REF 985 052

en

Test 0-52 07.15 *NANOCOLOR*® organic Complexing Agents 10

(Screening Test)

Method:
Photometric determination of the decoloration of the bismuth xylenol orange complex

Range:	**0.5–10.0 mg/L I_{BiC}**
Factor:	**011.7**
Wavelength (HW = 5–12 nm):	**540 nm**
Reaction time:	**5 min (300 s)**
Reaction temperature:	**20–25 °C**

Contents of reagent set:
20 test tubes organic Complexing Agents 10
1 tube *NANOFIX* organic Complexing Agents 10 R2

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

Notes:
The method described is a screening test which covers strong complexing agents. If results are positive, metals which are present can be totally or partially withdrawn from the photometric determination. For the complete determination of these metals the sample has to be decomposed with *NANOCOLOR*® *NanOx* Metal (REF 918 978).
The result is displayed as bismuth complexing index I_{BiC}, corresponding to:
1 mg/L I_{BiC} ≙ 1.4 mg/L EDTA
≙ 1.0 mg/L NTA

Interferences:
Copper(I) cyanide simulates the presence of a strong complexing agent. Addition of zinc powder circumvents this interference.

The method can be applied also for the analysis of sea water after dilution (1+19).

Procedure:
Requisite accessories: piston pipette with tips

Procedure A: no interference by Fe^{3+} ions

Test sample	Blank value
Open test tube, add	Open test tube, add
4.0 mL test sample, close and mix.	**4.0 mL** distilled water, close and mix.
(The pH value in the test tube with sample solution has to be < 2, otherwise add sulfuric acid.)	
Clean outside of test tube and measure after 5 min.	Clean outside of test tube and measure after 5 min.

Procedure B: in presence of Fe^{3+} ions

Test sample	Blank value
Open test tube, add	Open test tube, add
4.0 mL test sample and	**4.0 mL** distilled water and
1 ***NANOFIX*** R2, close and mix.	**1** ***NANOFIX*** R2, close and mix.
(The pH value in the test tube with sample solution has to be < 2, otherwise add sulfuric acid.)	
Clean outside of test tube and measure after 5 min.	Clean outside of test tube and measure after 5 min.
(Close NANOFIX tube immediately after use.)	

Measurement:
For *NANOCOLOR*® photometers and PF-12 see manual, test 0-52.
For each analysis a blank value is required.

Measurement when samples are colored or turbid:
For all *NANOCOLOR*® photometers see manual, use key for correction value.

Photometers of other manufacturers:
For other photometers check whether measurement of round glass tubes is possible. Verify factor for each type of instrument by measuring standard solutions.

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