Special information

05.06.2023, Version 3, FRI

True and apparent color in compact photometer PF-12*Plus*

Accessories and preparation		
Parameter	Color, true and apparent APHA Platinum-Cobalt Standard Method*	
Reagents and equipment	Compact photometer PF-12*Plus* (REF 919250) 2x empty test tubes 16 mm OD (included in the PF-12*Plus* case), REF 91680 50 mL deionized water *NANOCOLOR*® Membrane filtration kit 0.45 µm (REF 91650)	
Programming data	Method name:	Color Pt-Co
	Filter WL (Wavelength):	436 nm
	Factor (F0):	0.0000
	Factor (F1):	2927
	Factor (F2):	0.0000
	Factor (F3):	0.0000
	Factor (F4):	0.0000
	Factor (FLn):	0.0000
	Decimals:	0
	Unit :	mg/L
	Suffix:	Pt
	Min. value:	25
	Max. value:	500

*Reference: Eugene W. Rice, Rodger B. Baird, Andrew D. Eaton, Lenore S. Clesceri: Standard Methods For the Examination of Water and Wastewater, 22nd EDITION

Programming the special method

1) Switch on the photometer PF-12*Plus*. On the display “Method: _ _ _” appears.
2) Press the PROG.-Key. The display shows “Method: Pxx”.
3) Enter a free program number (for example “P01”).
4) The PF-12*Plus* asks for creating a new method? Confirm with OK.
5) Enter step by step the above programming data and confirm the respective entry with OK.
6) Store the new method by confirming with OK when “Save method?” is displayed.

Procedure

1) Rinse the membrane filter by pouring 10 mL of deionized water through it. Discard the rinse water.
2) Pour another 10 mL of deionized water through the membrane filter and collect the rinse water in a clean 16 mm OD test tube.
3) Pour 10 mL of the sample through the membrane filter and collect it in a second clean 16 mm OD test tube.
4) Call up the special method for Color Pt-Co via Method: Pxx.
5) Clean the blank tube from outside, place it in the cuvette slot and press “Null/Zero”.
6) Clean the test tube with the sample from outside, place it in the cuvette slot and press “M”. The result will be displayed as mg/L Pt.

Note: For determination of the apparent color use unfiltered deionized water and unfiltered sample.

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General information

The color of a water sample may be expressed as true color or apparent color. The true color includes all dissolved materials within a sample, whereas the apparent color includes the dissolved and suspended matter in a sample. By filtering the suspended matter from the deionized water and the sample with a 0.45 µm filter the true color can be determined. The stored method can be used for determination of the true and apparent color. The method is suitable for water, waste water and sea water. The measurement does not require any additional reagents from MACHEREY-NAGEL.

Sampling and storage

Collect the samples in clean glass or plastic bottles, fill bottles completely and close tightly. Avoid prolonged contact to air. Storage of samples at 4°C is possible up to 24 hours. Warm up the samples to room temperature before measurement.

Standard and method performance

For checking the accuracy of the method we recommend the use of a Pt-Co-Standard with a concentration of 250 mg/L Pt. Using a 250 mg/L Pt-Co-Standard solution a single operator obtained a standard deviation of ±10 mg/L Pt color units. The calculated detection limit of the method is 22 mg/L Pt color units.

Contact

If you have further questions, please do not hesitate to contact us:

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