





maintenance\_fun constant

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

	tC	FERM	RESP	ADPS	EAA	ENT	LIPS	Maint	RNAp	DNAp	r
С	1	-0.2	-0.15	0	0	0	0	0	Ō	Ō	0
ı	0	0.1	0.1	0	-1	-0.167	-0.18	0	0	0	0
AA	0	0	0	0	1	-0.167	0	0	0	0	-0.2
NT	0	0	0	-1	0	0.334	0	0	-1	-1	0
ADP	0	-0.8	-0.85	1	0	0.666	0.82	1	0	0	0.8
ATP	0	0.8	0.85	0	0	-0.666	-0.82	-1	0	0	-0.8
LIP	0	0	0	0	0	0	0.18	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	1	0	0
DNA	0	0	0	0	0	0	0	0	0	1	0
р	0	0	0	0	0	0	0	0	0	0	0.2

	tC	FERM	RESP	ADPS	EAA	ENT	LIPS	Maint	RNAp	DNAp	r
x_C	0.1	0	0	0	0	0	0	0	Ō	Ō	0
x_W	0	20	10	0	0	0	0	0	0	0	0
С	0	6	3	0	0	0	0	0	0	0	0
I	0	0	0	0	2	2	2	0	0	0	0
AA	0	0	0	0	0	4	0	0	0	0	4
NT	0	0	0	4	0	0	0	0	4	4	0
ADP	0	1	0.5	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	2	2	2	0	0	2
LIP	0	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	0
DNA	0	0	0	0	0	0	0	0	0	0	0
р	0	0	0	0	0	0	0	0	0	0	0

	tC	FERM	RESP	ADPS	EAA	ENT	LIPS	Maint	RNAp	DNAp	r
x_C	0	0	0	0	0	0	0	0.015	Ō	Ō	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
I	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
LIP	10	0	0	0	0	0	0	0	0	0	0
rRNA	0	0	0	0	0	0	0	0	0	0	40
DNA	0	0	0	0	0	0	0	0	4	4	0
р	0	0	0	0	0	0	0	0	0	0	0

### kcat

	tC	FERM	RESP	ADPS	EAA	ENT	LIPS	Maint	RNAp	DNAp	r
kcatf	73.8	1451.7	145.2	22.6	11.9	189.2	69	46.4	7.1	17.8	34.5
kcatb	0	0	0	0	0	0	0	0	0	0	0

# Keq



## phi input



## average saturation input

## minimal phi constraint

.1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10]	1 <b>]</b>	<b>[,2]</b>	<b>[,3]</b>	<b>[,4]</b>	<b>[,5]</b>	<b>[,6]</b>	<b>[,7]</b>	<b>[,8]</b>	<b>[,9]</b>	<b>[,10]</b>	<b>[,11]</b>
0 0 0 0 0 0 0.031 0 0	0	0	0	0	0	0	0.031	0	0	O	0

[1,]

### minimal f constraint

	[ 11	[ 2]	[ 3]	Γ <b>Δ</b> 1	[ 5]	[6]	[ <del>7</del> ]	181	T 91	[,10]	[ 11]
[1,]	0	0	0	0	0	0	0	3.85	0	0	0