### ALKALINITY IN WATER TEST KIT

**CODE 7240-01**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>CONTENTS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mL</td>
<td>*Phenolphthalein Indicator, 0.5%</td>
<td>*2258-E</td>
</tr>
<tr>
<td>15 mL</td>
<td>Total Alkalinity Indicator</td>
<td>2786-E</td>
</tr>
<tr>
<td>2 x 30 mL</td>
<td>*Sulfuric Acid, 0.12N</td>
<td>*7748WT-G</td>
</tr>
<tr>
<td>1</td>
<td>Test Tube, 5-10-25 mL, plastic, w/cap</td>
<td>0715</td>
</tr>
</tbody>
</table>

*WARNING:* Reagents marked with a * are considered to be potential health hazards. To view or print a Material Safety Data Sheet (MSDS) for these reagents see MSDS CD or www.lamotte.com. To obtain a printed copy, contact LaMotte by e-mail, phone or fax.

To order individual reagents or test kit components, use the specified code number.

**NOTE:** This test allows the analyst to use different sample volumes to vary equivalencies. Select the appropriate sample volume from the table below and add reagents as specified.

<table>
<thead>
<tr>
<th>SAMPLE SIZE</th>
<th>EQUIVALENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mL</td>
<td>1 drop = 10 ppm</td>
</tr>
<tr>
<td>10 mL</td>
<td>1 drop = 25 ppm</td>
</tr>
<tr>
<td>5 mL</td>
<td>1 drop = 50 ppm</td>
</tr>
</tbody>
</table>
PROCEDURE

PHENOLPHTHALEIN (P) ALKALINITY

1. Rinse sample tube with sample water. Fill with desired sample size selected from table above.

2. Add *Phenolphthalein Indicator, 0.5% (2258) as follows:
   - 25 mL sample: 2 drops
   - 10 mL sample: 1 drop
   - 5 mL sample: 1 drop
   Mix. Solution will turn pink if Active Alkalinity is present. If solution is colorless, P Alkalinity is zero; proceed to Step 5.

3. While gently swirling tube, add *Sulfuric Acid, 0.12N (7748WT), one drop at a time, until pink color disappears. Count the number of drops added. Hold bottle vertically.

4. Multiply number of drops used in Step 3 as follows:
   - 25 mL sample: multiply by 10
   - 10 mL sample: multiply by 25
   - 5 mL sample: multiply by 50
   Record as ppm P Alkalinity as CaCO₃.
   
   DO NOT DISCARD SAMPLE IF TESTING FOR TOTAL (T) ALKALINITY.

TOTAL (T) ALKALINITY

5. To sample from Step 4 add Total Alkalinity Indicator (2786) as follows:
   - 25 mL sample: 3 drops
   - 10 mL sample: 2 drops
   - 5 mL sample: 2 drops
   Mix. Solution will turn green.

6. While gently swirling tube, add *Sulfuric Acid, 0.12N (7748WT), one drop at a time, until green color changes to red. Count the number of drops added. Hold bottle vertically.

7. Multiply number of drops used in Step 6 as follows:
   - 25 mL sample: multiply by 10
   - 10 mL sample: multiply by 25
   - 5 mL sample: multiply by 50
   Add this result to the P Alkalinity from Step 4. Record as ppm T Alkalinity as CaCO₃.

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