





maintenance_fun constant

keep_ribosome_kcat FALSE keep_transport_kcat FALSE

	tC	FERM	RESP	ADPS	EAA	ENT	LIPS	Maint	RNAp	DNAp	r
С	1	-0.225	-0.15	0	0	0	0	0	Ō	Ō	0
I	0	0.125	0.125	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	-0.775	-0.85	1	0	0.666	0.82	1	0	0	0.8
ATP	0	0.775	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	10	20	0	0	0	0	0	0	0	0
С	0	4	8	0	0	0	0	0	0	0	0
ı	0	0	0	0	31	31	31	0	0	0	0
AA	0	0	0	0	0	5	0	0	0	0	5
NT	0	0	0	5	0	0	0	0	5	5	0
ADP	0	0.5	1	0	0	0	0	0	0	0	0
ATP	0	0	0	0	0	3	3	3	0	0	3
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	0.01	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	61	7300	730	22	12	226	73	42	7	16	37
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]	[,2]	[,3]	[,4]	[,5]	[,6]	[,7]	[,8]	[,9]	[,10]	[,11]
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 Δ 1	[5]	[6]	[7 1	181	T 91	[,10]	[11]
[1,]	0	0	0	0	0	0	0	3.85	0	0	0