**Section 820.320 Water Quality**

a) Testing Equipment

1) Water testing equipment for determining pH and disinfectant level of pool water shall be provided. The equipment for determining pH shall include at least five color standards with a range of pH 6.8 to 8.0, as a minimum.

2) If chlorine is used as a disinfectant, a DPD-type test kit shall be provided that includes at least four chlorine color standards with a range of 0.5 to 3.0 p.p.m., as a minimum.

3) If bromine is used as a disinfectant, a colorimetric test kit shall be provided that will determine free bromine residual and pH. The test kit shall include at least five bromine standards covering a range of 1.0 to 5.0 p.p.m.

4) Pools using chlorinated cyanurates for disinfection shall have a test kit to measure cyanuric acid concentration. The cyanuric acid test kit shall permit readings up to 100 p.p.m.

5) Where silver/copper or copper ion generators are used, a test kit to determine the concentration of copper shall be provided.

b) Disinfectant Residual

1) If chlorine is used as a disinfectant, the chlorine residual shall be maintained between 1.0 and 4.0 p.p.m. as free chlorine residual. A free chlorine residual of at least 2.0 p.p.m. shall be maintained when the pool water temperature exceeds 85° F.

2) If bromine is used as a disinfectant, a bromine residual shall be maintained between 2.0 and 8.0 p.p.m. as total bromine. A bromine residual of at least 4.0 p.p.m. shall be maintained when the pool water temperature exceeds 85° F.

3) If chlorinated cyanurates are used, the cyanuric acid concentration shall not exceed 100 p.p.m.

4) When combined chlorine in excess of 0.5 p.p.m. is detected, the pool shall be superchlorinated to attain a free chlorine concentration of at least 10 times the combined chlorine concentration, or oxidized by other means to eliminate the combined chlorine.

5) If silver/copper or copper ion generators are used, the concentration of copper shall not exceed 1.3 p.p.m. and the concentration of silver shall not exceed 0.05 p.p.m.

6) If ozone is used, the ambient air ozone concentration shall be less than 0.1 p.p.m. at all times either in the vicinity of the ozonator or at the pool water surface.

c) pH. The pH of the pool water shall be maintained between 7.2 and 7.6.

d) Turbidity. The pool water shall be sufficiently clear that the entire pool basin is clearly visible from the pool deck.

e) Alkalinity. The alkalinity of the pool water shall not be less than 50 nor more than 200 p.p.m. as calcium carbonate.

f) Temperature. The pool water temperature for indoor swimming pools shall not be less than 76° F or more than 92° F. Air temperature at an indoor pool shall be higher than the water temperature.

(Source: Amended at 37 Ill. Reg. 16539, effective October 4, 2013)