Glasswares and their cleaning methods.

**Eigbefoh Eloghosa Duchess**

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**MEDICAL LABORATORY SCIENCE**

THERMOMETER

Clean your digital thermometer before and after you use it with either rubbing alcohol or lukewarm soapy water, then rinse with cool water

HYDROMETER

For a thorough cleaning soak the entire hydrometer in vinegar (mild acid) for about 30 mins. and rinse. This will keep your hydrometer giving you an accurate reading for years.

CRUCIBLES.

1. Gently scrape as much residue left from the materials used in your experiment from the crucible.
2. Fill your porcelain crucible with fused potassium bicarbonate; this chemical will be in a solid form. You should have enough bicarbonate in the crucible to fill past the line of the remaining material from your experiments. If you need to fill the entire crucible, do so.
3. Place the crucible on a burner. Heat the crucible until the fused bicarbonate melts. Heat it until a layer of red potassium salt appears on the surface. Using a mixing rod, stir the melt a few times. The entire melting procedure should take about one minute.
4. Remove your crucible from the flame. Pour out the melt. If your crucible is made of porcelain, continue to step 5. If your crucible is platinum, submerge it in a boiling glass bath of hydrochloric acid (a 20% mix to water) for three minutes.
5. Rinse the crucible in hot water. For porcelain crucibles, use a clean cloth to dry the surface. If your crucible is platinum, use alumina-impregnated nylon webbing to complete cleaning the surface. Let the crucible cool.

PIPPETTE-

Exterior Cleaning: Most pipettes can be cleaned externally with typical household or laboratory cleaning agents, soaps, or alcohol. By spraying or wiping the exterior of the instrument, the outside of the pipette can be easily cleaned. To ensure full sterilization, let the cleaning solution sit on the pipette for 10-12 minutes before wiping it off.

Interior Cleaning: Cleaning the interior of your pipette can be more time-consuming because it requires full disassembly. Individual parts will need to be cleaned differently depending on the material, shape, size, and purpose.

1. Refer to the instruction manual for specific directions.
2. Use a long-stemmed cotton swab with a dab of cleaning solution to clean out air passages and remove any clogs.
3. Clean and rinse pistons with distilled water and replace them when chipped, pitted, or broken.
4. Lightly grease the pistons with the lubricant provided upon purchase.
5. Reassemble all parts and check to ensure the pipette operates smoothly.

Contamination Cleaning: If your pipette becomes contaminated with a known substance, there are specific cleaning steps that must be taken depending on the type of substance. Taking the routine cleaning and maintenance steps outlined above will not be sufficient if your pipette is cross-contaminated.

1. For aqueous solutions, rinse the contaminated parts with distilled water or 70 percent ethanol and air dry at 60°F.
2. For infectious liquids, autoclave the lower section at a temperature of 120°C for 20 minutes and then allow it to return to room temperature before reassembling.
3. For organic solvents, allow the substance to evaporate on its own or immerse the part in a detergent and then air dry.
4. For radioactive substances, place the pipette in a solution like Decon and then rinse and air dry.
5. For proteins, rinse the contaminated parts with a detergent, rinse, and air dry. DO NOT use alcohol as it will set the proteins.
6. For nucleic acids, boil lower parts in glycine/HCI buffer (pH 2) for 10 minutes, rinse with distilled water, and air dry.