1. Fill the mixing bottle with the water sample to be tested to the top of the etched mark (25ml); the bottom of the curved surface or meniscus should be exactly level with the mark.

2. Add 15 drops of **Hardness Indicator Buffer Solution** and swirl the vial to mix.

3. If the water turns ***BLUE***, no hardness is present and the answer is reported as zero. If the water turns ***Red*** or ***Purple***, hardness is present and the test should be continued to Step 4.

4. Add **HT-2 Hardness Titrating Solution**, dropwise, while the drops are counted, until the water changes to a ***BLUE*** color. This is the endpoint.
(Care should be taken to hold the ***OptiDrop*** dispenser bottle in a vertical position for accurate results.)

5. The total hardness of the water, in ppm or (mg/L), is equal to the number of drops of **HT-2 Hardness Titrating Solution** used times the factor shown on the bottle of titrant. (See examples.)

Indicator Added Hardness Present

Blue Endpoint

EXAMPLES:
13 drops x 1 = 13 ppm or (mg/L).
13 drops x 2 = 26 ppm or (mg/L).
13 drops x 5 = 65 ppm or (mg/L).
13 drops x 10 = 130 ppm or (mg/L).
13 drops x 20 = 260 ppm or (mg/L).
13 drops x 50 = 650 ppm or (mg/L).

#8417 Total Hardness Test Kit
(1drop = 1,2,5,10,20 or 50ppm/25ml)

MCI OptiDrop Test Procedure

Replacement Reagents & Equipment for Total Hardness Test Kit #8417
1- #R8411-Q/1-2-5-10-20 or 50ppm HT-2 Hardness Titrating Solution
1- #143-A Hardness Indicator Buffer Solution
1- #401- Scribed Test Bottle, 25ml Plastic
1- #8404- Plastic Test Kit Box w/Foam Insert

Product Control Notes:

#8417 Total Hardness Test Kit
(1drop = 1,2,5,10,20 or 50ppm/25ml)

MCI OptiDrop Test Procedure