







	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
С	1	0	-0.2	0	-1	-0.167	-0.18	0	0	0	0	0	0	0	Ō	0	0
AA	0	0	0	0	1	-0.167	0	0	0	0	0	0	0	0	0	-0.01	0
NT	0	0	0	-1	0	0.334	0	0	-1	-1	-1	1	1	1	-1	0	0
ADP	0	0	-0.8	1	0	0.666	0.82	1	0	0	0	0	0	0	0	0.05	0.05
ATP	0	0	0.8	0	0	-0.666	-0.82	-1	0	0	0	0	0	0	0	-0.05	-0.05
W	0	-1	0.2	0	0	0	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	0	0	0
rRNA	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	1	0	0	-1	0	0	0	0
tRNA	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	1	0	0
TC	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	0.01

	tC	tW	ATPS	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	Ö	Ö	Ö	0	0	0	Ō	0	0
x_W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
С	2	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
NT	0	0	0	1	0	0	0	0	1	1	1	0	0	3	1	0	0
ADP	0	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	1
W	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	0	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	22	0	0	6	0	0	0	0	0
mRNA	0	0	0	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	0	0	0	1	0	1	0
DNA TC	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	1	1
р	0	0	0	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	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
x_C	0	0	0	0	0	0	0	0.2	Ö	Ö	Ö	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
С	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
NT	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
ATP	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
LIP	50	50	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	70
mRNA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
tRNA DNA	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	10	10	10	0	0	0	10	0	0
TC	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

kcat

	tC	tW	ATPS	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
kcatf	41	118	838	4	8	132	47	2	3	1	1	10	10	10	40	8492	550
kooth	4	12	0.4	- 1	- 1	12	_	0	0	0	0	0	Λ.	0	0	0	Δ.

Keq

1	[1,]	[, 1] 41	[,2] 0.491666666666667	[,3] 9.97619047619048	[, 4] 8	[, 5] 8	[,6] 10.1538461538462	[,7] 9.4	[,8] Inf	[,9] Inf	[, 10] Inf	[,11] Inf	[,12] Inf	[,13] Inf	[,14] Inf	[,15] Inf	[,16] Inf	[,17] Inf

phi input

[,8] 0.2486 **[,9]** 0.0426 **[,10]** 0.0213 **[,11]** 0.0071 **[,12]** 0.002 **[,13]** 0.006 **[,15]** 0.002 **[,17]** 0.284

[,5] 0.165

[1,]

[,6] 0.01 **[,7]** 0.031 average saturation input

minimal	phi	constraint
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minimal	f	constrain	ĺ
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[1,]

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10] [,11] [,12] [,13] [,14] [,15] [,16] [,17] 0 0 0 0 0 0 0 0 0 0 0 0 0