

	Reaction Fluxes (nu)	Enzymes (E)	Process Machineries (P)	Target Concentrations (TC) Target Fluxes (TF)	RHS
Mass conservation	S	muC_E	muC_P	muC_TC + C_TF	
Process Capacity		muMC_E	muMC_P - diag(k_P)	muMC_TC + MC_TF	
Enzyme Capacity (forward)	R_to_E	-diag(k ⁺ _E)			
Enzyme Capacity (backward)	-R_to_E	-diag(k ⁻ _E)			
Density Constraints		W_E	W_P	W_TC	D

Blocks needed:

S: stoichiometry matrix.

C__.: composition (production or degradation) matrix

MC__.: machinery costs

W__.: weight matrix

k__.: capacity vector

D: density limits for every compartment

R_to_E: reaction to enzyme mapping.