

## SOP for Periodic Eccentricity Tests (Routine Tests)

|                                      |   |
|--------------------------------------|---|
| <b>Title:</b>                        | SOP for Periodic Eccentricity Tests               |
| <b>Document No.:</b>                 |   |
| <b>Author:</b>                       | METTLER TOLEDO Laboratory & Weighing Technologies |
| <b>Number of Pages:</b>              | 4   |
| <b>Controls</b>                      |   |
| <b>Replacement Document:</b>         | N/A   |
| <b>Reason for Revision:</b>          | N/A   |
| <b>Release Date:</b>                 | 17. Oct. 2007                                     |
| <b>Release for Routine Operation</b> |   |
| <b>Reviewed by:</b>                  |   |
| <b>Date:</b>                         |   |
| <b>Signature:</b>                    |   |
| <b>Approved by:</b>                  |   |
| <b>Date:</b>                         |   |
| <b>Signature:</b>                    |   |

## General

### Basic Rules for Handling Balances

- Before using a balance, make sure the balance was left on power for a sufficient period of time (mentioned in the balance operating instructions).
- Make sure the balance is leveled.
- Minimize environmental influences, e.g. open windows, direct sunlight or strong drafts.
- Do not enter the draft shield with hands. Use gloves or long tweezers.
- Place objects gently on the pan.

### Basic Rules for Handling Weights

#### Test Weights

- Only an external test weight with calibration certificate can make a balance a “traceable” piece of equipment.
- Test weights should always be placed gently on a clean weighing pan and put back 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’s calibration services will give advice on this.

#### How to Store Test Weights

- Test weights should be stored in their original box.
- Test weights should be stored in the same room as the balance they are used with, since temperature differences between test weights and their surrounding lead to measurement errors.
- Test weights that have not been stored at the same temperature need acclimatization, which can take several hours.

#### How to Move Weights

- Test weights should only be handled with appropriate tools such as tweezers, forks, handles or gloves (see METTLER TOLEDO’s accessories for weights).
- These tools should be exclusively used for transferring test weights, to avoid possible contamination.

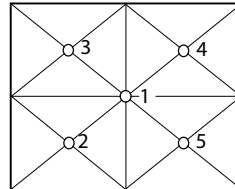
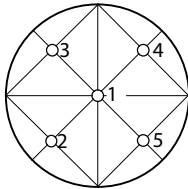
# Eccentricity Test

## Preparation

- Before the test is performed, the test weight must be acclimatized to the ambient temperature of the balance.
- Prepare a sheet to note the readings of the eccentricity test.

## Test Procedure

- Place the test weight in the center (1) of the pan and tare (if required press zero)
- Place the test weight on position 2 at "Left front"  
**Note:** Move the weights by lifting them; do not shift weights on the pan
- Read the stable value from the display and note it
- Repeat the measurements on positions 3, 4 and 5.



## Evaluation

- The largest reading (positive or negative) of any of the 4 corners (2 to 5) is the eccentric load deviation.
- Evaluate whether the eccentric load deviation exceeds the defined "Warning Limit" <sup>1)</sup>.
- Evaluate whether the eccentric load deviation exceeds the defined "Control Limit" <sup>2)</sup>.

## Deviation

### Warning Limit <sup>1)</sup> (where defined)

- If the warning limit is exceeded, level the balance and repeat the test.
- If the warning limit is exceeded again, report that the warning limit was not met to the laboratory supervisor or the person responsible of the balance. Optionally, contact METTLER TOLEDO's service organization for advice.

### Control Limit <sup>2)</sup>

- If the control limit is exceeded, report the problem to the laboratory supervisor or the person responsible of the balance.
- Mark the balance as "out of control limits".
- Contact METTLER TOLEDO service organization for advice.

<sup>1)</sup> – 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.

<sup>2)</sup> – Values within the control limit, see <sup>1)</sup>

– Values beyond the control limit show that weighing process is no longer under control and immediate action is therefore required.

**Mettler-Toledo AG**

Laboratory & Weighing Technologies  
Im Langacher  
P.O. Box LabTec  
CH-8606 Greifensee  
Switzerland

Subject to technical changes  
© 06/2009 Mettler-Toledo AG  
Printed in Switzerland 11793058

[www.mt.com/GWP](http://www.mt.com/GWP)

---

For more information