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| Purpose | The UniCel DxH 800 Coulter system is a quantitative, automated hematology instrument for in vitro diagnostic use in clinical laboratories. The DxH 800 system provides automated complete blood count, leukocyte differential and reticulocyte analysis. The DxH 800 also counts the NRBC present in the blood. |

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| Policy | Before patient samples, the Quality Control samples must have been analyzed for shifts and trends and Quality Control samples must be acceptable |  |

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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, 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 **Safety Practices**, 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 **Universal Body Substance Precautions**, specifically, but not limited to, exposure to body fluids. * For proper hand-washing, see **Hand washing Policy**, specifically, not limited to, proper hand-washing. * For proper infection control, see **Infection Control**, specifically, but not limited to, proper use of gloves. * For proper handling of regular and infectious waste, see **Handling of Regular and Infectious Waste**, specifically, but not limited to, proper disposal of regular and bio hazardous waste. * For proper cleaning of work area, see **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 **Storage & Disposal of Chemical Hazardous Waste**. All laboratory employees are expected to maintain a safe working environment and an injury-free workplace. Laboratory employees are responsible for their own safety, the safety of others and adhering to all departmental and medical center safety policies and procedures. |

**PROVISIONS/PROCEDURE**

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| **SAMPLE**  **REQUIREMENT** | Whole blood in K3EDTA. CBC with differential specimen is stable at room temperature for 24 hours or 48 hours if stored between 2-8oC. Reticulocyte specimen is stable at room temperature for 8 hours or 72 hours if stored between 2-8oC. |

**PLACING BAR** Risk of misidentification. Use of poor-quality, dirty, improperly placed or

**CODE ON TUBE** damaged bar code labels are not damaged. When placing label on a tube:

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| **Step** | | **Action** |
| 1. | | Ensure the label is flattened smooth against the tube. |
| 2. | | Press the label down securely, including all the edges and the corners. |
| 3. | | Ensure that no part of the label is loose |
| 4. | | Place the labels so that they are in the viewable area of the tube through the cassette window.  Note: Do not place the label on the bottom 10mm or the top 10mm of the tube or skew the label more than 12 degrees. These areas are not viewable due to the curvature of the tube and the cassette window. The top 10mm dimension is measure from the bottom edge of the cap. |
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| **CASSETTE**  **PRESENTATION** | The SPM (Specimen Processing Modular) must be online to run samples. View the status of the SPM in the Status Mode area at the upper left hand corner of the screen. Follow the steps below to process samples in the cassette presentation process.   |  |  | | --- | --- | | **Step** | **Action** | | 1. | Ensure the SPM is set up for the appropriate for your workflow. | | 2. | Ensure your specimens have been collected and stored properly. Possible clots will be flagged by automated analyzer. Specimen collected with Micro-container Map tubes should be checked for clots visually or with applicator sticks. | | 3. | Load the specimens into the cassettes | | 4. | Pre-Mix the sample specimens by inverting 8-10 times, avoid foaming. | | 5. | Place cassettes into the input buffer to the right of the SPM. The SPM automatically begins cycling the cassettes. | | 6. | After the SPM cycles the samples, review the sample results at the System Manager.  NOTE: To avoid serious injury, do not place your hand through the cassette presentation opening on the SPM. | |

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| **SINGLE TUBE PRESENTATION** | | Follow the steps below to process samples using the Single-Tube presentation process.   |  |  | | --- | --- | | **Step** | **Action** | | 1. | Ensure your specimens have been collected and stored properly. Possible clots will be flagged by automated analyzer. Specimen collected with Micro-container Map tubes should be checked for clots visually or with applicator sticks. Samples that needs to be aliquot on conical tubes will be labeled with new Cerner accession stickers. | | 2. | Select the Single-Tube Presentation icon at the top of any screen to display the Single-Tube Presentation dialog box. | | 3. | Place the specimen on the bar-code reader platform of the Single-Tube Presentation Station with the bar code facing the SPM to allow the Single-Tube Presentation Bar-Code Reader to scan the specimen label. The bar code may also be scanned with the handheld scanner or the Specimen Accession Number may be typed into the Specimen Identifier field. | | 4. | Verify the Specimen Accession number and test request. Acknowledging the ID that displays on the System Manager screen indicates that you accept the bar-code label read or manual entry. | | 5. | Thoroughly mix the specimen (invert 8-10 times, avoid foaming). | | 6. | Place the specimen into the correct Single-tube position. | | 7. | Do not place a closed tube or a 16 mm diameter tube in the right position of the Single-tube Presentation Station. Doing so could result in an incomplete aspiration and an erroneous result. | |
| DATA REVIEW | Go to Worklist Screen, it manages tests orders and results within the database. Worklist screen may be used:   * Use predefined filters for display and monitoring of patient test orders and results. * Specify sort/filter criteria for display and monitoring of patient test orders and reults. * Add, transmit, and export patient results, * Clear notification for specimens that were not processed.   Select worklist icon from the top of any screen OR Select Menu/Worklist:   |  |  | | --- | --- | | **Tab** | **Process** | | 1. | **Pending Tab** – The pending tab displays all patient test orders with a pending or partially completed result status. | | 2. | **Not Processed Tab** – The Not Processed tab displays exceptions for specimens that have been skipped. Those specimens need to be reloaded and tested. If exceptions are posted to the Not Processed tab, the Worklist alert status icon is red. The tab (view) automatically displays when you click the red Worklist icon. Specimens skipped because of a No Read or No Match is posted to the Not Processed tab. A corresponding Event is posted in the Event Log for each. | | 3. | Review Tab – The Worklist-Review tab displays specimens that have been held (not released) and requires attention. Use the scroll bar to view all the components and data on this screen. The filter at the top right allows you to search by the following categories; all held, held with exception status, and held with slide review action. To release a result, you must be at the Patient Results screen. | | 4. | Released Tab – The Worklist-Released tab displays the released results according to the filter that you select. The filter name drop-down list at the top right of the Released Tab allows you to filter by selecting All or All (last 30 days). | | 5. | Custom Tab – The Worklist-Custom tab allows one to select from predefined or user-defined filters. The following filter options may be chosen from the Filter Name drop-down list; Chartable Report Not Printed, Lab Report Not Printed, Not Transmitted, Rejected, Removed, Studies, and site specific Custom filters. | | | |

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| **PERFORMING DILUTION RUN ON DXH800** | If results for WBC > 300 or HGB >23.1, CBC will be performed by dilution analysis. Instrument recommendation for dilution is run at 1:5 dilutions. Follow the steps in performing dilution analysis.   |  |  | | --- | --- | | **STEPS** | **Action** | | 1 | In the instrument/DXH800 choose Single-Tube presentation. Under Single-Tube presentation, choose ‘Dispense Diluent’. | | 2 | Confirm procedure and insert an empty test tube on the left side loader as a container for your diluent to be used. Instrument will dispense diluent from instrument to the test tube. Repeat procedure for more diluent depending on the amount needed. Follow the instruction by instrument to stop Dispense diluent procedure | | 3 | *Perform 1:5 manual dilution of patient specimen using the dispensed diluent obtained from the instrument.* New specimen container with diluted sample will be labeled with new Cerner accession sticker marked with a**‘X5’**on the sticker label to identify dilution of the sample. | | 4 | Still on Single-Tube presentation, scan or type in the accession number of patient being processed (e.g. 215001123456B) and press **ENTER**. *Pressing the enter button will allow you to edit order for the patient*. Select **OK** to view/edit order. | | 5 | A pop up screen for editing order will show up. Remove the CDR default order by selecting CDR on the right side Selected Panels\* and hit Remove<<.  Under left side Available Panels\*, select **PREDIX5** and Add>> order as a selected panel to be run. Hit **Submit** to run 1:5 diluted patient sample. | | 6 | Instrument will instruct to load specimen to be run. Load 1:5 diluted sample on the left side of the Single-Tube presentation. | | 7 | Results obtained from this run will all be calculated as X5 and will be ready to verify in Remisol. |  |  |  | | --- | --- | | 8 | Under Remisol, double click on parameter(wbc/hgb) and type in under *result comment* the value obtained that is beyond linearity(e.g. WBC = 452). Add comment from drop down “Result verified by Dilution Analysis” and click on the Check icon to save. If differential count was ordered, report absolute differential count as “==” on each result field with a result comment of “*Unable to calculate, WBC beyond reportable range*”. Follow Critical Results protocol/documentation. Verify the pre-diluted CBC results. | |

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| Reference | |  |  | | --- | --- | | **Document Number** | **Document Name** | | LAMC-PPP-0123 | Safety Practices | | LAMC-PPP-0127 | Infection Control | | LAMC-PPP-0128 | Universal Body Substance Precaution | | LAMC-PPP-0129 | Handling of Regular and Infectious Waste | | LAMC-PPP-0130 | Cleaning Work Areas | | LAMC-PPP-0132 | Hand-washing Policy | | LAMC-PPP-0134 | Storage and Disposal of Chemical Hazardous Waste | | LAMC-PPP-0026 | Quality Control Program | | LAMC-PPP-0277 | Beckman Coulter DxH 800 System, Quality Control | |
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