







	tC	tW	GLY	RES	FER	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
С	1	0	-0.2	0	0	0	-0.5	-0.167	0	0	0	0	0	0	0	0	0	0	0
AA	0	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	0	-1	0	0.334	0	0	-1	-1	-1	1	1	1	-1	0	0
ADP	0	0	-0.8	-0.98	0	1	0	0.666	0.82	1	0	0	0	0	0	0	0	0.05	0.05
ATP	0	0	0.8	0.98	0	0	0	-0.666	-0.82	-1	0	0	0	0	0	0	0	-0.05	-0.05
CI	0	0	0.2	-0.02	-1	0	-0.5	0	-0.18	0	0	0	0	0	0	0	0	0	0
W	0	-1	0	0.02	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIP	0	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	0	1	0	0	-1	0	0	0	0	0
mRNA	0	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	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	0	1	0	0
TC	0	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	0.01

	tC	tW	GLY	RES	FER	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	Ö	Ö	Ö	0	0	0	Ö	0	0
x_C x_W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
С	4	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	1	0
NT	0	0	0	0	0	2	0	0	0	0	2	2	2	5	0	5	2	0	0
ADP	0	0	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
ATP	0	0	0	7	0	0	0	3	3	3	0	0	0	0	0	0	0	3	3
CI	0	0	0	3	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0
W	0	11	0	31	31	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	0	0
rRNA	0	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	0	3	0	0	1	0	0	0	0
tRNA	0	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	0
TC	0	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	0

	tC	tW	GLY	RES	FER	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	0	Ō	Ö	Ō	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	0	0
С	0	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	0
NT	0	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	0
ATP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CI	0	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	0
LIP	35	35	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	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	0	3
tRNA	0	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	0	2	2	2	0	0	0	2	0	0
DNA TC	0	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	0

### kcat

	tC	tW	GLY	RES	FER	ADPS	EAA	ENT	LIPS	Maint	rRNAp	mRNAp	tRNAp	rRNase	mRNase	tRNAse	DNAp	tRNAc	r
kcatf	157	193	349	10	281	7	14	61	40	10	27	2	2	10	10	10	2	11853	593
kcatb	16	19	35	1	28	1	1	6	4	0	0	0	0	0	0	0	0	0	0

### Keq



# phi input

**[,9]** 0.1 **[,10]** 0.122 **[,11]** 0.01 **[,12]** 0.01 **[,13]** 0.01 **[,14]** 0.001 **[,15]** 0.001 **[,16]** 0.001 **[,17]** 0.02 **[,18]** 0.02 **[,19]** 0.3

**[,7]** 0.15

**[,2]** 0.01

[1,]

**[,4]** 0.08 **[,5]** 0.01 **[,6]** 0.01 **[,8]** 0.04

# average saturation input

[,11] [,12] [,13] [,14] 0 0 0 0.001

[,15] [,16] [,17] [,18] [,19] 0.001 0 0 0

minimal phi	constraint
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**[,10]** 0.122

[,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] 0 0 0 0 0 0 0

[1,]

ninimal f constrain	t
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