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| Policy | It is our policy to follow manufactures schedule and directions for IChem VELOCITY Calibration verifications. Perform Quality Control after performing calibration verifications. |

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| Workplace 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, 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 biohazardous 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. |

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| Auto-Calibration | A fixed standard located within the Strip Reader Module is used to perform an auto-calibration each time the system is powered. If the Autocalibration is successful, the system goes into Ready mode. |

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| CalCheck | CalChecks are performed quarterly on the iChem VELOCITY system. If the instrument was moved, a CalChek should be performed to make sure the instrument is properly calibrated. The reflectance is the measure of LED illumination light reflected from the chemistry pads. In this mode the instruments directs the operator to remove all chemistry test strips from the Strip Provider Chamber and to place all five CalChek Strips into the Strip Provider chamber. The CalChek strips are automatically loaded into position in the Strip Reader Module and the closing step is bypassed. The measured reflectance values are compared to an acceptance range and if the values fall within that range the CalChek is verified and found acceptable.Follow the directions below for performing the CalCheks |

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| 1 | Click on the Instrument button on the top right side of the main screen |
| 2 | Click on the maintenance button located at the bottom of the instrument screen. The maintenance screen is displayed |
| 3 | Click on the Reflectance Check button. The system will display a series of six screens. Follow the instructions on the screens |
| 4 | If needed, access the test strip provider. Remove and discard all chemistry strips present inside the chamber. |
|  5 | Pull the test strip loader out of the system. Load the CalChek strips inside the test strip loader, and then push the test strip loader back inside the system. Rotate the test strip loader 180 degrees to transfer the strips to the test strip provider. |
| 6 | Verify that he Lot ID and the expiration date from the CalChek strip container match the data from the screen. Modify is necessary. |
| 7 | Pull the strip loader out of the system. Load the test strips and the desiccant inside the test strip loader, and then push the test strip loader back inside the system. Rotate the test strip loader 180 degrees to transfer the strips to the test strip provider. |
| 8 | Press Finish to return to the Chemistry strip lot information screen. Check the information related to the loaded test strips, modify if necessary. |
| 9 | The reflectance CalChek results can be reviewed in the Quality Review screen. |

**Specific Gravity, Color, and Clarity CalChek**

Follow the instructions for specific gravity, color, and clarity CalChek

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| **Pos #** | **Contents** | **Value** | **Barcode** |
| 1 | Specific Gravity Cal Chek solution | 1.002+/- 0.003 | Y |
| 2 | Specific Gravity Cal Chek solution | 1.030+/-0.005 | N |
| 3 | Specific Gravity Cal Chek solution | 1.060+/-0.005 | N |
| 4 | Color CalChek solution | Colorless | Y |
| 5 | Color CalChek solution | Straw | N |
| 6 | Color CalChek solution | Normal Yellow | N |
| 7 | Color CalChek solution | Normal Amber | N |
| 8 | Clarity Cal Chek solution | Hazy | Y |
| 9 | Clarity Cal Chek solution | Slightly cloudy | N |
| 10 | Clarity Cal Chek solution | Cloudy | N |

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| 1 | Obtain CalChek solution tubes as needed according to the table above |
| 2 | Gently invert the tubes one or two times to mix the solution |
| 3 | Remove the cap from each tube, and then place the tubes on the Calibration rack according to the table above making sure that the barcode labels are placed at the correct positions |
| 4 | Load the Calibration rack onto right side of the iChem Velocity sampler |
|  5 | Press START. The rack will be processed and all calculations performed automatically. |
| 6 | When the CalChek is successful, the date/time of the new SG/CC CalChek will be displayed on the shift summary screen. |
| 7 | The SG/CC CalChek (Pass/Fail) can be reviewed in the QC review screen. |
| 8 | The measured values are compared to acceptance ranges stored in the system. If the values fall within the appropriate ranges, the CalChek is verified and found acceptable. If it doesn’t fall within the acceptable ranges, repeat calibration. If the second time it still fails, call for service. Document that calibration was done. |

**Criteria**

Criteria for calibration are as follows but not limited to:

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| 1 | QC fails to meet the established criteria |
| 2 | Calibration/Calibration Verification failed - must Recalibrate |
| 3 | After major maintenance or service |
| 4 | When recommended by the manufacturer, quarterly for iChem Velocity |

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| Controlled Documents | The following controlled documents support this procedure.

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| **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-0158 | iChem Velocity Quality Manual |

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| Non Controlled Documents

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|  | Document Name |
| 1 | IChem VELOCITY Operator’s Manual, 300-4449 English Rev E 10/2008 |

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|  | **Document Name** |
|  | IChem VELOCITY Operator’s Manual, 300-4449 English Rev E 10/2008 |

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| Author(s) | Alvin Castillo |