visocolor® ECO

Cyanide

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

Method:
Cyanide ions react with chloramine T to form cyanogen chloride. Combined with isonicotinic acid and 1,3-dimethylbarbituric acid, this forms a blue polymethine dye. The method identifies free cyanide and cyanide complexes that are decomposed by chlorine.

Measurement range:
0.01–0.20 mg/L CN^-

Contents of test kit (*refill pack):
sufficient for 100 tests

19 mL CN-1*
4 g CN-2*
28 mL CN-3*
1 measuring spoon 70 mm*
2 screw-plug measuring glasses
1 slide comparator
1 color chart
1 plastic syringe 5 mL
1 instructions 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***.

Procedure:
a) colorimetric determination with color chart
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 CN-1**, seal the glass and mix.
3. Add **1 level measuring spoonful of CN-2**, seal the glass and dissolve by swirling.
4. Add **5 drops of CN-3**, seal the glass and mix.
5. Open the glass after **15 min** and place it on position B in the comparator.
6. 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.
7. After use, rinse out both measuring glasses thoroughly and seal them.

b) photometric determination

The reagents are also suitable for **photometric evaluation**. Please refer to the separate instructions for photometric performance.

The method can be applied also for the analysis of sea water after dilution (1+3).

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***.

Interferences:
Complexed cyanide is not or not completely detected. Reducing agents interfere since they react with the chlorinating agent. Thiocyanate, sulfide, bromide and iodide interfere even in low concentrations (> 0.1 mg/L).

The following ions will not interfere:
< 1000 mg/L Ca^{2+}, Mg^{2+}, Zn^{2+}, Cl^-, F^-, PO_4^{3-}, SO_4^{2-}; < 200 mg/L Cd^{2+};
< 50 mg/L NO_2^-; < 20 mg/L Cr(III), Fe^{3+}; < 10 mg/L Al^{3+}, Mn^{2+};
< 5 mg/L Cr(VI), Cu^{2+}; < 1 mg/L Ni^{2+}

To circumvent interferences readily liberated cyanide is separated by destillation before determination *(see „Note")*.

Note:
For the determination of readily liberated cyanide and total cyanide as well as for the determination of cyanide in stone-fruit spirits, please contact MACHEREY-NAGEL for special working instructions.

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

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