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CHAPTER *4462*. PUBLIC DRINKING WATER SYSTEMS

8.2 Disinfection: When it is specifically required by these regulations, or when it is deemed to be required to ensure compliance with subsection 3.4 or where it is demonstrated through bacteriological testing that there is a need for disinfection, continuous disinfection shall be provided. The disinfection shall be chlorine, unless a substitute is approved prior to installation. Plans and specifications for the disinfection system shall be approved in accordance with subsection 2.11. When the disinfection is instituted, it shall be operated such that a free chlorine ***residual*** of at least 0.3 mg/L is maintained throughout the water distribution system. The supplier of water shall keep accurate records of the amount of chlorine used and shall have an approved test kit for measuring both free and total chlorine ***residuals***. The supplier of water shall be required to conduct chlorine ***residual*** testing at least daily, and shall report these results to the Division on a monthly basis in accordance with subsection 4.1.1. If a substitute disinfectant is approved, the operational and monitoring requirements shall be specified by the Division.

8.2.1 Public water systems must measure ***residual*** disinfectant concentrations with one of the analytical methods in the following table. Except for the method for ozone ***residuals***, the disinfectant ***residual*** methods are contained in the 18 [th], 19 [th], and 20 [th] editions of Standard Methods for the Examination of Water and Wastewater, 1992, 1995, and 1998 respectively; the cited methods published in any of these three editions may be used. The ozone method, 45400-O 3 B, is contained in both the 18 [th] and 19 [th]editions of Standard Methods for the Examination of Water and Wastewater, 1992, 1995 respectively; either edition may be used. If approved by the Division, ***residual*** concentrations for free chlorine and combined chlorine also may be measured by using DPD colorimetric test kits. Free and total chlorine ***residuals*** may be measured continuously by adapting a specified chlorine ***residual*** method for use with a continuous monitoring instrument

provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days, or with a protocol approved by the Division.

Residual	Methodology	Methods
Free Chlorine	Amperometric Titration	4500-Cl D
	DPD Ferrous Titrimetric	4500-Cl F
	DPD Colorimetric	4500-Cl G
	Syringaldazine (FACTS)	4500-Cl H
Total Chlorine	Amperometric Titration	4500-Cl D
	Amperometric Titration (low level measurement)	4500-Cl E
	DPD Ferrous Titrimetric	4500-Cl F
	DPD Colorimetric	4500-Cl G
	Iodometric	4500-Cl I
Chlorine Dioxide	Amperometric Titration	4500-ClO_2 C
	DPD Method	4500-ClO_2 D
	Amperometric Titration	4500-ClO_2 E
Ozone	Indigo Method	4500-O_3 B