

# Copper

**Test kit for performing colorimetric tests  
on copper ions in surface water and sewage**

**Method:**

Combined with cuprizone [oxalic acid bis(cyclohexylidene hydrazide)], copper(II) ions form a blue complex in the alkaline range.

**Measurement range:**

0.1–1.5 mg/L Cu<sup>2+</sup>

**Contents (\*refill pack):**

sufficient for 100 tests

30 mL Cu-1\*

20 mL Cu-2\*

2 screw-plug measuring glasses

1 slide comparator

1 color chart

1 plastic syringe 5 mL

1 instruction for use\*

**Hazard warning:**

Information regarding safety can be found on the box' label and in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

**Instructions for use:**

*also refer to the pictogram on the back of the color chart*

1. Pour a **5 mL water sample** into each of the measuring glasses using the plastic syringe.  
Place a measuring glass on position A in the comparator.

**Only add the reagent to measuring glass B.**

2. Add **5 drops of Cu-1**, seal the glass and mix.
3. Add **5 drops of Cu-2**, seal the glass and mix.
4. Open the glass after **10 min** and place it on position B in the comparator.
5. Slide the comparator until the colors match in the inspection hole on top. Check the measurement reading in the recess on the comparator reed. Mid-values can be estimated.
6. After use, rinse out both measuring glasses thoroughly and seal them.

The reagents can be used for the **photometric evaluation** with photometers PF-12 / PF-12<sup>Plus</sup> / Advance.

This technique can be used also for analyzing sea water.

**Disposing of the samples:**

Information regarding disposal can be found in the safety data sheet. You can download the SDS from [www.mn-net.com/SDS](http://www.mn-net.com/SDS).

**Interferences:**

Strongly acidic and buffered test samples are to be adjusted to pH 9 with ammonia before determination.

Iron(II), chromium(VI), nickel and manganese ions disrupt tests if they are present in concentrations in excess of 10 mg/L. Chromium(III) ions present in concentrations in excess of 10 mg/L cause clouding and lead to limited results. Cobalt ions form a red color complex and, depending on the concentration of copper, disrupt the tests if present in concentrations from as little as 1 mg/L. If cyanide and sulfide are present in concentrations in excess of 1 mg/L, they will lead to limited results.

**Conversion table:**

mg/L Cu <sup>2+</sup>	mmol/m <sup>3</sup>
0.1	1.6
0.2	3.1
0.3	4.7
0.5	7.9
0.7	11
1.0	16
1.5	24

**Storage:**

Store the test kit in a cool (< 25 °C) and dry place.