

Software Requirements Specification document for qPCR analysis

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Summary:

This package will take Ct values from your qPCR and perform various forms of analyses on your data. Analyses will include primer efficiency calculations, delta-delta Ct analysis, the pfaffl method, and polysome profiling analysis. All inputs must include triplicate Cts and be .csv files.

Input format:

1. Primer efficiency

A csv file with the following headers:

- a. Gene [string]
- b. Dilution [#]
- c. Ct1 [float]
- d. Ct2 [float]
- e. Ct 3 [float]

2. Pfaffl methods

A csv file with the following headers:

- a. Gene [string]
- b. Condition [string]
- c. Replicate [#]
- d. Ct1 [float]
- e. Ct2 [float]
- f. Ct 3 [float]

3. Polysome profiling

A csv file with the following headers:

- a. Gene [string]
- b. Condition [string]
- c. Replicate [#]
- d. Fraction [#]
- e. Ct1 [float]
- f. Ct2 [float]
- g. Ct 3 [float]

Other Requirements:

Python v3.8>

Numpy

Pandas

Matplotlib