

maintenance\_fun constant

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

	tC	MFI	KNAP	DNAP	r
С	1	-1	0	0	0
AA	0	0.5	0	0	-0.9
NT	0	0.3	-1	-1	0
ATP	0	0.2	0	0	-0.1
rRNA	0	0	1	0	0
DNA	0	0	0	1	0
р	0	0	0	0	1

K

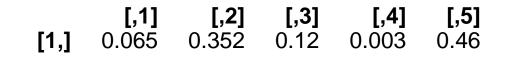
	tC	MET	RNAp	DNAp	r
x_C	0.1	0	0	0	0
С	0	7	0	0	0
AA	0	0	0	0	3
NT	0	0	1	1	0
ATP	0	0	0	0	12
rRNA	0	0	0	0	0
DNA	0	0	0	0	0
р	0	0	0	0	0

	tC	MET	RNAp	DNAp	r
x_C	0	0	0	0	0
C	0	0	0	0	0
AA	0	0	0	0	0
NT	0	0	0	0	0
ATP	0	0	0	0	0
rRNA	0	0	0	0	0
DNA	0	0	4	4	0
р	0	0	0	0	0

# kcat

ا ME	RNAp	DNAp	
2 7	6	8	4
3 1	1	1	(
	2 7 3 1	2 7 6	

# phi input



## average saturation input

### minimal phi constraint

#### minimal f constraint