rxns: {2382x1 cell}
mets: {1668x1 cell}
S: {1668x2382 double}
rev: {2382x1 double}
lb: {2382x1 double}
ub: {2382x1 double}
c: {2382x1 double}

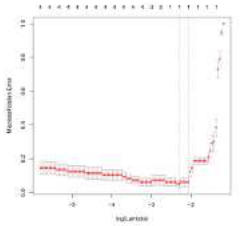
E. coli Model

Growth Conditions

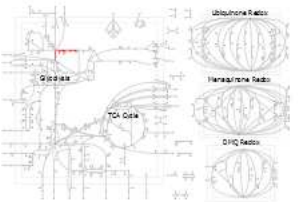
Carbon	Nitrogen
1. D-glucose	1. Ammonia
2. Pyruvate	2. Adenine
3. …	3. …

maximize {Biomass composition}
such that Sv=0, where
S is the stoichiometric matrix
v is the reaction flux vector
with
Reaction flux constraints:
a(i) < v(i) < b(i) for each rxn i.

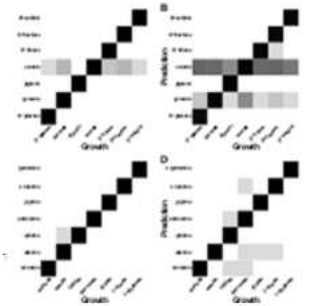
Flux Balance Analysis



Multinomial Classification



E. coli Map



Results:

1. Misclassification rate
2. Key reactions that discriminate growth conditions