

2016-07-14

## K&L Medium

Kuhl & Lorenzen (1964)

### Composition of K&L Medium

	stock solution (1000x, 1 L)		volume of stock for 1 L nutrient solution [mL]	final concentration [mmol/L]
	[mmol/L]	[g/L]		
<b>KNO<sub>3</sub></b>	10000	1011	1	10
<b>NaH<sub>2</sub>PO<sub>4</sub>·1H<sub>2</sub>O</b>	4500	621	1	4.5
<b>Na<sub>2</sub>HPO<sub>4</sub>·2H<sub>2</sub>O</b>	500	89	1	0.5
<b>MgSO<sub>4</sub>·7H<sub>2</sub>O</b>	1000	246.5	1	1
<b>CaCl<sub>2</sub>·2H<sub>2</sub>O</b>	0.1	14.7	1	0.0001
<b>micronutrient solution<sup>1</sup></b>			1	
<b>Fe-EDTA-complex<sup>2</sup></b>			1	
<b>ddH<sub>2</sub>O<sup>3</sup></b>			993	

Adjust pH with 1 M HCl to 6.

<sup>1</sup>micronutrient solution stock (1000x, 1 L):

	stock [mmol/L]	stock [g/L]
<b>H<sub>3</sub>BO<sub>3</sub></b>	1	0.061
<b>MnSO<sub>4</sub>·1H<sub>2</sub>O</b>	1	0.169
<b>ZnSO<sub>4</sub>·7H<sub>2</sub>O</b>	1	0.287
<b>CuSO<sub>4</sub>·5 H<sub>2</sub>O</b>	0.01	0.00249
<b>(NH<sub>4</sub>)<sub>6</sub>Mo<sub>7</sub>O<sub>24</sub>·4H<sub>2</sub>O</b>	0.01	0.01235

**ddH<sub>2</sub>O<sup>3</sup>, ad 1 L**

<sup>2</sup>Fe-EDTA-complex (100 ml):

Dissolve 0.69 g FeSO<sub>4</sub>·7H<sub>2</sub>O and 0.93 g Na<sub>2</sub>EDTA·2H<sub>2</sub>O (Titriplex® III) in 80 mL of ddH<sub>2</sub>O<sup>3</sup> by boiling for a short time. After the solution has cooled down to room temperature it is filled up to 100 mL. It contains 6.95 mg of iron in 1 mL.

<sup>3</sup>ddH<sub>2</sub>O double distilled water

### Reference

Kuhl, A. and Lorenzen, H. (1964) Handling and culturing of Chlorella. In: D. M. Prescott, ed., Methods in cell physiology. Vol. I, p. 152-187, Academic Press, New York and London.