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Glass and Plastic Washing- Laboratory Troy

Document Type: Procedure

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I. PURPOSE AND OBJECTIVE:

To describe the process for washing glassware, plasticware and glass pipettes using the dishwasher or pipette washer.

II. CLINICAL SIGNIFICANCE:

A. Laboratory glassware and plasticware needs to be cleaned so that there is no residual chemicals or detergent remaining on the surface of the items. If residual chemicals or detergent remains, reagents or specimens that come in contact with the glass/plasticware may be contaminated and patient results affected.

III. REAGENTS:

A. Alcotabs
B. Labsolutions Detergent Liquide
C. Neutrad detergent
D. Bleach

IV. EQUIPMENT:

A. Dishwasher
B. Pipette washer
C. Oven

V. PROCEDURE:

A. Glass washing room responsibilities
    1. Maintain an ample supply of clean plastic and glassware to the departments in the laboratory.
    2. Have a working knowledge of the following:
        a. Glass and plastic dishwasher
        b. Pipette washer
        c. Drying oven
    3. Check all washed glass and plastic loads for pH.

B. Glass and Plastic Washing
    1. Collect dirty glass and plastic from laboratory departments, if necessary. If possible, all dirty glass and plastic should be dropped off in the washing room by each department.
        a. Hand Washing
            i. Prepare wash water using 1/4 cup of Neutrad and 1/4 cup of bleach to a sink full of water.
            ii. Wash items.
            iii. Rinse.
                a. Rinse all items three times in regular water.
                b. Next rinse glassware 3 times in Deionized water (DI). Plastic is rinsed once.
            iv. Dry by placing on the pegboard overnight.
            v. Alternatively, try in the drying oven for 30 minutes.
                a. The oven must be manually turned on and off.
                b. Set a timer.
                c. Allow the items to cool for a few minutes before removing from the oven.
            vi. Place clean glassware back in the bin specific to the department it belongs to and return to the department.
        b. Dishwasher Washing
            i. Load plastic and/or glassware into the dishwasher.
            ii. Use only Labsolutions Detergent Liquide located in the lower right cabinet next to the dishwasher.
            iii. Take caps off containers prior to loading into dishwasher.
                a. Put caps in bucket in/by the sink.

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b. Add soap from the jug on the counter and water.
c. Let soak while dishwasher is running.
d. Rinse caps off and dry along with containers.

iv. Use prongs with holders for glass items to prevent damage.
v. Fill both cups in the dishwasher with detergent.
vi. Close and lock the door.
vii. Select Program- Choose scientific cycle (153 minutes).
viii. Press Start.
ix. After cycle is complete, test and document the pH of glassware. (See section E)
x. Items may be dried overnight using the rack on the wall.
xi. Alternatively, they may be dried in the oven for 30 minutes.
    a. The oven must be manually turned on and off.
    b. Use a timer so the oven does not stay on overnight.
    c. Allow items to cool for a few minutes before removing them from the oven.

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C. Pipette Washing

1. Remove used pipettes from the holding tank in Chemistry and place tip up in basket with a plastic bucket underneath.
2. Place basket containing used pipettes in Nalgene pipette washer.
3. Add 1 Alcotab.
4. Use the silver nozzle and screw it onto the tap water faucet.
5. Put the tube from the washer on the nozzle.
6. Use a screw drive to clamp the tube onto the nozzle.
7. Wash for 60 minutes with hot tap water.
    a. Observe one fill and empty cycle before leaving unattended.
    b. Fill rate should be about 2 liters/minute.
8. After 60 minutes, allow washer to empty.
9. Change tube to the Distilled water faucet.
10. Rinse for 30 minutes
    a. Observe one fill and empty cycle before leaving unattended
    b. Fill rate should be faster than wash cycle- up to 12 liters/minute.
11. When the rinse time is completed, wait for washer to empty.
12. Remove the pipette basket from the washer.
13. Check the pH of the clean pipettes following the instructions in section E.

14. Remove the pipettes from the basket and place tip up on drying rack.
15. Place drying rack in the oven.
16. Turn on the oven manually and allow to dry for at least one hour.
17. Set a timer for desired drying time.
18. Turn off oven and allow to cool for a few minutes.
19. Remove pipettes and place in the drawer in Chemistry.

D. Pipette Holding Tank
    1. Empty holding tank monthly and rinse with fresh water.
    2. Fill the tank 3/4 full with water and a small amount of bleach (about 1/4 cup)
    3. Place a clean basket in the holding tank.
    4. Place the holding tank in Chemistry near the hood.

E. Check pH
    1. It is important to monitor the pH of washed items.
    2. Use one piece from each load washed (hand washed, dishwasher washed or pipette washer).
    3. Use a small amount of Distilled Water and rinse the interior of an item or pipette.
    4. Check the pH of the water used to rinse the item with a pH strip.
    5. The pH of the rinse water should be between 5 and 6.
    6. A pH above 6 indicates alkaline detergent residue and all items in the load should be re-rinsed and pH repeated.
    7. If pH continues to be out of range, alert a supervisor to investigate.
    8. Additional pH strips can be obtained from the Chemistry department.

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Approval Signatures

Step Description	Approver	Date
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Policy and Forms Steering Committee (as needed)	Gail Juleff: Project Mgr Policy	2/21/2023
Policy and Forms Steering Committee (as needed)	Kristin Russell: Supv, Laboratory	2/21/2023

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