

ABL 825 Maintenance

Purpose

This procedure provides instructions for ABL 825 MAINTENANCE. The ABL825 FLEX analyzer is to be properly operated, maintained, serviced and monitored to ensure that malfunctions of the instruments do not adversely affect the analytical results.

Policy Statements

- The procedure applies to chemistry staff responsible for the daily operation and verification of the Radiometer ABL825 FLEX Blood Gas Analyzer.
- Required Instrument maintenance will be performed each day of patient testing
- Manufacturer's recommended schedules are adhered to
- Maintenance activities are documented by the tech performing the function checks and maintained in or near the analyzer
- Non-routine maintenance and repair records are kept in the analyzer's Maintenance Binder
- All maintenance records are retained for the life of the instrument, plus 2 years

Materials

Supplies	Equipment
<ul style="list-style-type: none"> • Lint free tissue • Tap water or Millipore water • Disposable disinfectant wipes 	<ul style="list-style-type: none"> • ABL825 FLEX Blood Gas System Serial Number: 754R0427N005 "ABL 1" in Minneapolis • ABL825 FLEX Blood Gas System Serial Number: 754R0427N010 "ABL 2" in Minneapolis • ABL825 FLEX Blood Gas System Serial Number: 754R0427N006 "ABL 4" in St. Paul • ABL825 FLEX Blood Gas System Serial Number: 754R0427N007 "ABL 5" in St. Paul

Special Safety Precautions

- Refer to Laboratory Safety policy manual
- Dispose of ABL 825 filled Waste Containers in Biohazardous Waste
- Dispose of empty reagent containers in regular trash
- Transport emptied gas cylinders to Children's Flammable Storage Room/Hazardous Waste Storage Room

Records/Forms/Documents

Linearity – Calibration - Reportable Range Information Packet, Part NO. 999-719, Radiometer America Inc.

Procedures: Daily Maintenance

Step	Task	Action
1	Check Solution Levels	Replace as needed. Refer to ABL Operator's Guide section 7: Replacements
2	Check/Replace Gas	Refer to ABL Operator's Guide section 7: Replacements
3	Check Paper Supply	Replace as needed. Refer to ABL Operator's Guide section 7: Replacements
4	Check Autocheck QC Supply	Refill carousel as needed. Refer to ABL Operator's Guide section 7
5	Clean analyzer Touchscreen	Wipe clean using a lint free tissue moistened with DI water
6	Clean instrument exterior surface	
7	Clean inlet gaskets.	Refer to ABL Operator's Guide section 7: Replacements

8	Bleach workstation.	Wipe up spills using a paper towel moistened with dilute bleach solution, or a disposable disinfectant wipe
9	Document each activity as completed.	Analyzer Status -> Electrodes and Other -> Touch the correct Activity under User Activities -> Log Activity -> touch "Done"

Weekly Maintenance

Step	Task	Action
1	Run Protein Remover	Refer to ABL Operator's Guide section 7: Replacements

Monthly Maintenance

Step	Task	Action
1	Enter the Recording Replacement Menu either by opening the lid to the electrode compartment, or via Electrodes and Other	After completing replacement tasks listed below, select the recorded replacement in the menu to the left. If nothing was replaced select "No Replacements done" in order to Restart the instrument.
2	Replace Reference Membrane	Refer to ABL Operator's Guide section 7: Replacements
3	Replace Glu and Lac Membranes	Refer to ABL Operator's Guide section 7: Replacements
4	Perform Decontamination	Refer to ABL Operator's Guide section 7: Replacements
5	Clean Fan Filter	Refer to ABL Operator's Guide section 7: Replacements
6	Perform Instrument Correlations	Refer to CH 2.05 Instrument Correlation procedure

Quarterly Maintenance

Step	Task	Action
1	Replace PCO2 / PO2 Membranes	<p>Refer to ABL Operator's Guide section 7: Replacements</p> <p>When replacing the pCO2 membrane these steps must be taken to prevent an erroneously low bias:</p> <p>Wait for the analyzer to complete the startup calibration plus two extra automatic calibrations. This will take approximately one hour.</p> <p>After the third automatic calibration perform one level 1 quality control determination.</p> <p>If the Quality Control is out of range, a new membrane must be installed.</p> <p>Do not report patient results until the newly installed membrane has been verified by acceptable quality control.</p>
2	Replace Electrolyte Membranes	Refer to ABL Operator's Guide section 7: Replacements
3	Perform tHb Calibration	Refer to ABL Operator's Guide Section 6: Calibrations, tHb calibration

Half Yearly

Step	Task	Action
1	Replace Pump Tubing	Refer to ABL Operator's Guide section 7: Replacements
2	Replace Fan Filter	Refer to ABL Operator's Guide section 7: Replacements
3	Run Linearity VK kit	Refer to ABL Operator's Guide section 6: Radiometer settings, Calibration verification

Yearly

Step	Task	Action
1	Annual Service PM	Contact Radiometer Service, included in warranty

Limitations

- Radiometer Tech line number during Business hours: 1.800.736.0600
- Radiometer Tech line number after Business hours: 1.800.800.7005
- Children's Service rep's business card is posted on the side of each instrument

References

1. ABL800 FLEX Operator's Manual, version 6.14, Publication: 201410, Edition: E, Code number: 994-909
2. Radiometer Product Notification dated 7/22/2013

Historical Record

Version	Written/Revised by:	Effective Date:	Summary of Revisions
1.	L. Lichty	May 11, 2009	Initial Version
2.	L. Lichty/D. Helfinstine	April 1, 2011	New Format. Renumbered from CH 4.042
3.	Linda Lichty	August 1, 2013	Revised pCO2 membrane replacement
4.	Linda Lichty	April 18, 2016	Update Operator's Manual for v6.14
