



Tannin-Lignin Test Kit

TA-3 (193701)

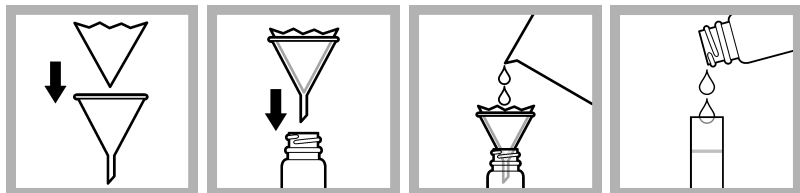
DOC326.97.00080

Test preparation

CAUTION: ⚠️ *Review the Safety Data Sheets (MSDS/SDS) for the chemicals that are used. Use the recommended personal protective equipment.*

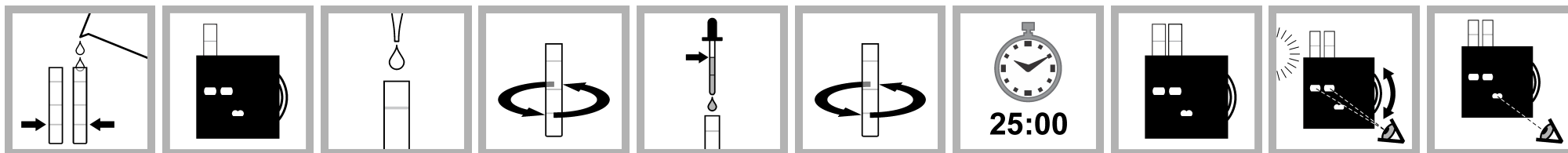
- Put the color disc on the center pin in the color comparator box (numbers to the front).
- Use sunlight or a lamp as a light source to find the color match with the color comparator box.
- Rinse the tubes and bottles with sample before the test. Rinse the tubes and bottles with deionized water after the test.
- If the color match is between two segments, use the value that is in the middle of the two segments.
- If the color disc becomes wet internally, pull apart the flat plastic sides to open the color disc. Remove the thin inner disc. Dry all parts with a soft cloth. Assemble when fully dry.
- Use the filtration procedure for samples that contain turbidity.

Filtration procedure for turbid samples



1. Put the filter paper in the funnel.
2. Put the funnel on the bottle.
3. Pour the sample into the funnel.
4. Use the filtered sample in the test procedure.

Test procedure—Tannin-Lignin MR (1–15 mg/L as Tannic Acid)



1. Fill two tubes to the first line (5 mL) with sample.
2. Put one tube into the left opening of the color comparator box.
3. Add 1 drop of TanniVer 3 Reagent to the second tube.
4. Swirl to mix.
5. Use the dropper to add 1 mL of Sodium Carbonate Solution to the second tube.
6. Swirl to mix.
7. Wait 25 minutes. A blue color develops.
8. Put the second tube into the color comparator box.
9. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.
10. Read the result in mg/L in the scale window.

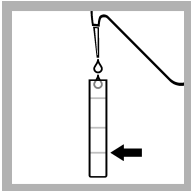
Replacement items

Description	Unit	Item no.
TanninVer™ 3 Reagent	100 mL MDB	256032
Sodium Carbonate Solution	100 mL MDB	67532
Water, deionized	100 mL	27242
Color disc, tannin-lignin, 0–15 mg/L and 0–150 mg/L	each	9263200
Color comparator box	each	173200
Glass viewing tubes, 18 mm	6/pkg	173006
Stoppers for 18-mm glass tubes and AccuVac Ampuls	6/pkg	173106
Dropper, plastic	each	608000
Formaldehyde, ACS	100 mL MDB	205932
Bottle, square, 29 mL without cap	6/pkg	43906
Filter paper, 2–3 micron, pleated, 12.5 cm	100/pkg	189457
Funnel, poly, 65 mm	each	108367

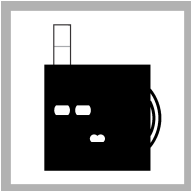
Optional items

Description	Unit	Item no.
Sodium pyrophosphate	50 g	1429525
Spoon, measuring, 0.05 g	each	49200

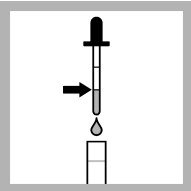
Test procedure—Tannin-Lignin HR (1–150 mg/L as Tannic Acid)



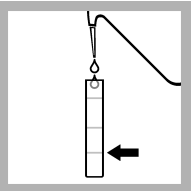
1. Fill a tube to the first line (5 mL) with deionized water.



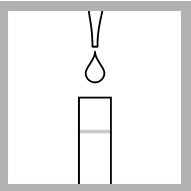
2. Put the tube into the left opening of the color comparator box.



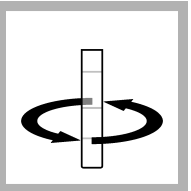
3. Use the dropper to add 0.5-mL of sample to a second tube.



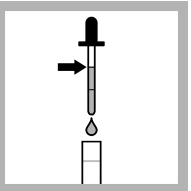
4. Fill the second tube to the first line (5 mL) with deionized water.



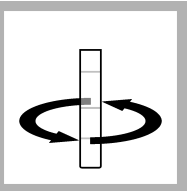
5. Add 1 drop of TanniVer 3 Reagent to the second tube.



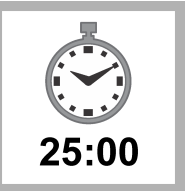
6. Swirl to mix.



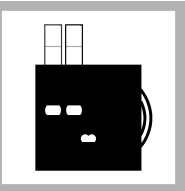
7. Use the dropper to add 1 mL of Sodium Carbonate Solution to the second tube.



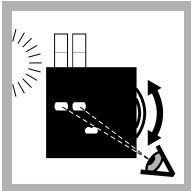
8. Swirl to mix.



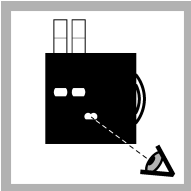
9. Wait 25 minutes. A blue color develops.



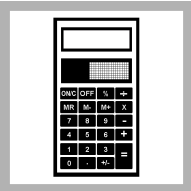
10. Put the second tube into the color comparator box.



11. Hold the color comparator box in front of a light source. Turn the color disc to find the color match.



12. Read the value in the scale window.



13. Multiply the value by 10 to get the result in mg/L.

Interferences

Substance	Interference level
Ferrous iron	Causes a positive interference. A solution of 2 mg/L ferrous iron in the test procedure has a color that is equivalent to approximately 1 mg/L of tannic acid. To remove the interference from a maximum 20 mg/L ferrous iron, add one 0.05 g scoop of sodium pyrophosphate to the sample before the TanninVer 3 Reagent is added. A greenish color can occur if high ferrous iron levels are in the sample with low tannin levels.
Sulfite	To remove sulfite interference, add 4 drops of formaldehyde to the sample before the test is started.
Aromatic hydroxy compounds (e.g., phenol and cresol)	Causes a positive interference at all levels.