

BG11 MEDIUM

PROTOCOL

- Add the stock solutions, and fill with ultrapure water to prepare 1L
- Autoclave
- After Autoclaving add 1 mL 1000x (Fe)

Sol N°	Reagent	Name	ml/L
S1	NaNO ₃	Sodium nitrate	1 ml
S2	K ₂ HPO ₄	Dipotassium hydrogen phosphate	1 ml
S3	MgSO ₄ .7H ₂ O	Magnesium sulfate heptahydrate	1 ml
S4	CaCl ₂ .2H ₂ O	Calcium chloride dihydrate	1 ml
S5	C ₆ H ₈ O ₇ .H ₂ O	Citric acid monohydrate*	1 ml
S6	C ₆ H ₈ FeNO ₇	Ferric ammonium citrate*	1 ml
S7	Na ₂ EDTA	Ethylenediaminetetraacetic Acid	1 ml
S8	Na ₂ CO ₃	Sodium carbonate	1ml
S9	-	Trace metal Stock solution A5+Co	1 ml

*Due to precipitation, larger volumes require stocks 5 & 6 to be autoclaved separately in 100ml deionized water or alternatively they can be autoclaved separately in test tubes and added to sterile medium in the airflow cabinet.

Composition of stock Solutions:

Trace metal solution A₅+ Co

Reagent	Name	g/L
H ₃ BO ₃	Boric acid	2.86
MnCl ₂ .4H ₂ O	Manganese dichloride tetrahydrate	1.81
ZnSO ₄ .7H ₂ O	Zinc Sulphate Heptahydrate	0.222
Na ₂ MoO ₄ .2H ₂ O	-	0.390
CuSO ₄ .5H ₂ O	Copper sulfate pentahydrate	0.079
Co(NO ₃) ₂ .6H ₂ O	Cobalt(II) nitrate hexahydrate	0.049

Adjust the pH to 7.1 after autoclaving.

For agar plates, add the % of agar needed to the shot, and autoclave.

Reference: Rippka R, Deruelles J, Waterbury JB, Herdman M, Stanier RY (1979) Generic assignments, strain histories and properties of pure cultures of Cyanobacteria *Journal of General Microbiology* 111, 1-61