

Diet Planning for E.coli

In-Silico Metabolism Analysis

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ABSTRACT

We study the problem of determining minimal nutrient sets for *Escherichia coli*. A nutrient set is a set of compounds that *E.coli* can thrive on, and a minimal nutrient set is a nutrient set such that no proper subset of compounds forms a nutrient set. We study computational methods to efficiently calculate the minimal nutrient set for *E.coli* based on the *E.coli* metabolome curated as part of the EcoCyc project at SRI. We are able to calculate 366 minimal nutrient sets in a few seconds of CPU time on a standard desktop PC running linux.

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