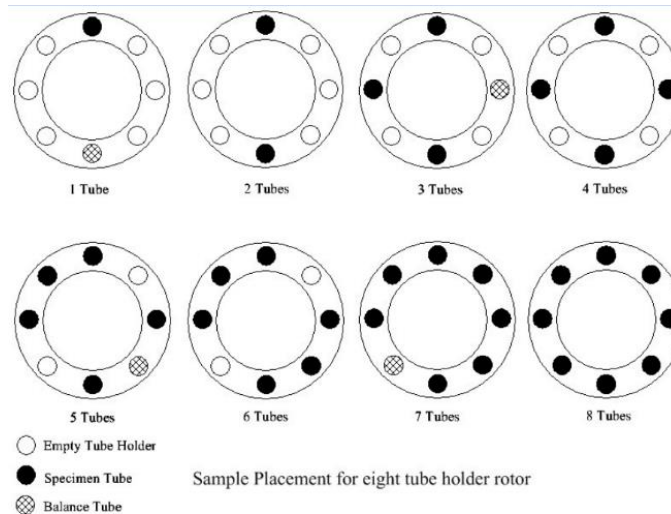
Centrifuge Safety Precautions

Centrifuges can be dangerous if used improperly. It can cause injuries and equipment damage. Please read these guidelines carefully before using a centrifuge in SEE.

Before Use:

- ❖ Inspect centrifuge tubes:
 - Check product specifications (e.g., speed, chemical resistance, filling limit) to ensure tube ratings are suitable for your intended use.
 - Examine tubes before filling them with solutions, ensure there are no cracks or signs of deterioration.
 - Tightly cap tubes to prevent spillage.
 - Clean and dry tube surfaces before inserting them into the rotor.

- ❖ Balance the load:
 - Balance tubes by mass (not volume) at least to the nearest 0.5 gram.
 - When using 15mL tubes, please use adaptors before balancing.
 - Load the rotor symmetrically. Please refer to the examples in the provided picture.



- If the number of tubes is uneven, balance with an additional tube of water.
 - Imbalanced loads can cause injuries and permanent damage to the machine.
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- ❖ Ensure dry and clean rotor and adaptors:
 - Check the centrifuge rotor and tube adaptors for any liquid before use to prevent imbalance.

During Centrifuge Operation:

- ❖ Set appropriate speed and time:
 - Never exceed recommended values from the manufacturers of centrifuge tubes and centrifuge rotors.

- ❖ Wait for full operating speed:
 - Do not leave the centrifuge until it reaches the set speed and runs safely without unusual noise or shaking.

- ❖ Respond to unusual noise or shaking:
 - A little vibration is normal, but excessive shaking can be dangerous.
 - If you notice unusual noise or shaking, stop the centrifuge, and re-weigh your tubes.
 - Seek assistance from a Technical Officer if needed.

After Use:

- ❖ Stopping the centrifuge:
 - Ensure the centrifuge comes to a complete stop before opening the cover.
 - When centrifuging hazardous materials, wait at least 10 minutes to allow aerosols to settle before opening centrifuge.

- ❖ Cleaning and Maintenance:
 - After each use, make sure the centrifuge rotor and tube adaptors are dry and clean.
 - Check for any leakage from centrifuge tubes. If there is a spill, take responsibility for cleaning it up:
 - Remove the solution to a suitable waste container.
 - Clean the centrifuge and rotor thoroughly with tap water.
 - Dry them completely.
 - Uncleaned spills can corrode the rotor, cause load imbalance, contaminate other users' samples, and pose risks.

Remember to follow these guidelines diligently! Lab users who violate this policy may receive warnings and penalties according to the "SEE Policy: Lab Hygiene, Cleanliness, and Proper Use of Communal Equipment."