

Stock Solutions

Item

Adenine	Dissolve 200mg adenine sulfate/100mL DI H ₂ O, sterilize by autoclaving. For minimal media, add 20mL of stock/L; final concentration: 40mg/L.
Ammonium acetate	Dissolve 385.4 g ammonium acetate in 150mL of water. Volume to 500mL (makes a 10M soln.).
Ammonium persulfate (10%)	Dissolve 0.1g APS into 800uL of water. Volume to 1mL. Store at 4C.
Ampicillin	Dissolve 50mg 800uL water. Volume to 1mL. Store at -20C.
Arginine-HCl	Dissolve 250mg/100mL DI water, sterilize by autoclaving. For minimal media, add 10mL of stock/L; final concentration: 25mg/L.
Aspartate (Asp)	Dissolve 0.5g/100mL DI H ₂ O, sterilize by autoclaving. For minimal media, add 20mL/L; final concentration: 100mg/L.
CaCl ₂ , 1M	Dissolve 147g CaCl ₂ * 2H ₂ O in 500 mL of water. Volume to 1L.
DTT, 1M	Dissolve 15.45g DTT in 100mL of water. Aliquot into 2mL tubes, store at -20C.
EDTA, 0.5M pH8	Dissolve 186.1g Na ₂ EDTA*2H ₂ O in 800mL water. Adjust pH to 8 w/ NaOH (about 20g pellets). Volume to 1L.
Ethidium Bromide	Dissolve 0.2g ethidium bromide to 20 mL water. Mix well and store @ 4C in the dark (stock soln is 10 mg/mL concentration).
Fructose (40%)	Dissolve 40g (slowly) into 60mL DI water, volume to 100mL. Sterilize by autoclaving.
Galactose (10%)	Dissolve 10g into 90mL DI water, volume to 100mL. Sterilize by filtration.
Glucose (40%)	Dissolve 40g (slowly) into 60mL DI water (heat in microwave for 1.5min), volume to 100mL. Sterilize by autoclaving.
HCl, 1M	Add 86.2mL of concentrated HCl to 913.8 mL of water.
HeBS, 2X	Dissolve 16.4 g NaCl, 11.9g Hepes acid, .21 g Na ₂ HPO ₄ into 800mL of water. Adjust pH to 7.05-7.12. Volume to 1L. Filter sterilize (.45um filter).

Histidine-HCl	Dissolve 250mg/100mL DI water, sterilize by autoclaving. For minimal media, add 10mL stock/L, final conc.: 25mg/L.
IPTG	Isopropylthio-β-Dgalactosidase; MW= 283.3 Dissolve 2g IPTG in 8 mL DI water. Volume to 10mL and filter sterilize (.22 micron). Store as 1mL aliquots at –20C.
Isoleucine (Ile)	Dissolve 300mg/100mL DI water, sterilize by autoclaving. For minimal media, add 10mL/L; final conc.:30mg/L.
Kanamycin	Dissolve 10mg into 800uL water. Volume to 1 mL. Store at –20C.
KCL, 1M	Dissolve 74.6g KCl in 500mL water. Volume 10 1L.
Lactate (20%)	Dissolve 20g/80mL DI water, adjust pH to 7 w/ KOH (pH adjusts rapidly after pH 5). Volume to 100mL. Sterilize by autoclaving. Final conc. In media should be 2%.
Leucine (Ileu)	Dissolve 300mg/100mL H2O. Sterilize by autoclaving. For minimal media, add 10mL/L; final conc.: 30mg/L.
Lysine-HCl	Dissolve 300mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL/L; final conc.: 30mg/L.
Maltose (20%)	Dissolve 20g into 80mL DI water. Volume to 100mL. Sterilize by filtration.
Methionine (Met)	Dissolve 250mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL stock/L; final conc.: 25mg/L.
MgCl ₂ , 1M	Dissolve 20.3g MgCl ₂ *6H ₂ O in 70mL water. Volume to 100mL.
MgSO ₄ , 1M	Dissolve 24.6g MgSO ₄ *7H ₂ O to 60mL water. Volume to 100mL.
MOPS buffer	0.2 MOPS (3-(N-morpholino)propanesulfonic acid), pH 7 0.5 M sodium acetate 0.01M EDTA Store in dark and discard if it turns yellow.
NaCl, 5M	Dissolve 292g NaCl in 600mL water. Volume to 1L.
NaOH 10M	Dissolve 400g NaOH in 450mL water. Volume to 1L.
Phenylalanine (Phe)	Dissolve 300mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 20mL/L; final conc.: 60mg/L.

SDS (20%)	Dissolve 20g Lauryl Sulfate into 80mL DI water (heat if necessary), volume to 100mL. PH to 7.2 w/ 5M HCl.
SDS/glycine buffer (5X)	Dissolve 15.1g Tris base, 72g glycine, 5g SDS, in 500mL water. Volume to 1L. Store at 4C. Do not adjust pH of stock soln. Working soln should be pH 8.3.
Serine	Dissolve 4g/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL/L; final conc.: 400mg/L.
Sodium acetate, 3M	Dissolve 408g sodium acetate*3H ₂ O in 800mL water. Volume to 1L. Adjust pH to 4.8 or 5.2 with 3M acetic acid.
TAE (Tris/acetate/EDTA) electrophoresis buffer	<i>50X stock solution:</i> 242g Tris Base, 57.1 mL glacial acetic acid, 100mL 0.5M EDTA (pH 8) <i>1X Working solution:</i> 0.04M Tris acetate, 0.001M EDTA.
TBE (Tris/Borate/EDTA) electrophoresis buffer	<i>5X Stock solution:</i> 54g Tris Base, 27.5g Boric Acid, 20mL 0.5M EDTA (pH 8) <i>0.5X working solution:</i> 0.045M Tris-Borate, 0.001M EDTA
TB salts	Dissolve 2.31g KH ₂ PO ₄ and 12.54g K ₂ HPO ₄ in 80mL of MQ water. Volume to 100mL. Sterilize by autoclaving. Final conc.: 0.17M KH ₂ PO ₄ and .72M K ₂ HPO ₄ .
TCA (trichloroacetic acid)	Dissolve 500g TCA into 227mL water. Resulting solution is 100% w/v.
Threonine	Dissolve 2g/100mL DI water. Sterilize by filtration. For minimal media, add 10mL/L; final concentration: 200mg/L.
Tryptophan	Dissolve 250mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL stock/L; final conc.: 25mg/L.
Tyrosine	Dissolve 150mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 20mL/L; final concentration: 30mg/L.
Uracil (Ura)	Dissolve 200mg/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL of stock/L; final conc.: 25mg/L.
Urea (100mM)	Dissolve 6g Urea and 20g Glucose/100mL DI water. Sterilize by filtration.
Valine (Val)	Dissolve 1.5g/100mL DI water. Sterilize by autoclaving. For minimal media, add 10mL/L; final concentration: 150mg/L.

Notes

- For stock solutions that are sterilized by filtration, use autoclaved DI water and sterilized glassware.
- Make sure all glassware is labeled w/ your initials, date, & contents on your color tape.
- For stock solutions that are sterilized by autoclaving, make sure caps are on loosely and set autoclave to slow exhaust for 40 min.