**S3 Table. Analytic formulas used to calculate flux ratios in central carbon metabolism for *E. coli* and *B. subtilis* (adapted from Fischer & Sauer 2003).**

|  |  |  |
| --- | --- | --- |
| Flux ratio | Analytic formula for *E. coli* | Analytic formula for *B. subtilis* |
| Glycolysis / Pentose-phosphate pathway |  |  |
| Pyruvate from Entner-Doudoroff pathway |  | n/a |
| Oxaloacetate from anaplerosis |  |  |
| PEP from gluconeogenesis |  |  |
| Pyruvate from malate |  |  |

M1-one carbon molecule labeled according to the substrate labeling

M13-last three carbon molecule labeled according to the substrate labeling

N13-three carbon molecule naturally labeled (C13 natural abundance 1%)

L13- first three carbon molecule fragment of the substrate propagated through glycolysis

αKG – α-ketoglutarate

BPG – biphosphoglycerate

OAA – oxaloacetate

PEP – phosphoenolpyruvate

PYR – pyruvate

Numbers in subscript indicate metabolic fragment