

## How to use TrimGdel

### About TrimGdel

TrimGdel aims to find the smallest gene deletion strategy for growth coupled production by removing unnecessary gene deletions from a large gene deletion strategy obtained by gDel\_minRN for a given target metabolite and constraint-based model.

### Necessary environments

An environment where MATLAB, GUROBI, COBRA Toolbox can run is required.

### Run the test code for TrimGdel

The test code is run by the following command:

```
>> test()
```

“test()” loads a MATLAB matfile “e\_coli\_core.mat” containing a core metabolic model of E.coli, and employs TrimGdel to search the small gene deletion strategy for growth-coupled production for all target metabolites.

### Example code

“example1” employs TrimGdel to calculate a gene deletion strategy for succinate (succ\_e) in e\_coli\_core.

Details are described in the comments in the source codes.