

10% Ammonium persulfate

Product	Con.	Cat#	Size
10% Ammonium persulfate	10%	IBS-BA013	10 ml

Components : 10%(w/v) Ammonium persulfate

Storage Conditions : Cold

Molecular formula : $(\text{NH}_4)_2\text{S}_2\text{O}_8$

Molecular mass : 228.18 g/mol

Introduction : Ammonium persulfate $(\text{NH}_4)_2\text{S}_2\text{O}_8$ is a strong oxidizing agent. It is very soluble in cold water, a large fall of temperature accompanying solution. It is a radical initiator. It is used to etch copper on printed circuit boards as an alternative to ferric chloride solution. It is also used along with tetramethylethylenediamine to catalyze the polymerization of acrylamide in making a polyacrylamide gel.

Preparing acrylamide gels

The gels generally consist of acrylamide, bisacrylamide, SDS, and a Tris-Cl buffer with adjusted pH.

The solution is degassed under a vacuum to prevent air bubbles during polymerization. Ammonium persulfate and TEMED are added when the gel is ready to be polymerized. The separating or resolving gel is usually more basic and has a higher polyacrylamide content than the loading gel.

Gels are polymerized in a gel caster. First the separating gel is poured and allowed to polymerize. Next a thin layer of isopropanol is added. Next the loading gel is poured and a comb is placed to create the wells. After the loading gel is polymerized the comb can be removed and the gel is ready for electrophoresis.

Preparation for 30% Acrylamide/Bis Solutions, 29:1

	stack		Resolving Gel	
	4%	7.5%	12%	X%
30% Acrylamide/Bis	3.3ml	25ml	40ml	$3.3(X\%)=(A)^* \text{ ml}$
0.5M Tris-HCl, pH6.8	6.3ml	-	-	-
1.5M Tris-HCl, pH8.8	-	25ml	25ml	25ml
10% SDS	250ul	1.0ml	1.0ml	1.0ml
D.W.	15ml	48.5ml	33.5ml	$73.5 - (A)\text{ml}$
TEMED	25ul	50ul	50ul	50ul
10% APS	125ul	500ul	500ul	500ul
Total volume	25ml	100ml	100ml	100ml