

1. POLICY:

- 1.1. Colorado Retrovirology Laboratory uses only a limited number of reusable glass or plastic vessels for the storage of analytical reagents.
- 1.2. High-density polyethylene carboys are dedicated to the storage of Type I Reagent Water used for buffer preparation and for storage of Tris-Borate-EDTA (TBE) buffer. Glass vessels are used for the storage of stock and working buffer.
- 1.3. These storage vessels are refilled without washing. This is the standard practice in both our research and diagnostic molecular labs for the storage of water and buffer used for gel electrophoresis. These highly purified liquids are protected from contamination with limited exposure to room air and human skin. They do not promote bacterial or fungal growth, and are free from common water borne contaminants at preparation.
- 1.4. If contamination is suspected, these vessels should be rinsed thoroughly by hand with distilled water, then rinse with Type I Reagent Water, steam sterilized, and refilled.
- 1.5. An automatic dishwasher is available in SM 5626. This unit uses distilled water as the rinse and wash water. Items are autoclaved after washing.
- 1.6. In the event of unusual background or interference in the laser detection step of acrylamide sequencing gels used in the analysis of HIV-1 genotyping, the quality of the buffer should be investigated.
- 1.7. If troubleshooting measures indicate that residual detergent may be affecting assay performance, the following procedure may be employed to detect detergent residues from improper rinsing.

2. PROCEDURE

- 2.1. Precautions: Add a small amount of non-buffering salt (NaCl, CaCl₂) to the Type I Reagent Water to allow the pH meter to function properly. Use a pH meter sensitive to 0.1 pH units. Some detergents and surfactants interfere with some types of pH paper, yielding a false reading.
- 2.2. Rinse a small, clean beaker by filling and emptying three times with distilled water. Rinse again with Type I Reagent Water.
- 2.3. Fill a fourth time and measure pH. Record the pH as the source water pH.
- 2.4. Take the cleaned vessel in question, fill with Type I Reagent Water to a level such that the pH may be measured. Swirl the water in the vessel to extract residues from all possible surfaces.

2.5. Measure the pH and record as the glassware/plastic pH.

2.6. Any significant increase of 0.2 or more pH units above the source water pH indicates alkaline detergent residue.

2.7. If detergent residue is detected, re-wash the vessel without detergent in the dishwasher, then rinse manually with Type I Reagent Water and retest.

3. REFERENCE

3.1. Alconox, Inc., New York, New York. (www.alconox.com)