

Macromolecular and elemental composition analysis and extracellular metabolite balances of *Pichia pastoris* growing at different oxygen levels

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Additional file 2 – Calculated C-mol formula for each biomass component.

<i>Saccharomyces cerevisiae</i> (*)									
Protein	C	H	1.581	N	0.275	O	0.318	S	0.003
Carbohydrate	C	H	1.667	O	0.833				
Lipids	C	H	1.873	N	0.010	O	0.149	P	0.010
RNA	C	H	1.232	N	0.389	O	0.737	P	0.105
DNA	C	H	1.255	N	0.378	O	0.312	P	0.102

11 % Oxygen setpoint									
Protein	C	H	1.512	N	0.256	O	0.344	S	0.002
Carbohydrate	C	H	1.667	O	0.833				
Lipids	C	H	1.746	N	0.000	O	0.145	P	0.003
RNA	C	H	1.230	N	0.400	O	0.734	P	0.105
DNA	C	H	1.232	N	0.390	O	0.632	P	0.105

21 % Oxygen setpoint									
Protein	C	H	1.503	N	0.259	O	0.347	S	0.002
Carbohydrate	C	H	1.667	O	0.833				
Lipids	C	H	1.697	N	0.000	O	0.156	P	0.004
RNA	C	H	1.230	N	0.400	O	0.734	P	0.105
DNA	C	H	1.232	N	0.390	O	0.632	P	0.105

8 % Oxygen setpoint									
Protein	C	H	1.511	N	0.255	O	0.340	S	0.002
Carbohydrate	C	H	1.667	O	0.833				
Lipids	C	H	1.780	N	0.000	O	0.144	P	0.002
RNA	C	H	1.230	N	0.400	O	0.734	P	0.105
DNA	C	H	1.232	N	0.390	O	0.632	P	0.105

Biomass constituent C-mol formulas depending on the oxygenation condition

Calculated C-mol formulas of the molecular biomass components at the different experimental conditions (% O₂ in the inlet air: 21, 11, 8). * Data from Lange and Heijnen 2001 [11] for *S. cerevisiae*.