

REF 985074

Test 0-74

03.23

**NANOCOLOR® Phenolic index 5****Method:**

Photometric determination of phenols and other compounds capable of oxidative coupling, which form antipyrine dyes with 4-aminoantipyrine, and, if wanted, subsequent extraction with isobutyl methyl ketone (MIBK)

	Tube test	10 mm cuvette after extraction	
Range:	<b>0.2–5.0 mg/L</b> phenolic index	<b>0.2–5.0 mg/L</b> phenolic index	
Wavelength (HW = 5–12 nm):	<b>520 nm</b>	<b>445 nm</b>	<b>470 nm</b>
Reaction time:	<b>5 min (300 s)</b>	<b>15 min (900 s)</b>	
Reaction temperature:	<b>20–25 °C</b>	<b>20–25 °C</b>	

**Contents of reagent set:**

- 20 test tubes Phenolic index 5
- 2 test tubes each with 11 mL Phenolic index 5 R2
- 1 tube *NANOFIX* Phenolic index 5 R3

*Note: The content of the 20 test tubes Phenolic index 5 may be colored lightly yellow, which has no influence to the color reaction.*

**Hazard warning:**

Test tubes contain 4-aminoantipyrine 25–100 %, reagent R2 contains ammonia 1–5 %, reagent R3 contains potassium peroxodisulfate 20–100 %.

H317, H334 May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261, P272, P280, P302+352, P304+340, P333+313, P342+311, P363 Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection. IF ON SKIN: Wash with plenty of water/ ... IF INHALED: Remove person to fresh air and keep comfortable for breathing. If skin irritation or rash occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER/doctor/ ... Wash contaminated clothing before reuse. For further information ask for a safety data sheet.

**Interferences:**

- oxidizing substances
- reducing substances
- cyanides
- applicable for turbid water **after extraction**
- applicable for sea water **after extraction**

To ensure the measuring results, extraction with isobutyl methyl ketone (MIBK, REF 918929) is recommended, analogous to DIN 38 409 H16.

**Procedure:**

Requisite accessories: piston pipette with tips

Open test tube, add  
**1.0 mL** R2 and  
**4.0 mL** test sample (*the pH value of the sample must be between pH 1 and 13*), close and mix. Add  
**1** *NANOFIX* R3, close and mix.  
*(Close NANOFIX tube immediately after use.)*  
 Clean outside of test tube and measure after 5 min.

**Procedure with extraction:**

Requisite accessories: piston pipette with tips, glass cuvettes 10 mm, isobutyl methyl ketone R4 (MIBK, REF 918929)

Test sample	Blank value
Open test tube, add <b>1.0 mL</b> R2 and <b>4.0 mL</b> test sample ( <i>the pH value of the sample must be between pH 1 and 13</i> ), close and mix. Add <b>1</b> <i>NANOFIX</i> R3, close and mix. <i>(Close NANOFIX tube immediately after use.)</i> Wait <b>5 min</b> . Add <b>4.0 mL</b> R4 (MIBK), close and shake vigorously for <b>30 s</b> .	Open test tube, add <b>1.0 mL</b> R2 and <b>4.0 mL</b> distilled water, close and mix.  Add <b>1</b> <i>NANOFIX</i> R3, close and mix. <i>(Close NANOFIX tube immediately after use.)</i> Wait <b>5 min</b> . Add <b>4.0 mL</b> R4 (MIBK), close and shake vigorously for <b>30 s</b> .

After 15 min open test tubes with test sample and blank value and pipet each about 2 mL of the upper organic phase into 10 mm cuvettes and measure [method 1742].

**Measurement:**

For *NANOCOLOR®* photometers and PF-12 see manual, test 0-74.

**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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