TABLE 2. *Growth parameters of E. coli growing on different carbon sources*[a]

Carbon source	No. of expt	k (1/h)	Y_{SC} (g [dw]/mol of SC)	Q_{O_2} (mmol of O_2/h per g [dw])	Q_{CO_2} (mmol of CO_2/h per g [dw])	RQ (mol of CO_2/mol of O_2)	BQ (mol of BC/mol of SC)
Single							
Glucose	6	0.89 ± 0.08	11.8 ± 1.5	19.8 ± 1.7	19.8 ± 1.8	1.01 ± 0.10	0.18 ± 0.04
Galactose	1	0.69	9.5	17.0	18.0	1.06	0.24
Mannose	1	0.38	12.0	6.8	7.1	1.05	0
Glycerol	2	0.87 ± 0.00	16.6	21.2 ± 2.5	14.3 ± 2.1	0.68 ± 0.02	0.02
Pyruvate	1	0.48	4.9	29.9	45.1	1.51	0.24
Lactate	1	0.52	7.8	32.3	31.9	0.99	0.12
Acetate	4	0.30 ± 0.09	11.7 ± 2.9	18.0 ± 2.9	18.2 ± 2.2	1.01 ± 0.04	0
Succinate	1	0.36	9.5	23.1	26.2	1.23	0
Fumarate	1	0.36	7.2	17.1	26.8	1.56	0
Glycolate	1	0.21	5.6	22.1	32.8	1.48	0
Mixed							
Glucose/casein hydrolysate	1	1.26	10.2 (glucose)	21.1	17.9	0.84	
Casein hydrolysate	1						
Phase I		0.92		24.3	34.7	1.42	
Phase II		0.92		24.0	28.4	1.18	
Glucose/mannose	1	0.76	11.0 (glucose)	18.3	17.8	0.97	
Glucose/acetate	1	0.92	15.7 (glucose)	21.0	21.0	1.00	
Glucose/lactate	1	0.87	15.0 (glycerol)	18.5	12.2	0.66	

[a] Parameters are defined in the text. Measurements of cultures growing on mixed carbon sources were performed in the phase where both carbon sources were present, and the growth yields for these cultures were determined for the carbon source which was exhausted first. The casein hydrolysate culture showed several phases of growth corresponding to exhaustion of the individual amino acids; the first two phases exhibited balanced exponential growth, and are shown in the table. SC, carbon source carbon; BC, by-product carbon.