

Hardness (Total & Calcium) Test Kit TK3059-Z

1 drop = 2 or 10 ppm as CaCO_3 / 25 mL

blue caps

KIT COMPONENTS:

ED2073-B	Hardness Titrant Low, 60 mL
ED2070-B	Hardness Titrant High, 60 mL
HA7405-A	Hardness Buffer Solution, 30 mL
HA7430-A	Hardness Indicator Liquid, 30 mL
CA1119-A	Calcium Buffer, 30 mL
CA1100-H	Calcium Indicator Powder, 10 g
VL-1005-V	Vial, 10-50 mL

INTERFERENCES: Metals may cause difficulty in seeing the endpoint. If metal interference is presumed, add one drop of Hardness Titrant to the sample before adding buffer or indicator. Include this drop of titrant when calculating your results. Additional Hardness Buffer may be necessary to view a clean endpoint.

SAFETY TIPS:



Wear
Gloves



Use Eye
Protection



Read
SDS

TESTING TIPS:



Collect
Accurate
Sample



Hold
Bottles
Vertically



Ensure
Proper
Lighting

ATTENTION: As necessary, calibrate this kit against a known standard made with plant / make-up water. Be sure to collect a representative sample.



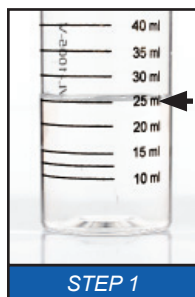
- 1** Rinse vial three times with sample to be tested. **Fill vial to 25 mL.**

For Total Hardness, go to Step 2.
For Calcium Hardness, go to Step 4.

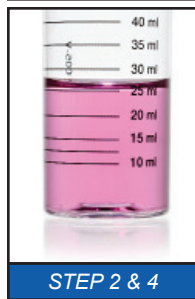
- 2** Add 5 drops of **Hardness Buffer** (HA7405) and swirl to mix. **Add 5 drops of Hardness Indicator** (HA7430) and swirl to mix.

Note: The sample will turn red if hardness is present and blue if there is no hardness.

- 3** Add **Hardness Titrant** one drop at a time while swirling. Count the number of drops until the color changes from red to blue. Record drops as Total Hardness. Multiply drops by factor to obtain results.



STEP 1



STEP 2 & 4

- 4** Add 5 drops of **Calcium Buffer** (CA1119) and swirl to mix. **Add 1 scoop of Calcium Indicator Powder** (CA1100) and swirl to mix.

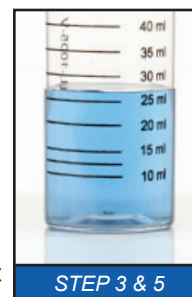
Note: The sample will turn red if hardness is present and blue if there is no hardness.

- 5** Add **Hardness Titrant** one drop at a time while swirling. Count the number of drops until the color changes from red to blue. Record drops as Calcium Hardness. Multiply drops by factor to obtain results.

Factor:

Hardness Titrant Low (ED2073)
of drops x 2 = ppm as CaCO₃

Hardness Titrant High (ED2070)
of drops x 10 = ppm as CaCO₃



STEP 3 & 5

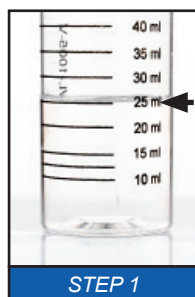
- 1** Rinse vial three times with sample to be tested. **Fill vial to 25 mL.**

For Total Hardness, go to Step 2.
For Calcium Hardness, go to Step 4.

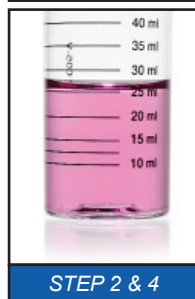
- 2** Add 5 drops of **Hardness Buffer** (HA7405) and swirl to mix. **Add 5 drops of Hardness Indicator** (HA7430) and swirl to mix.

Note: The sample will turn red if hardness is present and blue if there is no hardness.

- 3** Add **Hardness Titrant** one drop at a time while swirling. Count the number of drops until the color changes from red to blue. Record drops as Total Hardness. Multiply drops by factor to obtain results.



STEP 1



STEP 2 & 4

- 4** Add 5 drops of **Calcium Buffer** (CA1119) and swirl to mix. **Add 1 scoop of Calcium Indicator Powder** (CA1100) and swirl to mix.

Note: The sample will turn red if hardness is present and blue if there is no hardness.

- 5** Add **Hardness Titrant** one drop at a time while swirling. Count the number of drops until the color changes from red to blue. Record drops as Calcium Hardness. Multiply drops by factor to obtain results.

Factor:

Hardness Titrant Low (ED2073)
of drops x 2 = ppm as CaCO₃

Hardness Titrant High (ED2070)
of drops x 10 = ppm as CaCO₃



STEP 3 & 5