visocolor® HE

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Phosphate (DEV[1])

High sensitivity test kit for the determination in the range of 0.01 – 0.25 mg/L P

Method:
Phosphomolybdenum blue

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

5 g PO_4–1*
80 mL PO_4–2*
1 black measuring spoon 70 mm*
1 plastic beaker for sampling
2 round glass tubes with screw caps
1 comparator block
1 color comparison disc Phosphate

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:

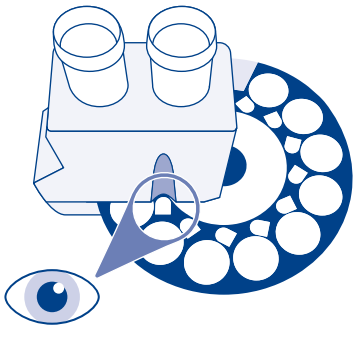
1. Insert color comparison disc (see illustration).
2. Open both round glass tubes, rinse several times with the water sample and fill up to the mark with the sample.
3. Add 1 level black measuring spoon PO_4–1 to the right glass tube, close and mix.
4. Add 15 drops PO_4–2 to the right glass tube, close and mix. Wait 5 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 P	mg/L PO_4^{3-}	mg/L P_2O_5	mmol/m^3
0.01	0.03	0.02	0.3
0.02	0.06	0.05	0.6
0.03	0.09	0.07	1.0
0.05	0.15	0.11	1.6
0.07	0.21	0.16	2.3
0.10	0.31	0.23	3.2
0.15	0.46	0.34	4.8
0.20	0.61	0.46	6.5
0.25	0.77	0.57	8.1

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:
Arsenate ions form a color complex similar to the phosphate complex. Interferences up to 1 mg/L arsenate can be eliminated by reduction to arsenite with thiosulfate.
Oxidizing agents in larger amounts inhibit formation of the blue color complex. They must be destroyed prior to the determination.
The following ions will not interfere:
≤ 1 mg/L NO_2^-
≤ 2 mg/L H_2S
≤ 10 mg/L heavy metals, Si(IV)
≤ 70 mg/L F^-
The temperature of the water sample should be between 18 and 30 °C. Outside this range the rate of the reaction decreases by finding less phosphate than actually present.



[1] based on German Standard Methods

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