

2016-07-14

L16 Medium

According to Lindström (1991)

Modified by MZCH

Composition of L16 Medium.

	stock solution (100x, 1 L)		volume of stock for 1 L nutrient solution [mL]	final concentration [mmol/L]
	[mmol/L]	[g/L]		
NaHCO ₃	100	8.4	10	1
NaNO ₃	15	1.275	10	0.15
CaCl ₂ ·2H ₂ O	10	1.47	10	0.1
MgSO ₄ ·7H ₂ O	5	1.232	10	0.05
K ₂ HPO ₄	1	0.174	10	0.01
Na ₂ SiO ₃ ·9H ₂ O	0.4	0.114	10	0.004
micronutrient solution ¹			1	
soil extract ²			10	
ddH ₂ O ³			929	

Adjust pH to 8.1

¹micronutrient solution stock (1000x, 1 L):

	stock [mmol/L]	stock [g/L]
FeCl ₃ ·6H ₂ O	0.4	0.108
Na ₂ MoO ₄ ·2H ₂ O	0.2	0.048
ZnCl ₂	0.2	0.027
MnCl ₂ ·4H ₂ O	0.05	0.01
CoCl ₂ ·6H ₂ O	0.04	0.0096
Na ₂ SeO ₃ ·5H ₂ O ⁴	0.0007	0.000184
Na ₂ EDTA·2H ₂ O (Titriplex® III)	1.5	0.558
ddH ₂ O ³ , ad 1 L		

⁴add from concentrated solution

²preparation of soil extract:

Weigh 50 g of unfertilized acre soil in a 1 L Erlenmeyer flask. Add 625 mL of dest. H₂O. Heat the soil solution and keep at 100 °C for 5 minutes. Place a piece of pleated filter paper on top of a second 1 L Erlenmeyer flask and fill a spatula tip of CaCO₃ on the filter. Filter the soil extract (if necessary overnight) and then stir for 15 min. The extract is then centrifuged for 15 minutes at 2500 g and 20 °C. Transfer and aliquot the supernatant into 50 mL Falcon tubes. Store at -20°C.

The volume of the added soil extract should be adapted to the nutrient requirements of the cultured strains.

³ddH₂O double distilled water

Reference

Lindström, K. (1991) Nutrient requirements of the dinoflagellate *Peridinium gatunense*. J. Phycol. **27**, 207-219.