

Chlorine (CL2) Testing Protocol

(Feb. 2022)

We are using a DPD Free Chlorine Reagent to test for free chlorine in the water supply. Chlorine binds to impurities in the water. Therefore, if there is a certain level of free chlorine in the system then the water is considered safe for consumption. The recommended free chlorine range is 0.10 to 0.80 mg/l. If readings are outside of this range, then contact Wayne.

- Test a water sample two times per week (every 3 to 4 days).
- Use only 1 glass cell continuously until discolored and then use a new cell. Discard the old cell.
- Additional DPD Free Chlorine Reagent pillow packs are available in the cupboard at the pump house.

Testing Procedure

- Using a *non-softened water source* such as the cold faucet in the kitchen, allow the cold water to run for at least two minutes ensuring that the water is cold.
- Ensure that the cell is clean. Fill the cell to the 10ml mark, replace the cap and make sure the exterior is dry and clean before installing into the meter.
- Press the "ON/OFF" button to turn the colorimeter "ON", the display will read "CL2". This tells you that the meter is in the range between 0.02 to 2.0 mg/l to measure free chlorine. Please note that if the display reads anything else then you will need to read the booklet carefully or call Wayne to correct the situation.
- Place the cell into the meter holder with the diamond mark facing the keypad and line it up with the same mark on the meter. Fit the plastic ring around the cap to prevent light from entering into the meter.
- Press the "ZERO/TEST" button. After several seconds the display should read "0.00". You have just zeroed the colorimeter (also known as the blank). Do not turn off the meter.
- Remove the cell and empty the complete contents of one pillow package (the reagent) into the cell. The contents should now start to turn pink. Cap the cell, dry the outside, and gently shake it for 20 seconds. Do not vigorously shake the contents as excess bubbles cause incorrect readings.
- Place the cell with the diamond mark facing the key pad into the colorimeter and aligned with the other diamond mark on the meter. Place the plastic ring on top of the cap which blocks out excess light entering into the meter. For consistent and accurate readings, allow the cell to sit for 10 seconds.
- Press the "ZERO/TEST" button. After a few seconds the reading should appear in the display screen. Record the date and reading into the record book.
- Press the "ON/OFF" button to turn the colorimeter off.
- **Cleanliness of the cell is paramount.** Rinse the cell that was used at least 20 times in cold water. Turn the cell upside down and drain any excess water out then air dry.

Important Notes

1. The colorimeter is very precise and all its components must remain clean to maintain the accuracy of the readings.

2. Keep your procedures precise and the same from one reading to the next. 20 seconds for the shake and 10 seconds for the rest period before taking the reading.
3. Do not allow any debris to get into the testing chamber. Do not put wet cells into the test chamber.
4. Discard any stained or discolored cells.
5. Replace batteries using the screwdriver in the kit but refer to the instruction booklet before attempting to replace them.
6. Extra reagent pillows are in the cupboard at the pump house.
7. Contact Wayne to check the accuracy of the unit. A set of Standards are available with sealed cells of known concentrations and color to test the meter.

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