GLASSWARE WASHING PROCEDURES

(Rev A)

A. General Glassware Washing.

All water chemistry glassware except that to be used for trace metals is to be washed with 10% HCL. Wash trace metal glassware with 10% HNO_3.

** Store vessels filled with distilled water until time to wash**

Wear protective clothing.

a) REMOVE ALL REP. NUMBERS WITH ACETONE PRIOR TO WASHING. (this does not include labels on DOC glassware).

b) Rinse well with distilled water to remove bulk of contents--check for any residue, scrub if necessary with test tube scrubber. This should be done immediately after use.

c) To wash, submerge in acid bath for at least one hour, preferably overnight. Make sure all surfaces are in contact with the acid and that there are no air pockets.

d) Rinse in bin filled with DISTILLED WATER (keep a constant flow of distilled water into bin).

e) Rinse under stream of distilled water $\geq$3X.

e) Drip dry inverted on "clean acid washed glassware" cart--small objects should be dried in plastic mesh basket.

f) Return glassware to appropriate cabinet or drawer.

B. Pipets and Burets

a) Immediately rinse pipet with distilled water after use

a) Submerge in 10% HCl / 10% HNO_3 in pipet canister at least overnight (for trace metals, use HNO_3 only).

b) Rinse with distilled water in the pipet washer $\geq$6X.

C. Dichromate or 'NoChromix' Washing (Kjeldahl, organic matter).

Wear goggles, viton gloves, apron, coat, etc.

a) Remove all rep. numbers with acetone.

b) Rinse well with distilled water to remove bulk of contents. Check for any residues--scrub if necessary

c) Wash completely all surfaces of glassware with acid. If possible, allow to soak overnight.

d) Rinse in bin of distilled water. Then rinse under stream of distilled water $\geq$5X.

e) Drip dry inverted on "clean acid wash" cart.

f) Return glassware to appropriate location.

D. Ashing Glassware for Organic Carbon Analysis.

Glassware should first be acid washed.

a) Place tubes in stainless steel rack or beaker with opening up.

b) Cover open tops of tubes or other glassware with Al foil.

c) Ash at 600 °C for 4 hours in muffle furnace.

d) Cool to room temp and return to appropriate storage area until use.