

Recipes for Tannin Assay Reagents

Recipe for Buffer A

For one liter of Buffer A use 12 mL of glacial acetic acid + 9.86 grams of sodium chloride.

Tip: first measure out about 500 mL of dionized water and then add the acid and salt.

Wait until the salt dissolves then adjust the pH to 4.9 with sodium hydroxide. Adjust the volume to 1 liter with water. The pH will not change even though you add water.

Recipe for Buffer B

For 0.5 liter of Buffer B weigh out 2.5 grams of KHTartrate and put into 400 mL of deionized water. Next add 60 mL of 100% ethanol. Stir for approximately 5 minutes, don't worry if all of the KHTartrate does not all dissolve. Adjust the pH to 3.3 with HCl and then bring the volume to 500 mL with deionized water.

Recipe for Buffer C

For 0.5 liter of Buffer C weigh out 25 grams of SDS and put into 400 mL of deionized water.

Add 25 mL of triethanolamine. Use a pH meter while stirring the solution to monitor the pH. Allow the pH to stabilize and then adjust to pH 9.4 with HCl . Adjust the volume to 500 mL with deionized water.

Recipe for Ferric Chloride

For 250 mL of Ferric Chloride Reagent weigh out 0.676 g Ferric Chloride hexahydrate and add it to 250 mL of deionized water. Then add 200 microliters of 12.1 N HCl (33-37 % HCl).

Recipe for Bleaching Solution*

For 100 mL the Bleaching Solution add 7.9 grams potassium metabisulfite to 100 mL of water.

Standard Catechin solution

Dissolve 2 mg of catechin into 200 microliters of 200 proof ethanol and then add 1.8 mL of deionized water.

Solution Stability

The Protein solution is stable if kept in a refrigerator. The remaining solutions are stable except for the catechin solution, which should be made fresh each time.

* Not used for tannin assays, only required for polymeric pigment assays.

Reagent Name	Sigma Cat # or Fisher Cat #	(g or L)
Potassium Metabisulfite	P 2522	500
Ferric Chloride Hexahydrate	F 2877	100
Sodium dodecyl Sulfate	L 5750	100
Bovine Serum Albumin	A 3803	10
Triethanolamine	T 1377	1
Hydrochloric Acid	A508-212	2.5
Sodium Chloride	S 9625	2.5
Glacial Acetic Acid	A38-212	2.5
Sodium Hydroxide	S 0899	500
(+) -Catechin	C 1251	1