

**Phosphonate****561700320****0 - 20 mg/L HEDP****Material**

| <b>Reagents</b>              | <b>Packaging Unit</b> | <b>Part Number</b> |
|------------------------------|-----------------------|--------------------|
| Phosphonate Neutraliser P1/2 | 65 mL                 | 56L070465          |
| Phosphonate Indicator P4L    | 65 mL                 | 56L017565          |
| Phosphonate pH Adjuster P3   | 65 mL                 | 56L718365          |
| Phosphonate Titrant P5       | 65 mL                 | 56L017665          |

The following accessories are required.

| <b>Accessories</b>                     | <b>Packaging Unit</b> | <b>Part Number</b> |
|--|-----------------------|--------------------|
| Syringe, plastic, 20 mL                | 1 pc.                 | 56A006501          |
| Titration jar with cap, plastic, 60 mL | 1 pc.                 | 56A006701          |

**Application List**

- Cooling Water

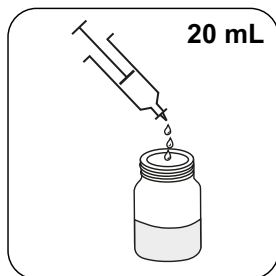
**Notes**

1. **Carry out the test on the Treated Water (Result A) and then on Untreated Water (Result B).**
2. Colours may vary depending on sample and test conditions.
3. This test is suitable for measuring AMP and HEDP type products.
4. Good results have also been obtained with PBSAM.
5. For accurate results the test should be calibrated to each product at typical system dose levels.
6. Standards should be prepared in water as similar as possible to system water (e.g. hard or soft).
7. Add factors into table.
8. Samples less than 20 mL should be diluted to approximately 20 mL with deionized water.

## Sampling

Select the sample volume from the table according to the expected measuring range and read off the factor to calculate the result.

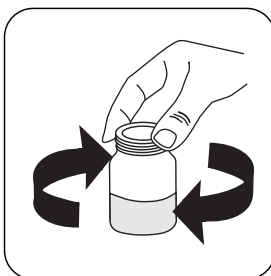
| <b>Expected Range</b> | <b>Titrant used</b>       | <b>Sample Size</b> | <b>Factor</b> |
|-----------------------|---------------------------|--------------------|---------------|
|                       | Phosphonate<br>Titrant P5 |                    |               |
|                       | Phosphonate<br>Titrant P5 |                    |               |
|                       | Phosphonate<br>Titrant P5 |                    |               |



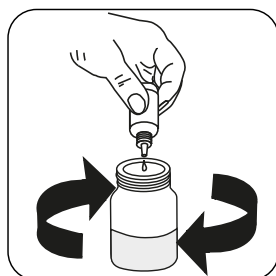
Fill the jar with **20 mL** of the sample.



Add **sufficient** drops of **Phosphonate Neutraliser P1/2** to give a **yellow** colour.



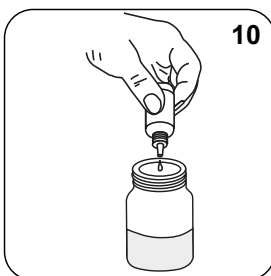
Swirl to mix.



Add drops of **Phosphonate pH Adjuster P3** until the sample is colourless .



Swirl to mix.



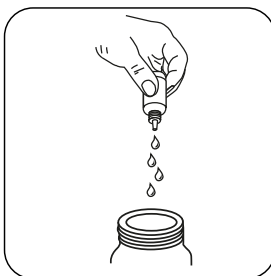
Add **10 drops Phosphonate Indicator P4L**.



Swirl to mix.

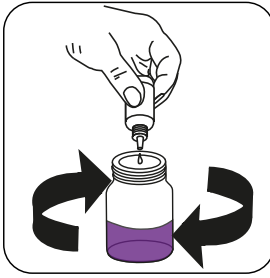


The sample will turn **light green** .



**Attention!** Record the number of drops that will be added.

**Note:** Make sure to swirl the jar after adding each drop!



Add **Phosphonate Titrant P5** drop by drop to the sample until colouration turns through **grey** to **purple**.



**Perform this test with treated (Result A) and untreated water (Result B).**

**Calculate test result: Product mg/L = Number of drops (result A - result B) x factor (see table)**