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.
Repeatability test

Preparation
• Before performing the test, the test weight must be acclimatized to the ambient temperature of the scale.
• Prepare a sheet where you can note the readings of the repeatability test points.
  Prepare 3 columns titled “w/o Test Wght”, “With Test Wght.” and “Differences”.

Test procedure
• Clear the scale platform
• If required, place tare load on the scale platform
• Tare the scale (if required)
• Read the stable value from the display and note it in the column “w/o Test Wght.”
• Place the test weight in the center of the scale platform
• Read the stable value from the display and note it in the column “With Test Wght.”
• Remove the test weight
• Repeat the measurements from “tare the scale” to “remove the test weight” until the defined number of “w/o Test Wght.” and “With Test Wght.” readings is performed

Evaluation
• Subtract each “w/o Test Wght.” from the corresponding “With Test Wght.” to calculate the difference.
• Calculate the standard deviation of the differences.
• Evaluate whether standard deviation exceeds the defined “Control limit” 1).

Deviation
Control limit 1)
• If the control limit is exceeded, report the problem to the appropriate 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 control limit: No action is necessary.
    – Values beyond the control limit show that weighing process is no longer under control and immediate action is therefore required.