



*Kaiser Permanente Medical Center, San Francisco
Northern California Region*

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 Work Instruction		
Title: Sartorius Balance	WI Number SFOWI-0224 Revision: 10	
Department: Chemistry	<i>Approved Work Instruction</i>	Implementation Date: 07/01/2019
Area: 2425 Geary Blvd SFO Hospital Lab		
Type of Document: Work Instruction	Review Period - 365 Days	

Instrument:

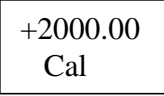
Electronic Semi-micro, Analytical and Precision Balances by Sartorius AG, Goettingen, Germany, Model BP 4100.

Introduction

1. The balance should remain "on" at all times.
Note: To deliver exact results, the balance must warm up for at least 30 minutes after correction to AC power or after a power outage.
2. The mode of measurement is locked into the **[GRAMS]** mode(g).
3. The **[TARE]** keys are located to right and left of the display.
4. In using the balance to obtain 24-hour urine volume via the gram conversion to milliliter, the specific gravity of urine is assumed to alter the total volume insignificantly, i.e., off by 2-3 ml per 1000 ml.

Procedure for calibration check

1. Check the calibration of the balance once a month.
2. Press one of the **[TARE]** keys to zero the weight display.
3. When the display shows a zero readout **[0.0000 g]**, press the **[CAL]** key. This starts





calibration. The calibration weight in grams is then displayed.

4. Errors or interference at the start of the calibration routine are indicated by the error code “**Err 02.**” If this is the case, tare and press the **[CAL]** key again when a zero readout appears.
5. Center the calibration weight on the weighting pan. The balance then calibrates automatically. At the end of calibration, the calibration weight readout and the stability symbol “g” are displayed.
6. Follow same steps to verify +4000 gms weight using two 2000 gms weights to verify calibration .
7. Document calibration on the PM form (SFOFCD-0325)
8. If the calibration fails (Acceptable limit 2000 + /- 6 gms,Acceptable criteria is 4000 gms \pm 10gms.), call for service of the balance.Do not use the balance.
9. Measure the volume of 24 hr urine instead of using the balance.

Maintenance

1. Annual calibration checked is done by Quality Control Services (A2LA accredited calibration services).

Procedure for weighing samples

1.  O displayed in the upper right corner stands for **off**. The balance was disconnected AC power
2.  O displayed in the lower left corner means **standby**. The display has been turned off by the **[I/O]** key.
3. Press the **[I/O]** key to turn the display on and off.
4. Press one of the **[TARE]** keys to zero the weight display.
5. Place an empty 24-hr urine container on the balance, press one of the **[TARE]** keys to zero the weight display.
6. Remove empty container.
7. Place a patient specimen (in the same type of container as #6) on the scale and record the gram result on the scale as total volume in milliliters (ml) on the requisition and specimen label.

Reference

1. Sartorius AG “Sartorius Basic Plus Electronic Semi-micro-, Analytical and Precision Balances”, Sartorius AG, Goettingen, Germany May 2000.

Associated Documents:

External Documents

Associated Documents:

SFOFCD-0325 -- pH STRIP QC LOG and 24 HR URINE PRESERVATIVE LOG

[Click to Open an Associated Document](#)

Documents Generated:

Document Revision History:

Revision: 10	Date Created: 04/17/2006 Date of Last Revision: 05/21/2019	Last Approval Date: 05/21/2019
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Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	N/A	Initial Issue of Document	6/27/07
2	Approver	Change of CLIA Director	6/29/07
3	Approver	Change of CLIA Director	9/6/11
4	Approver	Change of CLIA Director	4/22/13
5	Procedure for Calibration check 7 & 8 added	Calibration acceptance limit and action if calibration fails	11/7/2013
6.	Procedure for Calibration Check	<ol style="list-style-type: none"> Follow same steps to verify +4000 gms weight using two 2000 gms weights to verify calibration . Document calibration on the PM form for Osmometer. (Appendix C of SFO WI 332) If the calibration fails (Acceptable limit 2000 +/- 6 gms,Acceptable criteria is 4000 gms ± 10gms.), call for service of the balance.Do not use the balan 	12/24/2015
7	Associated Document is changed	1. SFOFCD-0332	5/4/2017
8	Approver, Attached Document.	Change in Associate Pathologist, Osmo Form Deleted	12/12/17
9	Format Approver	Updated format. Changed CLIA Director to Dr. Elizabeth Hosfield	5/17/19

Notification List:

Approvals:

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Document History Section