#### BECKMAN COULTER AU680 CALIBRATION

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| **Purpose** | This section contains the necessary information to perform calibration on the Beckman Coulter AU680 Chemistry Analyzer.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Scope**  **Policy** | This section will provide the operator a detailed instruction on how to perform calibration before starting analysis, for new reagent lot, after maintenance procedures or as needed for troubleshooting purposes.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  The analyzer must have a valid in-date calibration prior to QC and patient testing. Assay calibration must be performed when you switch to a new reagent lot, or to a new reagent shipment within the same lot number, when the active calibration has expired, when quality control data indicates calibration is necessary, and when a major system component has been repaired or replaced. |
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| **Materials and Supplies** | Lyophilized Chemistry Calibrator 1  Lyophilized Chemistry Calibrator 2  CRP Latex Calibrator  Serum Protein Multi-Calibrator 1  Acetaminophen Calibrator  Valproic Acid Calibrator  Digoxin Calibrator  Vancomycin Calibrator  Gentamicin Calibrator  Salicylate Calibrator  Carbamazepine Calibrator  Phenobarbital Calibrator  Phenytoin Calibrator  Theophylline Calibrator  Tobramycin Calibrator  Beckman Multi Calibrator |

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**Materials**

**and Supplies** Urine Chemistry Calibrator

Ethyl Alcohol Calibrator

Chloride/CO2 Standard 2340-C and 2340-E

Beckman Coulter ISE Low Serum Standard and ISE High Serum Standard

Beckman Coulter ISE Low Urine Standard and ISE High Urine Standard

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| Safety or Special Safety Precautions | 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 hand washing, see LGM 8010, specifically, not limited to, proper hand washing. * 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 | **Perform Reagent Blanks/Calibrations Using the STAT Table**   |  |  | | --- | --- | | **Step** | **Action** | | 1 | Select **Home >** **STAT Status** jump button > **Calibration** button | | 2 | Select sample type requiring calibration from the Type drop-down | | 3 | Select **Auto CAL/Requisition F3** to requisition the automatic analyzer calibration.  *Optional: Select* ***Start Entry F1*** *to make changes. Repeat for each sample type. Select* ***Entry F1*** | | 4 | Select **Display Cup Set F5** to view calibrators and volume required. | | 5 | Open small STAT table cover. Load the required calibrators in any position on the STAT table with barcodes facing out. Use the TABLE ROTATION/DIAG button to rotate the table, if necessary. | | 6 | Select **Close.** | | 7 | Place the reagent blank DI water in position **RB1** on the STAT table. Close small STAT table cover then select **Start**. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Perform Reagent Blanks/Calibrations Using the Rack Supply Belt**   |  |  | | --- | --- | | **Step** | **Action** | | 1 | Select **Home >** **Rack Requisition Sample** > **Calibration** | | 2 | Select the “Type” drop down menu to choose sample type Serum. | | 3 | Optional: Select **Start Entry F1** for additional tests. To select a specific test(s), Select “RB” or “CAL” column to the right of the test name. | | 4 | Select **Entry F1** to register additional manual requisitions. | | 5 | Repeat steps 2-4 to requisition for other sample type, if necessary. | | 6 | Select **Display Cup Set F5** to view the calibration load list. Use the scroll down to view all the racks needed for calibration. | | 7 | Load your calibrator(s) in the appropriate yellow rack. Always use a blue rack (Reagent Blank) to precede a yellow rack. | | 8 | Close the Display Cal Racks screen. | | 9 | Load the racks on the rack supply belt. | | 10 | Select **Start** | | 11 | Calibration report will print automatically upon completion. | | 12 | Review calibration report, perform and document any corrective action if applicable. | | |
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| Procedure | | **ISE Calibration**   |  |  | | --- | --- | | **Step** | **Action** | | 1 | Load the Standards in the Hitachi cups of the STAT table in the following labeled positions.   * S-H (Serum-High standard) * S-L (Serum-Low standard) * U-H (Urine-High standard) * U-L (Urine-Low standard)   **Note:** Press the TABLE ROTATION/DIAG button to rotate the table to access the required position. | | 2 | Select **Home** | | 3 | Select the **Analyzer Maintenance** jump button. | | 4 | Select the **ISE Maintenance** button. | | 5 | Select the **Calibration** tab. | | 6 | Select **Serum/Urine Start button.** | | 7 | Select **OK.** | | 8 | When the ISE Calibration is complete, verify Slope and MID solution factor results are in the range for sample types calibrated. | | 9 | Select **Home.** | | 10 | Perform and document corrective action if applicable. | |
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**Controlled**

**Documents** The controlled documents are as follows:

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| **Document No.** | **Name of Documents** |
| LCM 294 | Beckman Coulter AU680 Quality Control |
| LGM 8000 | Safety Practices |
| LGM 8004 | Infection Control |
| LGM 8005 | Universal Body Substance Precaution |
| 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 non-controlled documents are as follows:

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| **Document No.** | **Document Name** |
|  | AU680 User’s Guide |
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**Author** Aida R. Legaspi, CLS

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Reviewed and approved by:

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#### BECKMAN COULTER AU680 CALIBRATION

Document History Page

Effective Date:

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| Change type: New, Major, Minor etc. | Changes Made to SOP – describe | Signature responsible person/date | Med. Dir. Reviewed/ Date | Lab Manager reviewed/ date | Date change implemented |
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