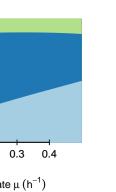


#### Proteome sectors



1.0

0.8

0.6

0.0

Metabolism Translation and trascription

0.1

0.2

Growth rate  $\mu$  (h<sup>-1</sup>)

Proteome sectors

1.0

0.8

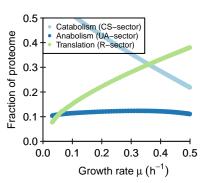
0.2

Growth rate  $\mu$  (h<sup>-1</sup>)

0.1

0.3 0.4

Proteome composition



	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
С	1	0	-0.02	0	-1	-0.167	-0.18	0	0	0	0	Ö	0	0
AA	0	0	0	0	1	-0.167	0	0	0	0	0	0	-0.01	0
NT	0	0	0	-1	0	0.334	0	0	-1	-1	-1	-1	0	0
ADP	0	0	-0.98	1	0	0.666	0.82	1	0	0	0	0	0.05	0.05
ATP	0	0	0.98	0	0	-0.666	-0.82	-1	0	0	0	0	-0.05	-0.05
W	0	-1	0.02	0	0	0	0	0	0	0	0	0	0	0
LIP	0	0	0	0	0	0	0.18	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	1	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	1	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	1	0	-0.94	0.94
DNA	0	0	0	0	0	0	0	0	0	0	0	1	0	0
TC	0	0	0	0	0	0	0	0	0	0	0	0	0.95	-0.95
р	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01

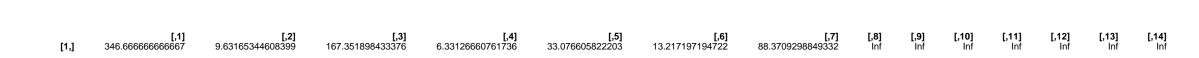
	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
x_C	0.1	0	0	0	0	0	0	0	Ö	0	0	Ö	0	0
x_W	0	2.5775875	0	0	0	0	0	0	0	0	0	0	0	0
С	4	0	1.5259375	0	2.491325	1.49555	1.4651625	0	0	0	0	0	0	0
AA	0	0	0	0	7.491325	2.49555	0	0	0	0	0	0	2.4114	0
NT	0	0	0	2.116875	0	6.49555	0	0	2.677875	2.3389375	2.1122	2.0257125	0	0
ADP	0	0	1.0259375	1.116875	0	1.49555	1.4651625	0	0	0	0	0	0	0
ATP	0	0	4.0259375	0	0	1.99555	1.9651625	3	0	0	0	0	1.9114	5.562575
W	0	3.0775875	6.5259375	0	0	0	0	0	0	0	0	0	0	0
LIP	0	0	0	0	0	0	17.9651625	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	0	0	1.4114	0
DNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TC	0	0	0	0	0	0	0	0	0	0	0	0	0	5.562575
р	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
x_C	0	0	0	0	0	0	0	0.025	Ō	Ō	Ō	Ō	0	0
x_W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
С	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	60	60	0	0	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	50
mRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	3
tRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0	0	9	9	9	8	0	0
TC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
р	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### kcat

	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
kcatf	26	23	1775	12	11	152	58	75	9	1	9	15	10310	626
kcatb	3	2	178	1	1	15	6	0	0	0	0	0	0	0

### Keq



# phi input

[1,]	<b>[,1]</b>	<b>[,2]</b>	<b>[,3]</b>	<b>[,4]</b>	<b>[,5]</b>	<b>[,6]</b>	<b>[,7]</b>	<b>[,8]</b>	<b>[,9]</b>	<b>[,10]</b>	<b>[,11]</b>	<b>[,12]</b>	<b>[,13]</b>	<b>[,14]</b>
	0.089	0.021	0.027	0.005	0.165	0.023	0.031	0.259	0.0426	0.0213	0.0071	0.002	0.023	0.284

# average saturation input

# minimal phi constraint

ш	13	u	an	•	L

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10] [,11] [,12] [,13] [,14] 0 0 0 0 0 0 0 0 0 0 0 0 0

[1,]

### minimal f constraint

[,6] [,7] [,8] [,9] [,10] [,11] [,12] [,13] [,14] 0 0 0 0 0 0



[,1] [,2] [,3] [,4] [,5] 0 0 0

[1,]