

	tC	ATPS	ADPS	EAA	ENT	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
С	1	-0.02	0	-1	-0.167	0	0	Ō	Ō	0	0
AA	0	0	0	1	-0.167	0	0	0	0	-0.01	0
NT	0	0	-1	0	0.334	-1	-1	-1	-1	0	0
ADP	0	-0.98	1	0	0.666	0	0	0	0	0.05	0.05
ATP	0	0.98	0	0	-0.666	0	0	0	0	-0.05	-0.05
rRNA	0	0	0	0	0	1	0	0	0	0	0
mRNA	0	0	0	0	0	0	1	0	0	0	0
tRNA	0	0	0	0	0	0	0	1	0	-0.94	0.94
DNA	0	0	0	0	0	0	0	0	1	0	0
TC	0	0	0	0	0	0	0	0	0	0.95	-0.95
р	0	0	0	0	0	0	0	0	0	0	0.01

	tC	ATPS	ADPS	EAA	ENT	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
x_C	0.1	0	0	0	0	Ō	Ō	0	0	0	0
x_W	0	20	0	0	0	0	0	0	0	0	0
С	0	8	0	8	8	0	0	0	0	0	0
AA	0	0	0	0	2	0	0	0	0	2	0
NT	0	0	2	0	0	2	2	2	2	0	0
ADP	0	1	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	2	0	0	0	0	2	2
rRNA	0	0	0	0	0	0	0	0	0	0	0
mRNA	0	0	0	0	0	0	0	0	0	0	0
tRNA	0	0	0	0	0	0	0	0	0	1	0
DNA	0	0	0	0	0	0	0	0	0	0	0
TC	0	0	0	0	0	0	0	0	0	0	2
р	0	0	0	0	0	0	0	0	0	0	0

	tC	ATPS	ADPS	EAA	ENT	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
x_C	0	0	0	0	0	Ō	0	Ō	0	0	0
x_W	0	0	0	0	0	0	0	0	0	0	0
С	0	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0	0	0
ADP	0	0	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	50
mRNA	0	0	0	0	0	0	0	0	0	0	5
tRNA	0	0	0	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	5	5	5	5	0	0
TC	0	0	0	0	0	0	0	0	0	0	0
р	0	0	0	0	0	0	0	0	0	0	0

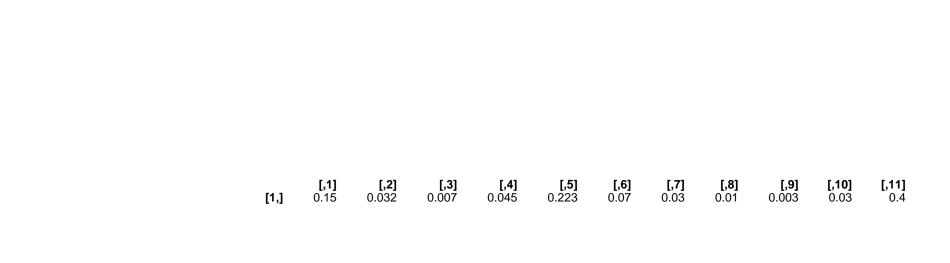
#### kcat

	tC	ATPS	ADPS	EAA	ENT	rRNAp	mRNAp	tRNAp	DNAp	tRNAc	r
kcatf	14	360	8	40	20	8	2	7	16	7904	444
kcatb	0	0	0	0	0	0	0	0	0	0	0

### Keq



# phi input



#### average saturation input

## minimal phi constraint

**[,5]** 0

**[,6]** 0

[,1] [,2] 0 0

[1,]

[,**3]** [,**4]** 0

**[8,]** 0 **[,9]** 0 **[,11]** 0

**[,7]** 0

#### minimal f constraint

[,**5]** [,**6]** 0

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

[1,]

**[,7]** 0

**[,8]** 0

**[,9]** 0

**[,11]** 0