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| **Owner Title / Approval:** | John R Samuel, MT(ASCP) Signature on file |
| **Administrative Director Approval:** | **Not required** |
| **Medical Director Approval:** | **I have reviewed this procedure and approve it for use.** |
| Cindy Sturtz, MD Signature on file |

# PURPOSE:

Reusable glass volumetric pipettes are used in the laboratory for hydrating reagents, controls, and other material used for testing. After use, pipettes are washed sufficiently to remove any chemical or biological residue remaining in or on the pipettes.

**EQUIPMENT:**

Boekel Pipette Washer / Dryer

**SUPPLIES:**

* 2 plastic pipette cylinders
* 2 stainless steel pipette holders
* Deionized water
* Liquinox detergent

**PROCEDURE: Pipette Washing**

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| Step | Action |
| 1 | Rinse used pipettes with running water then place tip-up in a plastic pipette cylinder filled with DI water pending the wash run. |
| 2 | When ready to begin the wash run, transfer the pipettes to a stainless steel pipette holder, tips up, with the exception of the 10 mL pipettes, which must be tip-down. |
| 3 | Add 10 mL of Liquinox detergent to the Boekel Pipette Washer. |
| 4 | Carefully place the stainless steel pipette holder into the pipette washer. |
| 5 | Turn on the HOT water supply to the pipette washer.   * Wash for 30 minutes with HOT water * Observe, at minimum, the first two cycles of filling/draining after the water is turned on to confirm that it is filling and draining appropriately. * If not filling/draining appropriately, adjust water flow and recheck until it does so. |
| 6 | After the 30-minute wash run, turn the hot water off at the end of a drain cycle. |
| 7 | Turn the COLD water supply to the pipette washer and repeat steps 5 and 6.   * Before turning off the Cold water, visibly check for obvious evidence of residual soap (ie. foaming). If present, continue the Cold water rinse until obvious soap is no longer present. |
| 8 | Remove the pipettes from the pipette washer by lifting out the stainless steel holder. |
| 9 | Allow the pipettes to drain in the sink for a few minutes. |

**PROCEDURE: DI Water Rinse**

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| Step | Action |
| 1 | Fill the second plastic cylinder with fresh deionized water. |
| 2 | Place the stainless steel holder with pipettes into the plastic cylinder and allow the pipettes to fill with DI water. |
| 3 | Raise and lower the pipette holder in and out of the water several times, allowing the pipettes to fill and drain. |
| 4 | Test the pH of the rinsed pipettes.   * Touch a piece of pH paper to one or more of the wet pipettes * Read the color reaction of the pH paper by comparing it to the color chart on the pH paper container. * Acceptable pH range is 6.0 and below. * If the pH range is unacceptable (>6.0), residual soap may be present. Repeat the 30-minute COLD rinse cycle and rinse with fresh deionized water as in the steps above. Recheck pH. |
| 5 | Record the date of pipette washing and the pH-Check result on the Pipette / Glassware & pH Chart. |
| 6 | Allow pipettes to air-dry overnight. Visually inspect pipettes for wetness before returning to inventory. |

**PROCEDURE: Washing Glassware**

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| Step | Action |
| 1 | Place the glassware in a plastic tub of sufficient size. |
| 2 | Add a small amount of Liquinox. |
| 3 | Fill tube with warm tap water and wash glassware. |
| 4 | Rinse glassware with copious amounts of running deionized water. |
| 5 | Test the pH of the rinsed glassware by touching a piece of pH paper to the wet glass and comparing the resultant color to the color chart on the pH paper container.   * Acceptable pH is 6.0 and below. * If the pH range is unacceptable (>6.0), repeat rinsing with running DI water and repeat pH check until acceptable. |
| 6 | Record the date of pipette washing and the pH-Check result on the Pipette / Glassware & pH Chart. |
| 7 | Allow the glassware to air-dry overnight. Visually inspect the glassware before returning to inventory. |

**PROCEDURE NOTES:**

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| * On the rare occasion that a pipette or glassware is used to contain/dispense a biological fluid, decontaminate the item prior to washing by soaking it for 30 minutes in a 10% bleach solution. |

**REFERENCES:**

* Boekel Pipette Washer/Dryer Instructions/Specifications. Boekel Scientific, Feasterville, Pa., February 1996.
* Kolmer, Spaulding & Robinson, Approved Laboratory Technic.
* Isenber and Henry, Clinical Microbiology Procedure Handbook, Volume 2, ASM, 1992.

**Related Documents**

* Pipette / Glassware pH Chart EQUIP 1005.X F

**Document History**

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| Date of Origination and Document Control Number | EQUIP 1005.1  August 2, 2017 | Replaces procedures WASH 1003.0 Glassware Washing and WASH 1005.0 Pipette Washing. |
| Prepared by: John R Samuel, MT(ASCP) |
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| **Medical Director or Designee Approval:** | **I have reviewed this document and approve it for use**  **\_\_\_** pending approval of Medical Director of record.  **\_\_\_** change in Medical Director of record.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_  Signature on file |