

**Tannin L****M389****0.5 - 20 mg/L Tannin****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	660 nm	0.5 - 20 mg/L Tannin
XD 7000, XD 7500	ø 24 mm	735 nm	0.5 - 20 mg/L Tannin

**Material**

Required material (partly optional):

Reagents	Packaging Unit	Part Number
KS539 - Tannin Reagent 1	30 mL	56L053930
Tannin Reagent 2	30 mL	56L746530

**Application List**

- Boiler Water

**Sampling**

1. If samples are turbid, filter before testing using GF/C filter papers.
2. For tannin concentrations higher than 20 mg/L the sample may be suitably diluted with distilled water prior to analysis. The result must then be multiplied by the dilution factor.

**Notes**

1. This test is very sensitive to the reaction period time. The sample must be read as close as possible to 5 minutes, starting from the addition of Tannin Reagent 2 being added to the pressing of the TEST key. Incorrect results will be displayed if this is not strictly followed.

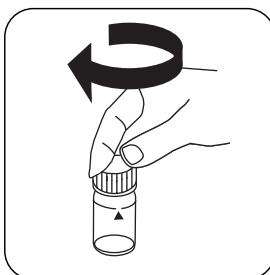


## Determination of Tannin with liquid reagents

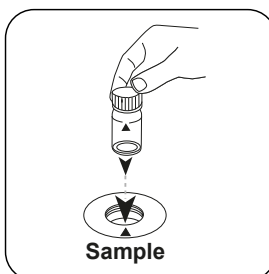
Select the method on the device.



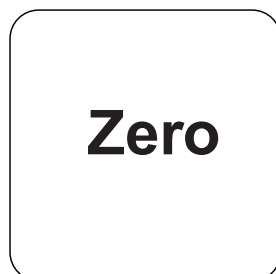
Fill 24 mm vial with **10 mL sample**.



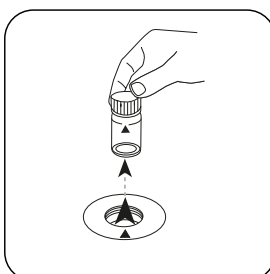
Close vial(s).



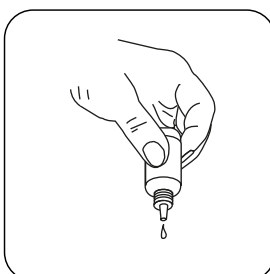
Place **sample vial** in the sample chamber. Pay attention to the positioning.



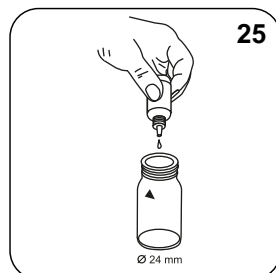
Press the **ZERO** button.



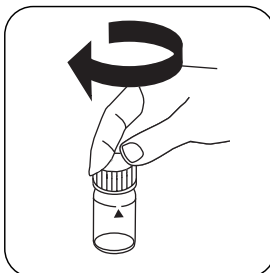
Remove the vial from the sample chamber.



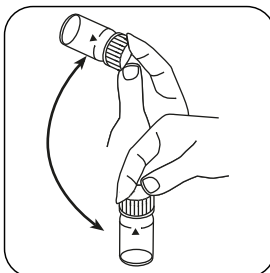
Hold cuvettes vertically and add equal drops by pressing slowly.



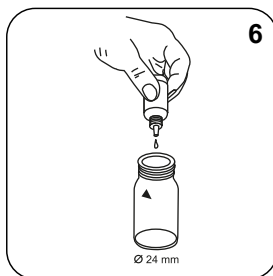
Add **25 drops Tannin Reagent 1**.



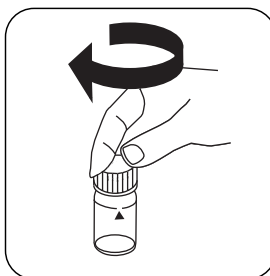
Close vial(s).



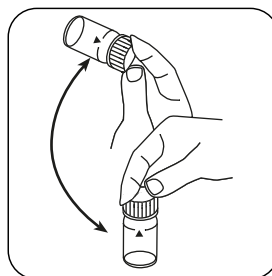
Invert several times to mix the contents.



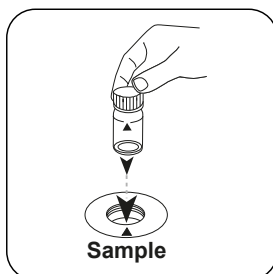
Add **6 drops Tannin Reagent 2**.



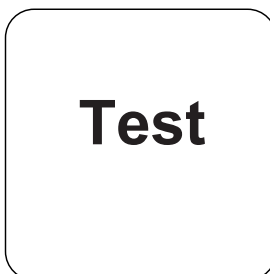
Close vial(s).



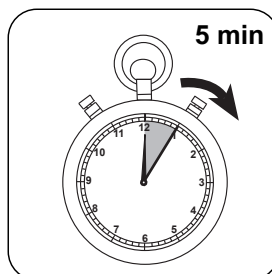
Invert several times to mix the contents.



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



Press the **TEST** button.



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

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

## Appendix

### Calibration function for 3rd-party photometers

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

	ø 24 mm	□ 10 mm
a	$3.28646 \cdot 10^{+0}$	$3.28646 \cdot 10^{+0}$
b	$7.84007 \cdot 10^{+0}$	$1.68562 \cdot 10^{+1}$
c		
d		
e		
f		

### Method Validation

Limit of Detection	0.13 mg/L
Limit of Quantification	0.26 mg/L
End of Measuring Range	20 mg/L
Sensitivity	7.72 mg/L / Abs
Confidence Intervall	0.93 mg/L
Standard Deviation	0.38 mg/L
Variation Coefficient	0.65 %

#### Derived from

5550 B Standard Method