

Table 3. Phenomic and modeling data from growth screens of *G. metallireducens* GS-15 wild type and *dcuB* with acetate as an electron donor.

Strain	Acceptor/Growth Mode (Donor Acetate)	Growth Rate (hr ⁻¹)	Donor Uptake Rate (mmol gDW ⁻¹ hr ⁻¹)	Acceptor Uptake Rate (mmol gDW ⁻¹ hr ⁻¹)	Acceptor/Donor Ratio
GS-15 <i>dcuB</i>	Fumarate/Batch	0.114±0.005	6.81±0.10	14.0±0.2	2.06±0.01
GS-15 <i>dcuB</i>	Fumarate/Chemostat*	0.05	2.79±0.23	N.D.	N.D.
GS-15	Nitrate/Batch [†] (byproduct ammonia)	0.111±0.022	5.20±2.08	4.67±0.64 (no3) – 3.98±0.38 (nh4)	0.90±0.42
GS-15	Fe(III)/Batch	N.D.	N.D.	N.D.	6.96±0.43
GS-15	Fe(III)/Chemostat*	0.05	7.86±1.02	58.29±9.08	7.41±0.64
Simulation GS-15 <i>dcuB</i>	Max Growth Rate Fumarate	0.116	6.22	14.2 (lim)	2.28
Simulation GS-15 <i>dcuB</i>	Max Growth Rate Fumarate	0.054	3.02 (lim)	7.06	2.34
Simulation GS-15	Max Growth Rate Nitrate	0.118	7.28 (lim)	4.35 –3.61 (lim)	0.60
Simulation GS-15	Max Growth Rate Fe(III)	0.047	8.88 (lim)	62.31	7.02

* Donor-limited chemostat;

N.D., Not Determined; lim, limiting rate in the simulation;

[†]calculated error using a 90% confidence interval from Lovley and Phillips, 1988 [27].

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