a

$$Importance(m) = \log_2\left(\frac{\Sigma t_i}{\Sigma e_o} - \frac{\Sigma t_o}{\Sigma e_i}\right)$$

Tetrathionate reductase

Thiosulfate Oxidase

Thiosulfate
= 6.554

Sulfate reductase

- Enzyme node
- Metabolite node

More likely released          More likely consumed

Importance Score

b

N–Acetyl–D–glucosamine
2–Methylpropanoyl–CoA
L–Proline
Butanal
Aminofructose 6–p
D–Fructose 1–p
CO2
dADP
Primary alcohol
Ethanol
Propanoate
UTP
Acetate
CTP
D–Fructose 6–p
Formate

Median Metabolite Importance Score

c

Streptomycin
  D–Fructose 6–p
  D–Sorbitol
  5,6,7,8–Tetrahydromethanopterin
Cefoperazone
  Mannitol
Clindamycin
  4–Hydroxybutanoic acid
  Salicin 6–p
Gnotobiotic
  Acetate
  N–Acetylneuraminate
  ATP
  D–Ribose 5–p
  Phosphonoacetate
  Formate
  L–Lysine
  AMP
  L–Isoleucine
  D–Glyceraldehyde 3–p
  dGDP
  6–Thioxanthine 5'–p
  L–Leucine

Metabolite Importance Score

d

e

OD$_{600}$

- +Glucose +Amino acids
- −Glucose +Amino acids
- +Glucose −Amino acids
- −Glucose −Amino acids
- D–Fructose
- D–Sorbitol
- Mannitol
- Salicin
- N–Acetylneuraminate

Time (hours)

OD$_{600}$

- −Glucose +Amino acids

Time (hours)