

10A NCAC 42D .0240 CHEMISTRY LABORATORY PRACTICES

The following chemistry laboratory practices shall apply:

- (1) General:
 - (a) Chemicals and reagents. Analytical reagent grade (AR) chemicals or better grade shall be used for analyses. Individual analytical methods in the approved references may specify additional requirements for the reagents to be used.
 - (b) Laboratory safety. Where safety practices are included in an approved method, they shall be strictly followed.
- (2) Inorganic Contaminants:
 - (a) Reagent water. The laboratory shall have a source of reagent water having a resistivity value of at least 0.5 megohms (less than 2.0 micromhos) at 25°C. Quality checks to meet these specifications shall be made at planned intervals of at least once per month.
 - (b) Glassware preparation. Glassware shall be washed in a warm detergent solution and thoroughly rinsed first with tap water and then with reagent water. This cleaning procedure is sufficient for general analytical needs, but the individual procedures shall be referred to for precautions to be taken against contamination of glassware.
- (3) Organic Contaminants:
 - (a) Reagent water. Reagent water for organic analysis shall be free of interferences for the analytes being measured. Water shall be treated when necessary to eliminate interferences.
 - (b) Glassware preparation. Glassware and sample bottles shall be washed in a detergent solution and thoroughly rinsed first in tap water and then in reagent water. Glassware shall have a final organic solvent rinse or shall be baked at 400°C for 30 minutes and then dried or cooled in an area free of organic contamination. Glassware shall be covered with organic-free aluminum foil during storage. Bottles and cap liners, used for collection of samples for determination of volatile organic chemicals (VOCs) shall be dried at 105°C for one hour, sealed, and stored in an area free of volatile organics.

*History Note: Authority G.S. 130A-315;
Eff. December 1, 1991;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 23, 2017.*