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ION LABS	Standard Operating Procedure	SOP Number D-104	Revision 5
	QC Laboratory Glassware Cleaning	Effective Date 04/13/22	Page Page 1 of 4
Written by/ Date SSB/02/11/22	Reviewed by/ Date SAS 04/12/22	Approved by/ Date Jan 04/13/22	
Title: QC Laboratory Director	Title: Analytical Development Scientist	Title: Analytical Development Manager	

1.0 Purpose

The purpose of this procedure is to provide guidelines for cleaning laboratory wares for use in the QC Laboratory.

2.0 Scope

This procedure applies to all reusable wares used in testing or experiments in the QC Laboratory. This procedure does not cover disposable wares or sterilization.

3.0 Responsibility

- 3.1 It is the responsibility of QC analysts to follow this procedure.
- 3.2 It is the responsibility of QC Laboratory Management to implement this procedure and to ensure that the procedure is being followed.
- 3.3 It is the responsibility of QC Laboratory Management to keep this procedure current with latest Ion Labs practices.

4.0 Definitions

- 4.1 **Ware(s)** – Glassware, plasticware, and metalware inclusively
- 4.2 **IPA** – Isopropyl Alcohol
- 4.3 **MeOH** – Methanol
- 4.4 **QC** – Quality Control

5.0 References

- 5.1 D-824, SOP, Operation and Cleaning of the Tuttnauer EZ10 and 3850EA Autoclaves

6.0 Procedure

6.1 Detergent Selection

- 6.1.1 Only detergent labeled for use with laboratory wares will be used. Micro-90 Concentrated Cleaning Solution (Item: M-9050-12) will be used as the first option when available. For specialty cleaning, an appropriate detergent will be selected that is compatible with the surface and cleaning method.

6.2 Cleaning of Wares

- 6.2.1 A fresh soap solution should be made at least once weekly and replaced as needed. Soap should be diluted as per manufacturer instructions.
- 6.2.2 Pre-rinse items with tap water and remove all loose material from the wares before placing into soap solution. If there is a residue that is especially resistant to removal, the glassware may be presoaked separately using an appropriate detergent to loosen the residue before continuing with general cleaning. An ultrasonic cleaner may also be used to remove residue that is not easily reached.
- 6.2.3 When soaking is necessary, items should be completely submerged and interiors completely filled with detergent solution. Wares should be soaked for a time sufficient to loosen or remove all residue and deposits. Metal components should not be soaked for more than 24 hours as corrosion may occur.
- 6.2.4 After the item has been soaked, inspect glassware for markings and labeling which should be removed. Acetone, Methanol, and IPA can be used to remove ink and label glue. Used organic solvents must be stored in a waste solvent container for disposal.
- 6.2.5 Rinse wares with tap water and a final rinse with Millipore water before drying.

- 6.2.6 Dry items in an oven with temperature adjusted between 35°C and 45°C (suggested).
- 6.2.7 Items can also be allowed to air dry at room temperature.
- 6.2.8 For dried wares that require sterilization, refer to SOP D-824 Operation and Cleaning of the Tuttnauer EZ10 and 3850EA Autoclaves.
- 6.3 Cleaning of Pipettes
- 6.3.1 Fill the pipette station with tap water and detergent.
- 6.3.2 Insert the pipette basket loaded with pipettes to be cleaned. Pipette tips should all be facing up.
- 6.3.3 Soak the pipettes for 2 to 24 hours in detergent.
- 6.3.4 Transfer the pipette basket to the pipette rinse station.
- 6.3.5 Fill the rinse station with tap water and then Millipore water, then drain.
- 6.3.6 Repeat step 6.3.5 as necessary to remove detergent residue.
- 6.3.7 Fill the rinse station with Millipore water for the final rinse.
- 6.3.8 Pipets can also be cleaned by forcing water and detergent through with an appropriate spray bottle or other means. Detergent residue should be removed taking care to ensure water is moved sufficiently through the inside walls of the small aperture of the pipets.

7.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	05/06/10	New	-	-
1	02/04/13	Updated SOP format. Improved SOP and added information on the use of cleaning/sterilization equipment.	13-033	B. Johns
2	01/20/15	Updated SOP format. Expanded responsibilities. Replaced filtered water with tap water. Replaced Type I water with Millipore water. Biennial review.	15-0054	B. Johns
3	04/04/17	Change responsibilities to meet current practices. Clarified wording. Biennial review.	17-0347	B. Johns
4	04/15/20	Scheduled Review; added alternative cleaning for pipets, removed 2x requirements for rinses. Rinses can be performed as many times as necessary to remove detergent.	CC-20-0297	J. Maignan
5	03/03/22	Updated to reflect current practices.	CC-22-0088	J. Sassman