Checker® HC handheld colorimeter Using the HI 758: Optimizing Results

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1) Measure 1.0 mL of Reagent A into the cuvet.

a. It's important to dose one full milliliter of Reagent A. Using less than 1 mL will result in a false high reading.

b. Make sure you use the included tip

2) Fill the cuvet to the 10 mL mark with RO/DI water

a. Use the included pipette to dose the RO/DI water into the cuvet

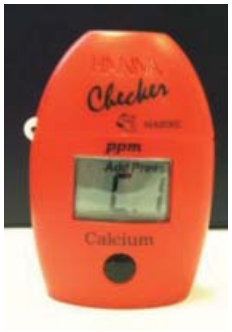
b. Make sure the meniscus is just over the 10 mL line.

3) Zero the HI 758.

a. Turn the meter on. It will display "C.1"

b. Add the cuvet containing 1 mL Reagent A and RO/DI water

c. Press the button to zero the instrument



4) Add 0.1 mL of sample.

a. It's important to dose exactly 0.1 mL of sample. The sample size is small, so to be accurate it's important to:

i. Use the included syringe tip

ii. Rinse the syringe 2-3 times with sample water

iii. Dose precisely 0.1 mL

b. To dose 0.1 mL, fill the syringe to the **1.0 mL** mark with your sample water. Slowly push the plunger to the **0.9 mL** mark, thus dosing 0.1 mL of sample into the cuvet.

Before

After

5) Add one packet of Reagent B

a. Cut off two adjacent sides of the packet, and push the corners together to make a funnel shape.

b. Pour the contents into the cuvet. Shake vigorously for 15 seconds, and then let rest for 15 seconds to allow any micro bubbles to dissipate.

6) Put the reacted sample in the HI 758 and press the button to take a measurement.

TOP TIPS

The chemical method of measuring calcium used by the HI 758 is far more accurate than any other available in this price range. It allows the precision of 1 ppm measurements, rather than 10 ppm on widely available test kits using alternative methods. Out of necessity, this method requires a very small sample size, with a dilution. Therefore certain practices become very important. Following these tips will ensure accurate and repeatable results.

- **It's important to use good quality RO/DI water.** Any residual calcium in the RO/DI water will be magnified during the testing procedure and can result in a false positive/out of range reading. Even levels of calcium undetectable by a TDS meter (which could be 3-4 ppm, even if the meter reads 0) will skew the reading. Use HI 70436 (3.75 L) or HI 70436M (250 mL) Hanna triple filtered RO/DI for best results.
- **Always use the syringe tips.** When using the tips, it doesn't matter if there is an air bubble under the plunger, or if there is reagent left in the tip after dosing.
- **Use a full 1.0 mL of Reagent A.** Using less than 1.0 mL will result in false high readings.
- **Be consistent with plunger placement on the sampling syringe.** If the plunger is just touching the top of the 1.0 mL line, push the plunger so it is just touching the top of the 0.9 mL line to dose exactly 0.1 mL sample.
- **Rinse the sampling syringe.** Fill the syringe with sample water and empty it 2-3 times before drawing a sample to dose. This will clear out any residual salts from previous uses, or any RO/DI water if you have rinsed with that.

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