Importance of Proper Cleaning and Maintenance for Balances in the Laboratory

We so often run into balances in our customer’s laboratories that have been around for 10-20 years. If you read this sentence and wonder how those customers keep their balances in such great conditions for that long, then this article is meant for you.

This type of longevity isn’t solely due to the quality of a balance, but greatly depends on the maintenance of the balance by the end users. Keeping a balance cleaned and maintained can dramatically increase the life of your balance and the quality of your weighing results.

Quality-relevant work steps, such as the measuring process itself, but also cleaning, calibration and maintenance, should be described in your Standard Operating Procedures (SOPs). Following your SOPs can mean that you will have consistent and precise weighing results at all times. Sartorius balances can meet your requirements for laboratory and production areas, and allow for easy and simple cleaning. Care of the balance’s cleanliness reduces disturbances during the weighing process.

When was the last time you moved your balance completely in order to clean it? Did you also clean the area underneath and surrounding the unit? Maybe you fear doing this because you will have to re-level the balance. After installation, cleaning, calibration and, if necessary, adjustment, the leveling of the balance must be checked on a regular basis.

We often see balances at customer accounts that are partially clean inside but haven’t been moved since installation due to the anxiety the end user experiences with having to level the balance after moving the unit. Leveling a balance should not cause anxiety or stress to our end users and for this purpose, depending on the model, Sartorius weighing technology offers either automatic motorized leveling or manual, guide-assisted leveling control to help make it easy to quickly level the balance accurately because having a leveled balance will promote accurate weighing.

Within your SOPs, determinations must be made about when the balance should be cleaned, who should service it, at what intervals, and how to proceed if a repair is necessary. The results of regularly performed maintenance procedures can also be useful for analyzing the trend of certain deviations.

Each balance manufacturer will have recommendations for proper cleaning of their units. It’s important to understand these recommendations. Please refer to your user manual for specific guidelines and recommendations for cleaning your balance.

Some basic tips for keeping a balance clean:

• Keep the weighing pan and weighing chamber clean at all times.
• Use a fine brush to remove sample residues; if necessary, remove weighing pan, base plate and shield ring for cleaning.
• Use an absorbent cloth to remove any liquids.
Preparing your unit for a good cleaning
For further cleaning of your unit please switch the display to Standby mode to avoid modifying the settings for operation during cleaning. Unplug the AC adapter from the wall outlet. If you have an interface/data cable connected to the balance port, unplug it from the port. Make sure that no liquid or dust enters the balance housing. Never open the balance or the AC adaptor. The parts contained in these areas cannot be cleaned, repaired, or replaced by the operator. Remove the base plate, pan support and weighing pan from the weighing chamber and balance. Depending on the readability of your balance in order to remove and clean the weighing pan you may need to reach beneath the shield disk and lift it up carefully together with the weighing pan to avoid damaging the weighing system. Some balances on the market allow you to remove the draft shield glass doors and panels in order to be washed in a dishwasher.

Sensitive areas and working with cleaning agents
The plastic top and bottom parts of some of the balance housings have a special coating that allows acetone to be used to clean these parts. Do not clean the following parts with acetone or aggressive cleaning agents: foil-covered keypad, power connector port, control panel, main plug, data interface, labels, verified seals, or any other plastic parts. These are parts of the balance you need to be extra sensitive with. Refer to your user manual to verify the type of cleaning agents you are allowed to use on your specific balance. Make sure that no liquid enters the balance housing during your cleaning routine. Clean the balance with a cloth lightly moistened with soap solution. Wipe the balance with a soft, dry cloth after cleaning.

Stainless Steel parts
If you are working with stainless steel parts you should clean these parts regularly. Remove the stainless steel weighing pan and thoroughly clean it separately. Use a damp cloth or sponge to clean stainless steel parts on the balance. You can use any household cleaning agent that is suitable for use on stainless steel. Clean stainless steel surfaces only by wiping them down, then rinse the equipment thoroughly, making sure to remove all residues. Afterwards, allow the equipment to dry.

We are proud of our balances here at Sartorius, and would like to see these units live long lives with our end users. Along with keeping your balance leveled and cleaned, you should also consider having consistent preventative maintenance service performed on your units by a certified technician. Sartorius has many certified technicians available to provide the service you require at intervals specified in your SOP’s. For any further questions or tips on leveling, cleaning, service or repair, please reach out to your local Sartorius representative. We want your balance to live a long and happy life.

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