#### Replacing Reagents on the Sysmex XN-3100 Hematology Analyzer

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| **Background** | This procedure describes how to replace reagents on the Sysmex XN-3100 hematology analyzer |

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| **Policy** | * Only appropriate, non-expired, Sysmex reagents will be used on the XN-3100. * Reagent replacement will be done routinely only when the analyzer alarms for replacement. * Discard used reagents in non-biohazard waste. * Reagents must be at room temperature (15-30°C) before loading on analyzer. * Verify reagents are not expired beyond the manufacturer's expiration date prior to loading |

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| Reagents | Refer to the table below for the list of reagents   |  |  |  |  | | --- | --- | --- | --- | | **Reagent** | **Function** | **Storage** | **Open Stability** | | CELLPACK DCL | Diluent | 2-35°C | 60 days | | CELLPACK DST (RU-20) | Diluent | 2-35°C | 60 days | | CELLPACK DFL | Diluent for flow cytometry analysis for retics and platelets | 2-35°C | 60 days | | SULFOLYSER | RBC lysing reagent used in hemoglobin analysis | 1-30°C | 90 days | | Lysercell WNR | RBC lysing reagent in WBC, basophil, NRBC counts. | 2-35°C | 60 days | | Lysercell WDF | RBC lysing reagent used in neutrophil, lymphocyte, monocyte, and eosinophil counts. | 2-35°C | 90 days | | Fluorocell WNR | Dye used to stain nucleated cells in WBC, basophil, and NRBC counts | 2-35°C | 90 days | | Fluorocell WDF | Dye used to stain WBCs for automated differential | 2-35°C | 90 days | | Fluorocell RET | Dye used to stain reticulocytes | 2-35°C | 90 days | | Fluorocell PLT | Dye used to stain platelets | 2-35°C | 90 days | |

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| Reagent ReplacementProcedure A | Replace a New Dilution/Hemolytic Agent (includes Cellpack DST/DFL, Sulfolyser, Lysercell WNR/WDF)   |  |  | | --- | --- | | Step | Action | | 1 | Access the Reagent Replacement screen in one of the following ways:   * Review the Help dialog window that displays when an empty/expired reagent is detected during analysis to determine which reagent needs to be replaced, then click Execute. * Click the Analyzer menu button, then click Reagent Replacement. Click the reagent level display then click the reagent to be replaced. | | 2 | Click the Replace the Reagent box | | 3 | Remove cap from new reagent. | | 4 | Place cursor in the reagent code text box, then:   * Use the barcode scanner to scan the reagent code barcode on outer box of new reagent, or * Manually enter the reagent code (enter additional info as prompted) and click OK | | 5 | Remove cap from old reagent container and pull the dispensing set straight up, out of container | | 6 | Insert the dispensing set straight into the new reagent container | | 7 | Close the cap | | 8 | Click Execute. The Help dialog box will close when priming of new reagent is complete | | 9 | Remove and discard the old reagent | |

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| Reagent ReplacementProcedure B | Replace a New Dye Cartridge ( includes Fluorocell WNR/WDF/RET/PLT)   |  |  | | --- | --- | | Step | Action | | 1 | Access the Reagent Replacement screen in one of the following ways:   * Review the Help dialog window that displays when an empty/expired reagent is detected during analysis to determine which reagent needs to be replaced, then click Execute. * Click the Analyzer menu button, then click Reagent Replacement. Click the reagent level display then click the reagent to be replaced | |

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| Reagent ReplacementProcedure B, cont | |  |  | | --- | --- | | Step | Action | | 2 | Open the top cover of the analyzer | | 3 | Pull up the cover for the dye cartridge to be replaced | | 4 | Remove the old dye cartridge from its holder and discard | | 5 | Install the new dye cartridge into the holder. Make sure the new cartridge label color matches the color of the cover | | 6 | Pull down the cover until it clicks. The analyzer will beep and automatically registers the new reagent information. | | 7 | Close the top front cover of the analyzer. The Help dialog box will close when priming of new reagent is complete | |

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| Reagent ReplacementProcedure C | Replace a New CellPack DST using the RU-20   |  |  | | --- | --- | | Step | Action | | 1 | Access the RU-20 reagent replacement screen in one of the following ways:   * Click OK in the Help dialog window that displays when an empty/expired CELLPACK DST is detected during analysis. * Click the RU menu button, then click Maintenance (Wrench Icon). Click Replace Reagent. | | 2 | Open the RU-20 reagent storage drawer slowly using the handle | | 3 | In the Replace Reagent dialog box:   * Use the barcode scanner to scan the reagent code on the new container, or * Manually enter the reagent code (enter additional info as prompted) and click OK | | 4 | Remove the cap from the new reagent container | | 5 | Remove the cap from the old reagent container and pull out the dispensing set straight up, out of container | | 6 | Insert the dispensing straight into the new reagent container | | 7 | Close the cap | | 8 | Click Execute. The Help dialog box will close when preparation and priming of new reagent is complete. | | 9 | Remove and discard old reagent container | |

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| References | * Sysmex XN 3100 Operator’s manual, March 2017 |

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