

Table I. Concentrations of the intracellular metabolites involved in the lumped GAPDH and PGK reactions and their subsequent ratios for approximately the same biomass-specific glucose consumption rates under aerobic and anaerobic conditions

	Conversion rates			Intracellular metabolite levels				Metabolite ratios		
	q_{Glucose}	q_{Ethanol}	μ	GAP	3PG	ADP	ATP	NAD:NADH	GAP:3PG	ADP:ATP
	(mmol/gDW/h)		(h ⁻¹)	(μmol/gDW)						
Aerobic	1.8	-	0.16	0.03	5.83	1.84	6.40	135–426	0.01	0.29
Anaerobic	1.8	2.5	0.03	0.15	0.42	2.41	5.76	0.5–1.1	0.34	0.42
Aerobic	11	15	0.38	0.06	1.83	0.95	5.89	55–173	0.03	0.16
Anaerobic	12	19	0.19	0.13	1.09	1.54	6.52	2.7–5.0	0.11	0.24

* q_{Glucose} , biomass-specific glucose consumption rate; q_{Ethanol} , biomass-specific ethanol consumption rate.