Standard Operating Procedure (SOP) for Weighing Machine/Balance

1. Purpose

The purpose of this SOP is to ensure the accurate and consistent use of weighing machines/balances for precise measurements in various applications, such as laboratory work, industrial use, and everyday weighing needs.

2. Scope

This SOP applies to all personnel using weighing machines/balances, ensuring their proper handling, calibration, and maintenance.

3. Responsibilities

- Users must handle the weighing machine with care and follow this SOP.
- The assigned personnel must ensure regular calibration and maintenance of the balance.
- Any discrepancies or malfunctions must be reported immediately.

4. Equipment and Materials
- Weighing machine/balance (electronic or mechanical)
- Calibration weights
- Power source (for digital balances)

5. Procedure
5.1 Pre-Operation Checks:
- Ensure the weighing machine is placed on a stable and level surface.
- Check for any visible damages or dirt on the weighing pan.
- If using an electronic balance, ensure it is properly plugged in and turned on.
- Allow the balance to warm up if required by the manufacturer.

5.2 Calibration:
- If required, perform calibration using standard weights before use.
- Follow the manufacturer's instructions for internal or external calibration.
- Ensure the balance displays zero

before placing any object.

5.3 Weighing Process:
- Place the object gently on the weighing pan to avoid damage or misreading.
- Ensure the object is dry and free from any extra materials that might affect the weight.
- Record the weight only when the display reading is stable.
- Remove the object carefully and ensure the balance returns to zero before the next measurement.

5.4 Post-Operation Care:
- Clean the weighing pan using a soft brush or cloth after use.
- Turn off the balance if it's not in continuous use to conserve energy.
- Store the balance in a clean, dry place, free from extreme temperature and humidit

6. Troubleshooting Common

Issues
- Inaccurate readings: Ensure calibration is done correctly, and the balance is on a stable surface.
- Fluctuating readings: Avoid air drafts or vibrations near the balance.
-Balance not turning on: Check the power source or battery.

7. Safety Measures
- Do not overload the balance beyond its maximum capacity.
- Avoid using the balance near strong magnets or electrical interference.
- Handle with care to prevent mechanical damage.
8. Maintenance and Record Keeping
- Schedule regular calibration as per manufacturer's guidelines.
- Keep a log of maintenance, calibration, and any issues encountered.
- Ensure proper servicing if persistent issues arise.

By following this SOP, users can maintain

the accuracy, longevity, and efficiency of the weighing machine, ensuring reliable measurements in every use.