SOP for periodic sensitivity tests (routine tests)

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Routine Testing of Scales
**General**

**Basic rules for using scales**
- Before using a scale, make sure the scale power was switched on for a sufficient period of time (mentioned in the scale operating instructions).
- Make sure the scale is leveled.
- Minimize environmental influences, e.g. open windows, vibrations, temperature changes or strong drafts.
- Place objects gently on the scale platform.

**Basic rules for handling weights**

**Test weights**
- Only commercial test weights with up to date calibration certificates can be used for certifying the “traceability” of scale equipment.
- Test weights should always be placed gently on a clean scale platform and returned immediately in their storage place after use.
- Test weights (since they are also part of measuring equipment) need to be re-calibrated at specified intervals (ISO 9001).
- Any incident, which might have affected the value of the test weight, should trigger an immediate re-calibration. METTLER TOLEDO calibration services can offer a recommendation.
- Test weights should be protected from shocks, scratches, dirt and any other external influence that might degrade their integrity.

**How to store test weights**
- Test weights should be stored in their original box.
- Test weights should be stored in a clean and dry room.

**How to move weights**
- Small test weights should only be handled with appropriate tools such as forks or handles (see METTLER TOLEDO’s accessories for weights).
- Always use care when handling test weights, to avoid possible contamination or damage.
Sensitivity test

Preparation
• Before the test is performed, the test weight must be acclimatized to the ambient temperature of the scale.
• Prepare a sheet where you can note the readings of the sensitivity test.

Test procedure
• Clear the scale platform
• If required, place the tare load on the scale platform
• Tare the scale (if required)
• Place the test weight on the scale platform
• Read the stable value from the display and note it

Evaluation
• Evaluate whether the noted value exceeds the defined “Warning limit” 1).
• Evaluate whether the noted value exceeds the defined “Control limit” 2).

Deviation
Warning limit 1) (where defined)
• If the warning limit is exceeded, repeat the test.
• If the warning limit is exceeded again, report that the warning limit was not met to the relevant supervisor or the person responsible for the scale.
• Level the scale and repeat the test.
• If the warning limit is still exceeded, report the problem to the relevant supervisor or the person responsible of the scale. Optionally, contact METTLER TOLEDO service organization for advice.

Control limit 2)
• If the control limit is exceeded, report the problem to the relevant supervisor or the person responsible of the scale.
• Mark the scale as “out of control limits”.
• Contact METTLER TOLEDO service organization for advice.

1) – Values within the warning limit: No action is necessary.
   – Values between the warning and control limit are within the tolerance but must be kept under surveillance. Corrective action may be appropriate, depending on the direction in which the values are changing.

2) – Values within the control limit, see 1)
   – Values beyond the control limit show that weighing process is no longer under control and immediate action is therefore required.