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| Purpose | | This procedure provides instructions on how to perform maintenance on the ChloroChek™Chloridometer® | |
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| Scope | This procedure is intended for Clinical Laboratory Scientist (CLS) who are trained and competent in performing the Sweat Chloride assay.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Policy | This procedure provides instructions for performing daily and ‘as needed’ maintenance on the ChloroChek™Chloridometer®. Performance of maintenance procedures must be documented on the appropriate section of the maintenance log. |

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| Materials and supplies | * Titration beaker * Magnetic Stir Bar * Magnetic Stir Bar Retriever * Distilled water * Catch beaker * Silver cleaning cloth * Microfiber cloth * Kimwipes |

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| Equipment | * ChloroChek™Chloridometer® |

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| Safety | All laboratory employees are expected to maintain a safe working environment  and an injury-free workplace. Laboratory employees are responsible for their own safety, and the safety of others and adhering to all departmental and medical center safety policies and procedures.   * For standard precautions and safety practices in the laboratory; see LGM   8000, specifically, but not limited to, equipment safety, proper body  mechanics, sharps exposure and proper use of personal protective  equipment (PPE).   * For Universal Body Substance precautions, see LGM 8005, specifically, but not limited to, exposure to body fluids. * For proper handwashing, see LGM 8010, specifically, not limited to, proper handwqashing. * For proper infection control, see LGM 8004, specifically, but not limited to, proper use of gloves. * For proper handling of regular and infectious waste, see LGM 8006, specifically, but not limited to, proper disposal of regular and biohazardous waste. * For proper cleaning of work area, see LGM 8007 – Cleaning Work Areas. * For proper handling of chemicals and reagents, see the Chemical Hygiene Plan.   For proper storage and disposal of chemical hazardous waste, see LGM 8012. |

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| Procedure | Follow the steps below to perform Daily Maintenance: | |
| **Step** | **Action** |
| **1** | Once all samples are measured, press STANDBY and then CANCEL. This will end the measurement sequence. |
| **2** | Raise the handle to lift the electrode set out of the Working Solution. |
| **3** | Remove the stir bar from the Working Solution by using the Magnetic Stir Bar Retriever. |
| **4** | Discard the Working Solution in the ‘Corrosive Waste Container’. |
| **5** | Rinse the titration beaker, stir bar, and electrodes with deionized water. Remove the electrodes from the electrode carriage for easy rinsing and drying. |
| **6** | Dry the titration beaker, stir bar, and electrodes with lint-free tissue. |
| **7** | Store electrodes in plastic tubes to prevent oxidation on electrodes. Store in this manner until next use of the ChloroChek. |
| **8** | The ChloroChek is now ready for use again with a freshly prepared Working Solution. |

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|  | Follow the steps below to Clean the Electrodes (As Needed):  If conditioning is unsuccessful or the software ‘times out’. The Measurement Electrode, silver anode, and silver cathode must be cleaned and a new Working Solution prepared. The Measurement Electrode must be replaced if conditioning continues to fail after multiple cleaning attempts. | |
| **Step** | **Action** |
| **1** | Place the small pink or green microfiber cloth and the large blue or orange silver polishing cloth near each other on a lab bench or other hard surface. |
| **2** | Remove the electrodes from the ChloroChek. |
| **3** | Observe the angle of the measurement electrode tip demonstrated below. When the correct angle has been achieved, aggressively pull the tips of the Measurement Electrode across the microfiber cloth with heavy downward pressure against the cloth. Repeat on all sides of the electrode. If done correctly, dark marks should appear on the cloth. |
| **4** | Electrodes may bend; straighten to be parallel if needed. |
| **5** | Dampen the large silver polishing cloth with deionized water. Clean all four sides of the electrode on the dampened cloth. |
| **6** | Rinse the electrode with deionized water. |
| **7** | Dry with lint free tissue, i.e. Kimwipes. |
| **8** | Again, straighten the electrodes if needed. |
| **9** | Install the measurement electrode into the ChloroChek. |
| **10** | Prepare a fresh working solution. |
| **11** | Lower probes into the working solution. |
| **12** | Press Measure; then Ready. |
| **13** | Add 10uL of 100mmol/L NaCl standard. Wait until ‘conditioning successful’ appear on the display. |
| **14** | At the end of the session, press Standby, then Exit. |
| **15** | Remove the electrodes: measurement electrode, silver anode, and silver cathode. |
| **16** | Rinse with deionized water. |
| **17** | Dry very well with lint free tissue, i.e. Kimwipes. |
| **18** | Store all three electrodes in individual plastic containers to prevent oxidation. |

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| **Calibration and Meter Check:** |

The ChloroChek is factory calibrated. Calibration is not required by the user.

Return the ChloroChek for service if the following occurs:

* ChloroChek not able to condition even after electrodes have been cleaned and or replaced.
* Correct quality control values while using Sweat Control Solutions (SS-150) are not achieved.
* Verification that the pipette is delivering the correct volume.

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| Controlled Documents | The following controlled documents support this procedure.   |  |  | | --- | --- | | Document No. | Name of Documents | | LGM 8000 | Safety Practices | | LGM 8004 | Infection Control | | LGM 8005 | Universal Body Substance Precautions | | LGM 8006 | Handling of Regular and Infectious Waste | | LGM 8007 | Cleaning Work Areas | | LGM 8010 | Hand washing Policy | | LGM 8012 | Storage and disposal of Chemical Hazardous Waste | |

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| Non-Controlled Documents | The following non-controlled documents support this procedure. |

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| Document No. | Name of Documents |
|  | ChloroChek™Chloridometer® Sweat Chloride Analyzer Model 3400 User’s Manual 57-2006-01C |
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