Table S3 Characteristics of the production of amino acids from glucose for different calculation schemes as described in the main document. "Yield" indicates the maximal number of moles of the respective amino acid that can be produced from one mole of glucose. "ATP Cons." corresponds to the number of moles of ATP that are required to produce one mole of the amino acid (assuming that 2 mol ATP can be produced from 1 mole NADH). "Carb. Yield" indicates the fraction of carbon atoms from the carbon source that are retained in the amino acid using the respective pathway. A number >1 indicates that there is a net consumption of carbon dioxide. Otherwise, carbon dioxide is released.

AS	Glucose								
	Manual			LP standard			LP unlimited energy		
	Yield (mol/mol)	ATP Cons.	Carb. Yield	Yield (mol/mol)	ATP Cons.	Carb. Yield	Yield (mol/mol)	ATP Cons.	Carb. Yield
Ala	2.000	-1	1.000	2.000	-0.25	1.000	2.000	-0.25	1.000
Arg	0.929	0	0.929	0.885	0	0.885	1.333	38.5	1.333
Asn	1.733	2	1.156	1.742	0	1.161	2.000	2	1.333
Asp	2.000	0	1.333	1.862	0	1.241	2.000	1	1.333
Cys	1.130	8	0.565	1.032	0	0.516	2.000	12.5	1.000
Glu	1.000	-7	0.833	1.152	0	0.960	1.333	30.25	1.111
Gln	1.000	-6	0.833	1.190	0	0.992	1.333	29.25	1.111
Gly	2.000	-2	0.667	2.731	0	0.910	4.000	4.125	1.333
His	0.820	3	0.820	0.885	0	0.885	1.200	14	1.200
Ile	0.839	7	0.839	0.750	0	0.750	1.000	9	1.000
Leu	0.667	-9	0.667	0.752	0	0.752	0.800	26	0.800
Lys	0.839	5	0.839	0.800	0	0.800	1.000	6.75	1.000
Met	0.689	18	0.574	0.621	0	0.517	2.000	36.25	1.667
Phe	0.571	0	0.857	0.560	0	0.839	0.600	3.25	0.900
Pro	1.000	-2	0.833	1.014	0	0.845	1.333	34.5	1.111
Ser	2.000	-2	1.000	2.000	-1	1.000	2.000	-1	1.000
Thr	1.368	6	0.912	1.297	0	0.865	2.000	7.25	1.333
Trp	0.444	-1	0.815	0.471	0	0.863	0.500	3.25	0.917
Tyr	0.571	-2	0.857	0.581	0	0.871	0.600	1.5	0.900
Val	1.000	-2	0.833	1.000	-0.75	0.833	1.000	-0.75	0.833