CHU Medium

Chu (1942), modified
Modified by MZCH

Composition of CHU Medium.

	stock solutions (1 L)		volume of stock for 1 L nutrient solution	final concentration
	[mmol/L]	[g/L]	[mL]	[mmol/L]
KNO_3	1000	101.11	1	1
$Ca(NO_3)_2$	431.48	70.8	1	0.43
K_2HPO_4	50	8.71	1	0.05
$MgSO_4 \cdot 7H_2O$	243.43	60.0	1	0.243
$NaHCO_3$	195.22	16.4	2	0.39
$FeSO_4 \cdot 7H_2O$	1	0.278	1	0.001
$MnCl_2$	0.127	0.016	1	0.0001
$Na_2EDTA \cdot 2H_2O$ (Titriplex®III)	1	0.37	10	0.01
soil extract[1]			100	
NP-H_2O[2]			882	

Adjust **pH** to **6**.

[1]**preparation of soil extract**:
Weigh 50 g of beech forest soil in a 1 L Erlenmeyer flask. Add 625 mL of dest. H_2O. 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 $CaCO_3$ 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.

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

Reference

Chu, S.P. (1942) The influence of the mineral composition of the medium on the growth of planktonic algae. Part I. Methods and culture media. J. Ecol. **30**, 284-325.