visocolor® ECO

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Oxygen

Test kit for performing colorimetric tests

on dissolved oxygen in surface water and sewage

Method:
modified Winkler method
In the alkaline range, dissolved oxygen oxidizes manganese(II) ions to higher manganese hydroxides. Acidification leads to the release of manganese(III) ions which react with a special reagent forming a dark red dye.

Measurement range:
1–10 mg/L O_2

Contents of test kit (*refill pack):
sufficient for 50 tests
- 15 mL O_2-1*
- 15 mL O_2-2*
- 30 mL O_2-3*
- 2 screw-plug measuring glasses
- 1 slide comparator
- 1 colour chart
- 1 plastic syringe 1 mL
- 1 instructions for use*

additionally required: oxygen reaction bottle (REF 915498)

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***.

Instructions for use:

a) colorimetric determination with color chart
also refer to the pictogram on the back of the color chart
Cover the working surface with a polyethylene-coated filter paper.

1. Pour a **1 mL water sample** into one of the measuring glasses and place it on position A in the comparator.
2. Rinse the **oxygen reaction bottle** several times with the water to be tested and fill until it overflows without air bubbles.
3. Add **5 drops of O_2-1**.
4. Add **5 drops of O_2-2**, close the bottle with the stopper (avoid air bubbles) and mix by shaking.
5. After **1 min** add **12 drops of O_2-3**, close the bottle and shake well until the deposit is dissolved.
6. Pour **1 mL** of the resultant reaction solution into the second measuring glass and place it on position B in the comparator.
7. 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.
8. After use, rinse out the oxygen reaction bottle and 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.

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:
Most oxidizing and reducing substances interfere, e. g. active chlorine, higher manganese compounds, ascorbic acid, iodide, nitrite, sulfide and sulfite. Organic compounds interfere, if the potassium permanganate consumption exceeds 60 mg/L.

Conversion table:

mg/L O_2	mmol/m^3
1	31
2	63
3	94
4	125
6	190
8	250
10	310

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

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