

Hydrochloric Acid 5%, Aqueous for Acid Cleaning Glassware – Technical Memo

SOLUTION:	Part 12086A	Part 12086B	Part 12086C
Hydrochloric Acid 5%, Aqueous	1 Liter	1 Gallon	20 Liters

For storage requirements and expiration date refer to individual bottle label.

APPLICATION:

Newcomer Supply Hydrochloric Acid 5%, Aqueous for Acid Cleaning Glassware is instrumental in ensuring that laboratory glassware/plasticware is acid/chemically cleaned prior to solution preparation and/or performing any silver, iron or calcium staining procedures.

METHOD:

Solutions: All solutions are manufactured by Newcomer Supply, Inc.

PROCEDURE:

1. Before proceeding with acid cleaning, all glassware/plasticware should be cleaned with a laboratory grade glassware detergent, washed and rinsed according to your accepted laboratory protocol.
 - a. *Most new glass is slightly alkaline and should be washed upon receipt in the laboratory and prior to initial use.*
2. Use appropriate safety precautions and pour sufficient Hydrochloric Acid 5%, Aqueous into glassware; gently swirl to ensure that all surfaces/sides/edges have been thoroughly coated with the solution.
3. Repeat this process for all glassware/plasticware to be used in a procedure that requires acid cleaning, including; bottles, beakers, flasks, Coplin jars, graduated cylinders, stir rods, pipettes, thermometers and any lids for bottles or jars.
 - a. *See Procedure Note #1.*
4. Rinse all glassware/plasticware with a minimum of four changes of distilled water, ensuring that all surfaces/sides/edges have been rinsed well and no residual Hydrochloric Acid 5%, Aqueous remains.
 - a. *It is essential that the final rinses are distilled water or chlorine-free water. Tap water rinses will leave surface contaminates on the glassware/plasticware resulting in staining issues.*
5. Dry glassware in a designated area for acid/chemically cleaned glassware.

PROCEDURE NOTES:

1. Fresh Hydrochloric Acid 5%, Aqueous should be used with every batch of glassware acid/chemically cleaned. The solution can be reused on multiple pieces of glassware/plasticware that are acid/chemically cleaned at the same time.
2. Neutralize dilute Hydrochloric Acid 5%, Aqueous with 1 M magnesium hydroxide/oxide, sodium carbonate or sodium bicarbonate and/or dispose of according to local and state environmental regulations.

REFERENCES:

1. Dapson, Janet Crookham, and Richard Dapson. *Hazardous Materials in the Histopathology Laboratory: Regulations, Risks, Handling, and Disposal*. 4th ed. Battle Creek, MI: Anatech, 2005. 252.
2. Sheehan, Dezna C., and Barbara B. Hrapchak. *Theory and Practice of Histotechnology*. 2nd ed. St. Louis: Mosby, 1980. 134.
3. "What Are Good Cleaning Techniques for Laboratory Glassware?" Ace Glass Inc. Accessed August, 19, 2015. www.aceglass.com/dpro/kb_article.php?ref=8386-IPSF-3037.
4. Modifications developed by Newcomer Supply Laboratory.