



## Phenol T

M315

0.1 - 5 mg/L C<sub>6</sub>H<sub>5</sub>OH

4-Aminoantipyrine

## Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

Instrument Type	Cuvette	$\lambda$	Measuring Range
MD 600, MD 610, MD 640	ø 24 mm	530 nm	0.1 - 5 mg/L C <sub>6</sub> H <sub>5</sub> OH
SpectroDirect, XD 7000, XD 7500	ø 24 mm	507 nm	0.1 - 5 mg/L C <sub>6</sub> H <sub>5</sub> OH

## Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Phenole No. 1	Tablet / 100	515950BT
Phenole No. 2	Tablet / 100	515960BT

## Application List

- Waste Water Treatment
- Raw Water Treatment

## Preparation

1. The aqueous sample solution should have a pH value between 3 and 11.

## Notes

1. This method determines ortho- and metha-substituted phenols but not all para-substituted phenols (see: "Standard Methods of Examination of Water and Wastewater, 22nd Edition, 5-46ff.")

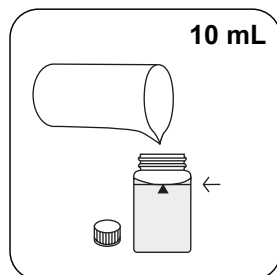




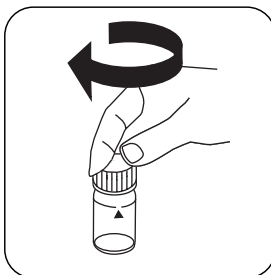
## Determination of Phenol with Tablet

Select the method on the device.

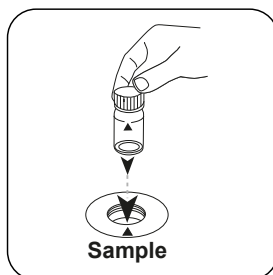
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



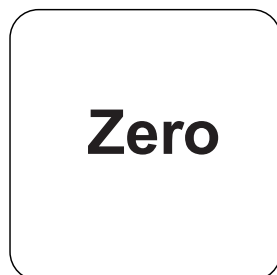
Fill 24 mm vial with **10 mL sample**.



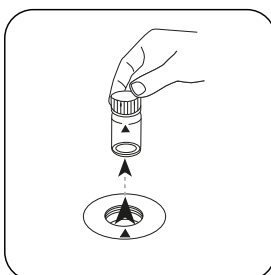
Close vial(s).



Place **sample vial** in the sample chamber. Pay attention to the positioning.

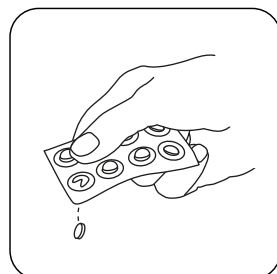


Press the **ZERO** button.

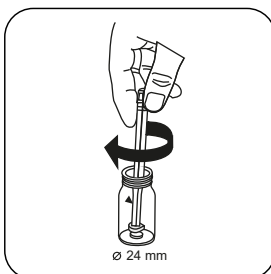


Remove the vial from the sample chamber.

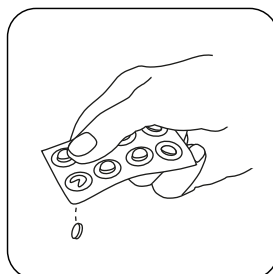
For devices that require **no ZERO measurement**, start here.



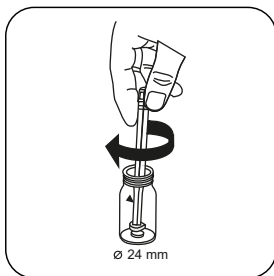
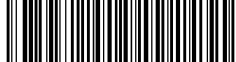
Add **PHENOLE No. 1 tablet**.



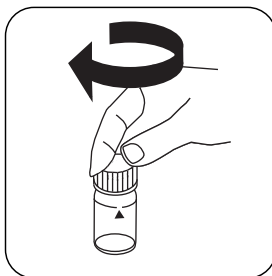
Crush tablet(s) by rotating slightly and dissolve.



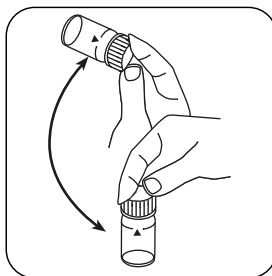
Add **PHENOLE No. 2 tablet**.



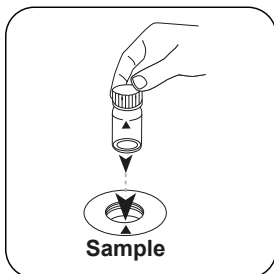
Crush tablet(s) by rotating slightly.



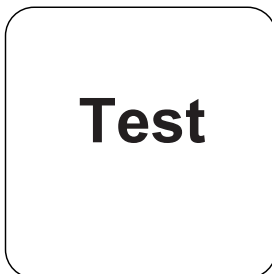
Close vial(s).



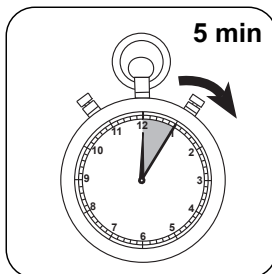
Dissolve tablet(s) by inverting.



Place **sample vial** in the sample chamber. Pay attention to the positioning.



Press the **TEST** (XD: **START**) button.



Wait for **5 minute(s) reaction time**.

Once the reaction period is finished, the measurement takes place automatically.  
The result in mg/L Phenole appears on the display.



## Chemical Method

4-Aminoantipyrine

## Appendix

### Calibration function for 3rd-party photometers

Conc. =  $a + b \cdot \text{Abs} + c \cdot \text{Abs}^2 + d \cdot \text{Abs}^3 + e \cdot \text{Abs}^4 + f \cdot \text{Abs}^5$

	ø 24 mm	□ 10 mm
a	$-4.16246 \cdot 10^{-2}$	$-4.16246 \cdot 10^{-2}$
b	$3.18197 \cdot 10^{+0}$	$6.84124 \cdot 10^{+0}$
c		
d		
e		
f		

## Interferences

### Removeable Interferences

1. In case of known or suspected interferences (e.g. phenol-decomposing bacteria, oxidizing agents, reducing agents, sulfur compounds and suspended solids) the sample should be pre-treated accordingly, see "Standard Methods for Examination of Water and Wastewater, 22nd Edition, 5-46 ff".

## Method Validation

Limit of Detection	0.03 mg/L
Limit of Quantification	0.09 mg/L
End of Measuring Range	5 mg/L
Sensitivity	3.21 mg/L / Abs
Confidence Intervall	0.024 mg/L
Standard Deviation	0.01 mg/L
Variation Coefficient	0.39 %

### According to

Standard Method 5530  
US EPA Method 420.1