

OREGON HEALTH & SCIENCE UNIVERSITY  
Hospitals and Clinics  
Point of Care

**OSM3 Hemoximeter Maintenance**

Daily

1. Check level of Rinse Solution. If necessary, replace by:
  - a) Open new bottle of S3661 Rinse Solution. Do not discard the cap.
  - b) Unpack the S4380 capsule and hold it with the black pin pointing downward.
  - c) Press the pin against a flat surface to unstop the capsule.
  - d) Keeping the pin pointing downward, drop the capsule into the bottle of the rinse solution. Place the cap on the bottle.
  - e) **WARNING:** The enzyme content in the S4380 capsule is a skin and eye irritant. Wash any affected area with plenty of water.
  - f) Allow 10 minutes for contents to dissolve. Shake vigorously a few times during the 10 minute time interval.
  - g) Screw on the dispensing cap and place on the right side of the OSM3. Write date opened and new expiration date on the bottle. Solution is stable for 4 weeks after preparation.
2. Check waste container. If necessary, replace with new waste container.
3. Clean washer inlet with DI H<sub>2</sub>O and swab or gauze.
4. Run two levels of Quality Control (QC) by:
  - a) Break open QC ampule and fill the QC injector. QC solution remains stable for 48 hours in injector. Write the QC Level and date and time ampule is opened on a piece of tape and place on QC injector.
  - b) Check that READY lamp is lit and open inlet flap.
  - c) Slowly inject 400 µL or 2 notched portions on injector barrel. The first portion rinses the outlet tip and the next portion is used to perform QC test.
  - d) Record QC results in QC Log Book. If QC results are within acceptable limits, perform patient testing.
  - e) If QC fails, repeat QC test.
  - f) If repeat QC fails, do not perform patient testing until problem is resolved. Record results and any corrective action taken in QC Log Book.

Weekly

1. Perform the Two-Week Maintenance first if it is due.
2. Perform Cleaning Solution Procedure and Water (zero) Calibration.
  - a) Do not perform Cleaning Solution procedure more than once per week as it may result in damage to the measuring cuvette.
  - b) Fill the syringe with 0.5 mL of S5332 Cleaning Solution.

- c) With the READY light on, open the inlet flap and slowly inject all the solution into the OSM3. Wait approximately 30 seconds and then close the inlet flap.
  - d) When the CAL key light is on, perform a water calibration (zero cal) by pressing CAL key.
  - e) Verify that the zero calibration is within acceptable limits of 50-500. Record value in maintenance log.
3. If the zero Cal is not within acceptable limits, perform the Protein Remover procedure and repeat the water (zero) calibration.
  4. Perform Cleaning Solution procedure after measurements on lipemic samples.

### Two-Week

1. Perform the weekly Cleaning Solution procedure before performing the Protein Remover procedure.
2. Perform the Protein Remover procedure.
  - a) Fill the syringe with 0.5 mL of S5312 Protein Remover.
  - b) **WARNING:** S5312 Protein Remover is toxic to humans if ingested or splashed in the eyes. Wash any affected area immediately with plenty of water.
  - c) With READY light on, open the inlet flap and press the MODE key until PRO appears on the screen.
  - d) Inject all the protein remover and close the inlet flap. The OSM3 starts counting down the time remaining for completion of Protein Remover Procedure. The time is shown in minutes and seconds on line 5 of the numerical display.
3. Proceed with the weekly Maintenance procedure.

### Quarterly

1. Change the Pump Tubing.
  - a) Slide the plastic cover plate upward to gain access to the peristaltic pump.
  - b) Disconnect the tubing connectors from both the inlet and outlet tubes and pull the pump tubing from under the pressure rollers.
  - c) Connect new pump tubing with connectors (842-153) and place the connectors in the slots. Stretch the pump tubing around the lower part of the roller drum.
  - d) Slide down the plastic cover plate. Perform a manual rinse by opening and then closing the inlet flap. The pump starts rotating and draws the pump tubing under the rollers.
2. Change the Inlet Washer.
  - a) Open the inlet flap and remove the inlet washer.
  - b) Clean the area around the inlet stub with S5332 Cleaning Solution and mount a new washer for inlet (943-578).

3. Perform tHb Calibration Procedure.
  - a) Perform the protein remover procedure, cleaning solution procedure, and the water (zero) calibration.
  - b) Verify that the water (zero) calibration is within limits (50-500) and that the OSM3 is in the READY mode.
  - c) Press the ASPIRATE and CAL keys simultaneously for about 3 seconds, until the ENTER key is visible.
  - d) Press the ENTER key to access the tHb CAL program. The READY LED light is on.
  - e) Open an ampule of the S2190 Calibrator and fill a disposable syringe with at least 200  $\mu$ L of the calibrator.
  - f) Open the inlet flap and inject 200  $\mu$ L of the calibrator. Close the inlet flap.
  - g) The OSM3 calibration results appear on the display:

tHb XX.X g % = value measured

CAL = calibration value adjusted 12.5

Y.YYY = STATUS, limits must be within 0.80-1.20

- h) Record the calibration results in the QC Log Book.
- i) The OSM goes through a rinse cycle and returns to the READY mode.
- j) Verify the calibration by injecting another 200  $\mu$ L of the SD2190 Calibrator.
- k) If the tHb calibration is within acceptable limits of  $12.5 \pm 0.1$ g, record the calibration results in the QC Log Book.
- l) If the tHb calibration fails and is not within acceptable limits of  $12.5 \pm 0.1$ g, repeat the tHb calibration procedure. Document all action taken in QC Log Book.
- m) If the repeat tHb calibration fails, do not use the OSM3 for patient testing. Document all action taken in maintenance book. Contact Clinical Engineering at 4-8420 to schedule instrument repair.

Procedure Prepared by Point of Care (503)-494-5497.  
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