







maintenance\_fun constant

keep\_ribosome\_kcat FALSE keep\_transport\_kcat FALSE

	tC	FERM	RESP	ADPS	EAA	ENT	RNAp	DNAp	r
С	1	-0.04	0	0	-1	-0.167	0	0	0
AA	0	0	0	0	1	-0.167	0	0	-0.2
NT	0	0	0	-1	0	0.334	-1	-1	0
ADP	0	-0.96	-1	1	0	0.666	0	0	0.8
ATP	0	0.96	1	0	0	-0.666	0	0	-0.8
RNA	0	0	0	0	0	0	1	0	0
DNA	0	0	0	0	0	0	0	1	0
р	0	0	0	0	0	0	0	0	0.2

	tC	FERM	RESP	ADPS	EAA	ENT	RNAp	DNAp	r
x_C	0.1	0	0	0	0	0	Ō	Ō	0
$x_W$	0	10	0	0	0	0	0	0	0
С	5	1	0	0	1	6	0	0	0
AA	0	0	0	0	10	4	0	0	4
NT	0	0	0	1	0	11	4	4	0
ADP	0	1	10	10	0	1	0	0	0
ATP	0	10	20	0	0	2	0	0	2
RNA	0	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0	5	0
р	0	0	0	0	0	0	0	0	0

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	tC	GLY	RESP	ADPS	EAA	ENT	RNAp	DNAp	r
x_C	0	0	0	0	0	0	0	0	0
x_W	0	0	0	0	0	0	0	0	0
С	0	0	0	0	0	0	0	0	0
AA	0	0	0	0	0	0	0	0	0
NT	0	0	0	0	0	0	0	0	0
ADP	0	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	0	0	0	0
RNA	0	0	0	0	0	0	0	0	40
DNA	0	0	0	0	0	0	4	4	0
р	0	0	0	0	0	0	0	0	0

kcat

	[,1]	[,∠]	[,3]	[,4]	[,5]	[,6]	[,/]	[,8]	[,9]
kcatf	29	200	150	18	8	153	6	13	19
kcatb	0	0	0	0	0	0	0	0	C

## Keq



## minimal phi constraint

[1,]

## minimal f constraint

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