



Maine Center for
Disease Control and Prevention

An Office of the
Department of Health and Human Services

Guidance for Small Water Systems With Continuous Chlorination Disinfection

Maine CDC Drinking Water Program • 11 SHS Augusta, ME 04330 • 287-2070 • www.medwp.com

Your chlorination system is a key part of delivering safe drinking water to your customers and requires regular care to keep it working effectively. Monitoring your chlorination system and reporting to the Drinking Water Program (DWP) helps ensure that your system is properly working. This document is intended to provide guidelines for maintaining your chlorination treatment system.

Chlorine Residuals

How do I measure chlorine residuals?

Test for chlorine residuals using a DPD method, free chlorine, low range (0 mg/l to 3.5 mg/l) chlorine test kit. A pool test kit is **NOT** acceptable. Follow the instructions in your chlorine test kit to measure free chlorine residual. Before testing, ensure the test kit is usable (i.e. vials are not stained and reagents have not expired). Pick a sample point in the distribution system according to your sampling plan, such as a kitchen sink.

What should my chlorine residual be?

The target chlorine residual range for most systems is 0.2 mg/l to 0.7 mg/l of free chlorine in the system. At no time should the level be over 4.0 mg/l at the first faucet after the chlorinator.



Chlorine Bleach

What kind of bleach can I use?

You must use chlorine that has been certified to meet NSF/ANSI Standard 60 in your continuous chlorination system. Agencies that certify to Standard 60 include NSF International (NSF), Underwriters Laboratories (UL), and Water Quality Association (WQA). Unscented Clorox bleach is certified to NSF/ANSI Standard 60. *Always check the label to ensure it meets this requirement.*



How should I maintain the chlorine solution tank?

It is important to have a written procedure in place for how to fill the chlorine solution tank. Keep this procedure visible and near to the tank. It should include the amount of bleach used to the ratio of water. Recording keeping is an important and useful tool for managing your water system, every time bleach is added to the solution tank, record the date and amount of bleach added to the tank.

Collecting a Bacteria Sample

Do I need to do anything different when collecting my bacteria sample?

Whenever a bacteria sample is collected for compliance, a chlorine residual should also be taken at the same time and location. Record the chlorine residual reading on the appropriate paperwork.



Keep Your Drinking Water Safe:

✓ Protect Your Source

✓ Take Your Samples

✓ Maintain Your Treatment

✓ Inspect Your Pipes & Tanks

If Your Chlorination System Malfunctions

If your chlorination system is malfunctioning or if there is no chlorine residual in the water system **you must issue a Boil Water Order right away**. You are required to notify all of your customers as soon as possible and within 24 hours. Keep Boil Water Order notices posted until the problem is resolved and the Boil Water Order is lifted. You must also immediately contact the DWP and inform them of the chlorination system malfunction at 287-2070 or after hours at 557-4214.

To ensure the safety of your drinking water you must repair the chlorinator and return the chlorine residual to normal levels to all taps throughout your water system. The Boil Water Order can be removed once the residual is reestablished throughout the system to all taps unless directed otherwise by the DWP. **The DWP reserves the right to verify residual levels or require satisfactory BWO removal bacteria samples before lifting the Boil Water Order.** Additional follow-up water samples may also be required by the DWP.

Maintenance Checklist

- ✓ Only use bleach that is certified to NSF/ANSI Standard 60 (Clorox®).
- ✓ Inspect your treatment system daily to ensure there is adequate chlorine solution in the solution tank and the chemical feed pump is operating.
- ✓ Have a written procedure in place to regularly fill and maintain the chlorine solution tank.
- ✓ Have the chlorination system regularly serviced by a qualified treatment professional.
- ✓ Have essential spare parts onsite or immediately available.
- ✓ Keep maintenance logs detailing when the chlorination system was serviced, when the solution tank was filled, any unusual changes in residuals, etc.



**Certified to
ANSI/NSF 60**