

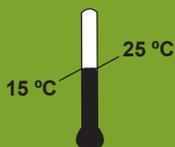
# Lovibond® Water Testing

Tintometer® Group



## Closed System Weekly Test Kit

56I701120





## Closed System Weekly Test Kit

### Cooling Water Monitoring

The Closed Water Test Kit is designed for use on all types of Closed Water Systems such as Cooling Water Circuits and Heating Systems. The kit should be used to monitor water conditions to ensure that the systems are under control and do not exhibit signs of corrosion, scaling or microbiological fouling.

#### Tests supplied are as follows:

1. Conductivity/TDS
2. Iron (Comparator)
3. Molybdate (Comparator)
4. Nitrite (Drop test)
5. pH

#### Note:

1. The conductivity meter will also measure temperature directly on the display.
2. Further instructions can be found with the corresponding product.

Nitrite

56I700300

10 - 2000 mg/L NaNO<sub>2</sub>

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**Material**

Reagents	Packaging Unit	Part Number
Nitrite Indicator N1	65 mL	56L017165
Nitrite Titrant N2	65 mL	56L017265

The following accessories are required.

Accessories	Packaging Unit	Part Number
Syringe, plastic, 20 mL	1 Pieces	56A006501
Test Tube 5/10 mL + Cap	1 Pieces	56A600401
Titration jar with cap, plastic, 60 mL	1 Pieces	56A006701
Plastic syringe, 1 ml	1 Pieces	56A013501

**Remarks**

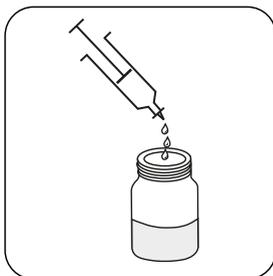
1. Colours may vary depending on sample and test conditions.
2. This test can be used to determine the nitrite reserve in cooling systems. Note that other reducing agents such as sulphite and ascorbic acid will increase the observed result.
3. Results from this test are expressed as sodium nitrite (NaNO<sub>2</sub>). To convert from mg/L as sodium nitrite to mg/L as nitrite (NO<sub>2</sub>), multiply the result obtained by 0.67.

## Sampling

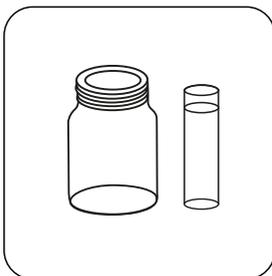
Select the sample volume from the table according to the expected measuring range and read off the factor to calculate the result.

<b>Expected Range</b>	<b>Titrant used</b>	<b>Sample Size</b>	<b>Factor</b>
10-40 mg/L	5 drops of Nitrite Indicator N1	40 mL	1.25
25-100 mg/L	4 drops of Nitrite Indicator N1	20 mL	2.5
50-150 mg/L	3 drops of Nitrite Indicator N1	10 mL	5
100-400 mg/L	2 drops of Nitrite Indicator N1	5 mL	10
300-1000 mg/L	1 drop of Nitrite Indicator N1	2 mL	25
500-2000+ mg/L	1 drop of Nitrite Indicator N1	1 mL	50

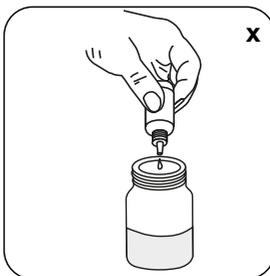
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**Attention!** Select the appropriate sample volume according to the instructions in the chapter Sampling.



Use a titration jar for larger samples or test tube for smaller samples (5 mL or less).



Add **X** drops of **Nitrite Indicator N1** reagent to the sample, according to the selected sample volume (see table in the notes).



Swirl to mix.

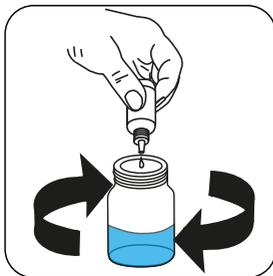


The sample will turn **orange** (if nitrite is present).

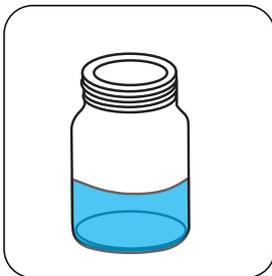


**Attention!** Record the number of drops that will be added.

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



Add **Nitrite Titrant N2** drop by drop to the sample until colouration turns from **orange to blue**.



The color should persist for at least **10** seconds.

**Calculate test result:** Nitrite (as  $\text{NaNO}_2$ ) mg/L = Number of drops x factor (see table)

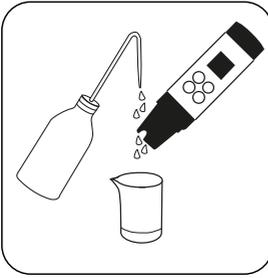


**Conductivity****SD / Con****0 - 20 mS/cm**

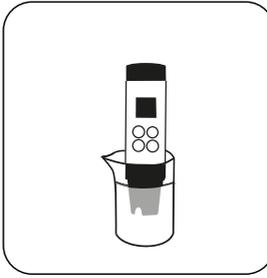
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**Remarks**

1. The description of the calibration and the device settings are described in the detailed operating instructions. Detailed operating instructions are enclosed with the device.



Rinse the electrode with distilled or deionised water and carefully wipe with a paper towel.



Hold the tester without protective cap in the sample water to be measured so that the electrode and temperature probe is immersed in the sample water not deeper than the seal ring.



The measurement result is displayed.

pH

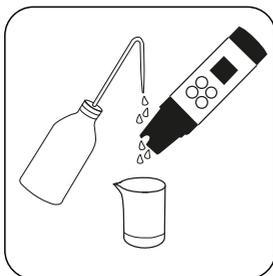
SD / pH

0 - 14

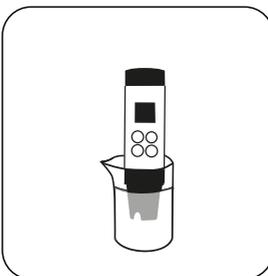
**Remarks**

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1. The description of the calibration, the preparation of the buffer solutions and the device settings are described in the detailed operating instructions. Detailed operating instructions are enclosed with the device.



Rinse the electrode with distilled or deionised water and carefully wipe with a paper towel.



Hold the tester without protective cap in the sample water to be measured so that the electrode and temperature probe is immersed in the sample water not deeper than the seal ring.



The measurement result is displayed.

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