

Supplementary Information

M9 minimal media 1 L, adjust to 1L with sterile water

10X M9 Buffer	100 ml
1M MgSO ₄	2 ml
1M CaCl ₂	100 µl
Ampicillin/Kanamycin	100 mg/ 25 mg
Solution C	20 ml
Vitamin Stock	500 µl
Thiamin	200 µl
¹⁵ NH ₄ Cl	0.5 g
¹³ C Glucose	3 g
Proline (if necessary)	1 g
Bioexpress (¹³ C and ¹⁵ N labeled)	10ml

M9 Buffer (10X), 1 L autoclave separately

Na ₂ HPO ₄ ·7H ₂ O	128 g
KH ₂ PO ₄	30 g
NaCl	5 g

Solution C, 1 L, adjust pH with 5 M KOH to 6.7

KOH	7.3 g
Metal 44	50 ml
Nitrilotriacetic acid	10 g
MgCl ₂ ·6H ₂ O	24 g
CaCl ₂ ·2H ₂ O	3.335 g

Metal 44 solution, 100ml, Store in dark glass bottle at 4 °C

K ₂ EDTA·2H ₂ O	0.327 g
ZnCl ₂	0.522 g
FeCl ₂ ·4H ₂ O	0.502 g
MnCl ₂ ·4H ₂ O	0.18 g
(NH ₄) ₆ Mo ₇ O ₂₄ ·6H ₂ O	0.0185 g
CuCl ₂ ·2H ₂ O	0.0156 g
Co(NO ₃) ₂ ·6H ₂ O	0.0248 g
Boric Acid	0.0114 g

Vitamin stock, 50 ml, keep in fridge in dark

Nicotinic acid	0.5 g
<i>p</i> -Aminobenzoic acid	0.05 g
Biotin	0.005 g

Thiamin (0.01 g/20 ml), make fresh.