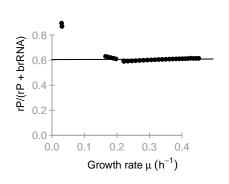
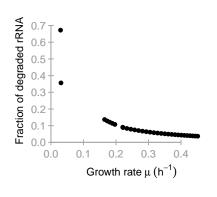
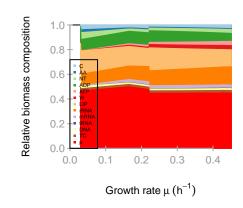
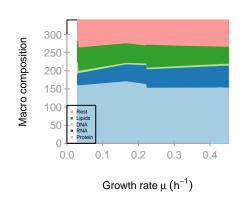


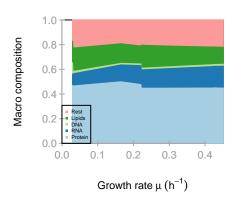
Protein mass fraction in ribosome

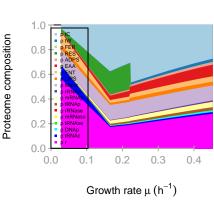


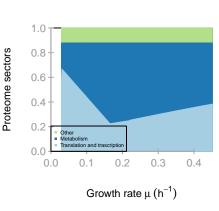




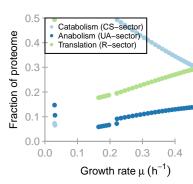












	tC	tW	FER	RES	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
С	0.2	0	-1	-0.02	0	-1	-0.167	-0.18	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	1	-0.167	0	0	0	0	0	0	0	0	0	-0.01	0
NT	0	0	0	0	-1	0	0.334	0	0	-1	-1	-1	1	1	1	-1	0	0
ADP	-0.8	0	0	-0.98	1	0	0.666	0.82	1	0	0	0	0	0	0	0	0.05	0.05
ATP	8.0	0	0	0.98	0	0	-0.666	-0.82	-1	0	0	0	0	0	0	0	-0.05	-0.05
W	0	-1	1	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	0	0	0	0	0	0	0	0.18	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	1	0	0	-1	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	0	1	0	0	-1	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	0	1	0	0	-1	0	-0.94	0.94
DNA	0	0	0	0	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	0	0	0	0.95	-0.95
р	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01

	tC	tW	FER	RES	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
x_C	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
x_W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
С	6	0	2	2	0	2	2	2	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	1	0
NT	0	0	0	0	2	0	5	0	0	2	2	2	5	0	0	2	0	0
ADP	2	0	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0	0
ATP	7	0	0	7	0	0	3	3	3	0	0	0	0	0	0	0	3	3
W	0	13	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	35	0	0	12	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
DNA	0	0	0	0	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	0	0	0	2	1
р	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	tC	tW	FER	RES	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
x_C	0	0	0	0	0	0	0	0	0	Ö	Ō	Ō	0	0	0	Ö	0	0
x_W	0	0	0	0	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	0	0	0	0
AA	0	0	0	0	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	0	0	0	0
ADP	0	0	0	0	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	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	35	35	0	0	0	0	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	0	0	0	0	45
mRNA	0	0	0	0	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	0	0	0	0
DNA	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	2	0	0
TC	0	0	0	0	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	0	0	0	0

kcat

	tC	tW	FER	RES	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
kcatf	116	114	181	10	7	10	61	40	10	27	2	2	10	10	10	2	11853	593
kcath	12	11	18	1	1	1	6	4	Λ	Λ	0	0	Λ	0	0	0	0	0

Keq



phi input

[,10] 0.01

[,11] 0.01 **[,12]** 0.01 **[,13]** 0.001 **[,14]** 0.001 **[,15]** 0.001 **[,16]** 0.02 **[,17]** 0.02 **[,18]** 0.3

[,8] 0.1 **[,9]** 0.122

[,4] 0.05

[,3] 0.01

[1,]

[,5] 0.01 **[,6]** 0.15

[,7] 0.04

average saturation input

minimal phi constraint

[,9] [,10] [,11] [,12] 0.122 0 0 0

[,15] [,16] [,17] 0.001 0 0

[,18] 0

 	P	 •	 •••

[8,] 0

[,1] [,2] [,3] [,4] [,5] [,6] [,7] 0 0 0 0 0 0

minimal f con	straint
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[1,]