

435.28: Bacterial Quality

The Board of Health may cause samples of swimming, wading, or special purpose pool water for bacteriological analysis to be taken from the pool whenever it considers it necessary. All samples shall be collected, dechlorinated and examined in accordance with the procedure outlined in the latest edition of the Standard Methods for the Examination of Water and Waste Water (APHA). The bacteriological quality of the water from the pool shall meet the following standards: No sample shall:

- (1) contain more than 200 bacteria per milliliter, as determined by the standard (35°C) agar plate count, or show a positive test (confirmed test) for coliform organisms in any of the five 10-milliliter portions of a sample or more than 1.0 coliform organism per 50 milliliters when the membrane filter test is used; and
- (2) show a positive test (confirmed test) for pseudomonas aeruginosa organisms in any of the five 10 milliliter portions of a sample or more than 1.0 pseudomonas aeruginosa organisms per 100 milliliters when the membrane filter test is used.

435.29: Chemical Standards

- (1) Swimming, wading and special purpose pool water shall be treated in accordance with the following tables:

Type of Disinfection	pH	Alkalinity (ppm)(mg/l)	Residual Chlorine (ppm)(mg/l)
Chlorine	7.2-7.8	50-150	1.0-3.0 Free 0.0-0.2 Combined
Bromine	7.2-7.8	50-150	2.0-6.0

Other equally effective disinfectants registered with the United States Environmental Protection Agency as an approved disinfectant, may be used as a substitute for chlorine or bromine, subject to the approval of the local Board of Health.

- (2) Tests for residual disinfectant shall be made four times daily, once during the peak load by the pool operator, or more often if required by the Board of Health.
- (3) Hydrogen-Ion Concentration (pH): Tests for hydrogen-ion concentration (pH) shall be made simultaneously with the residual disinfectant test by the pool operator of each swimming pool, and whenever else the Board of Health considers it necessary.
- (4) Alkalinity and calcium hardness: Tests for alkalinity and calcium hardness shall be made weekly by the pool operator of each pool and whenever else the Board of Health considers it necessary.
- (5) If cyanuric acid is used to stabilize the free available residual chlorine, or if one of the chlorinated isocyanurate compounds is used as the disinfecting chemical, the concentration of cyanuric acid in the water should be at least 30 mg/l, but shall not exceed 100 mg/l.
- (6) When electronic monitoring devices are used in conjunction with chlorine or bromine disinfection at a swimming, wading or special purpose pool, the operator shall check the disinfectant, pH and alkalinity levels manually at least once every 24 hours.

435.30: Water Testing Equipment

- (1) The operator shall provide and use a DPD test kit for measuring the concentration of chlorine or bromine and an appropriate test kit for measuring pH, alkalinity, and cyanuric acid levels at each swimming, wading and special purpose pool. The test kit shall be maintained in good repair together with an adequate supply of reagents that are no more than one year old. The requirements of 105 CMR 435.29 will not be superseded by the use of automatic equipment.