2016-07-14

C Medium

Ichimura (1971)
Micronutrient solution by Provasoli and Pintner (1959)
NIES

Composition of C Medium.

	stock solutions (1000x, 1 L)		volume of stock for 1 L nutrient solution	final concentration
	[mmol/L]	[g/L]	[mL]	[mmol/L]
$Ca(NO_3)_2 \cdot 4H_2O$	635.2	150	1	0.635
KNO_3	989.02	100	1	1
ß-Na_2glycero-phosphate$\cdot 5H_2O$	163.3	50	1	0.163
$MgSO_4 \cdot 7H_2O$	162.3	40	1	0.162
micronutrient solution[1]			3	
vitamin solution[2]			1	
Tris-HCl	412.7	50	10	4.127
NP-H_2O[3]			982	

Adjust **pH** to **7.5**.

[1]micronutrient solution - P IV metals - stock (333x, 1 L):

	stock [mmol/L]	stock [g/L]
$Na_2EDTA \cdot 2H_2O$ (Titriplex® III)	2.686	1
$FeCl_3 \cdot 6H_2O$	0.725	0.196
$MnCl_2 \cdot 4H_2O$	0.182	0.036
$ZnCl_2$	0.0763	0.0104
$CoCl_2 \cdot 6H_2O$	0.0168	0.004
$Na_2MoO_4 \cdot 2H_2O$	0.0103	0.0025
ddH_2O[4], ad 1 L		

[2]vitamin solution stock (1000x, 1 L)**:**

	stock [mmol/L]	stock [g/L]
cyanocobalamin (B12)	0.00007	0.0001
biotin (H)	0.0004	0.0001
thiamine HCl (B1)	0.0296	0.01
ddH_2O[4], ad 1 L		

Add vitamin solution to the autoclaved and cooled-down medium via sterile filtration.

[3]NP-H_2O nanopure water, Purelab Pulse (ELGA Lab water, Celle, Germany)

[4]ddH_2O double distilled water

References

1. Ichimura, T. (1971) Sexual cell division and conjugation-papilla formation in sexual reproduction of *Closterium strigosum*. In Proceedings of the Seventh International Seaweed Symposium, University of Tokyo Press, Tokyo, p. 208-214.

2. Provasoli, L.; Pintner, I. J. (1959) Artificial media for fresh-water algae: problems and suggestions. In The Ecology of Algae. Spec. Pub. No. 2, Eds. Tryon, C. A., Jr. & Hartmann, R. T., Pymatuning Laboratory of Field Biology, University of Pittsburgh, Pittsburgh, p. 84-96.

3. Microbial Culture Collection at the NIES, Japan http://mcc.nies.go.jp/