

Copper

High sensitivity test kit for the determination in the range of 0.04–0.50 mg/L Cu²⁺

Method:

Complex of copper with cuprizone

Contents of test kit (*refill pack):

sufficient for 150 tests

80 mL Cu-1*

60 mL Cu-2*

2 round glass tubes with screw caps

1 comparator block

1 color comparison disc Copper

Hazard warning:

This test does not contain any harmful substances which must be specially labelled as hazardous.

Procedure:

1. Insert color comparison disc (see illustration).
2. Open both round glass tubes. rinse several times with the water sample and fill up to the mark with the sample.
3. Add 10 drops Cu-1 to the right glass tube. close and mix.
4. Add 10 drops Cu-2 to the right glass tube. close and mix. Wait 10 min.
5. Reading: Turn color disc until both colors match by transmitted light from above. Read test results from the mark on the front side of the comparator (see illustration). Intermediate values can be estimated.
6. After use clean both round glass tubes thoroughly and close.

mg/L Cu ²⁺	mmol/m ³
0.04	0.6
0.07	1.1
0.10	1.6
0.15	2.4
0.20	3.1
0.25	3.9
0.30	4.7
0.40	6.3
0.50	7.9

This method can be applied also for the analysis of sea water.

Disposing of the samples:

The used analysis specimens can be flushed down the drain with tap water and channelled off to the local sewage treatment works.

Interferences:

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 und sulfide are present in concentrations in excess of 1 mg/L. they will lead to limited results.

