Operation & Maintenance of Pocket Colorimeter

Low Range Chlorine Residual Measurement

The Pocket Colorimeter measures chlorine residuals from 0.02 – 4.50 mg/L.
Tests for residuals ranging from 0.02 – 2.20 mg/L must be done in low range setting.
Instructions below apply to low range tests only.

1 Fill the glass bottle with water to the 10 mL line and cap bottle.

2 Wipe the bottle and insert into the meter with the diamond facing the keypad. Cover with instrument cap.

3 Press the ZERO key; screen will illuminate & show "---" then "0.00". If "0.0" appears, switch meter to low range & repeat Step 3.

4 Remove bottle; add reagent from 1 DPD Free Chlorine foil packet; cap bottle and shake for 20 seconds.

5 Wipe the bottle and place in the meter with diamond facing the keypad. Cover with instrument cap.

6 Press READ within 1 minute of adding DPD Free Chlorine reagent. Record results, discard sample, and rinse bottle.

7 Repeat steps 1 to 6 to conduct a Total Chlorine Residual test using reagent from 1 DPD Total Chlorine foil packet. For step 6, **wait 3 to 6 minutes** after adding the reagent before pressing READ. Meter will shut down on its own.

Operation:

- Ensure meter is in low range (LR)
- Ensure DPD packets are not expired
- Use separate bottles for free and total chlorine residual tests; otherwise rinse bottles between tests
- Accuracy is not affected by undissolved powder
- A flashing "2.20" means the test must be done in high range (HR)
- Refer to manual for more detailed instructions

Maintenance:

- Check your meter with Spec Secondary Standards to verify repeatability; readings should fall within the stated tolerance limits to the initial value recorded for that meter
- Clean sample bottles with Hach 88449 HCL 1:1 solution and rinse with deionized water
- Clean the meter with deionized water and a Q-tip or lint free cloth; **do not use alcohol** as it can damage the meter
- Sample bottle must be clean, dry & defect free

To switch between Low Range and High Range:

- Press both the ZERO and READ keys simultaneously
- After one second, release the ZERO key and continue to hold the READ key
- HI or LO will appear on the screen, indicating the range the meter is currently in; repeat process to toggle back and forth

Environment, Climate Change and Municipalities
Water Resources Management Division
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