

Gating-ML Compliance Test Suite

This test suite is intended to determine/verify Gating-ML compliance of third party analytical software in terms of:

- (i) being able to read Gating-ML compliance files,
- (ii) being able to apply gates on list mode data files,
- (iii) being able to perform appropriate data transformations for gates described on transformed data, and
- (iv) obtaining correct events membership results for described gates.

The test suite contains 32 sets of tests (Gating-ML files) totaling 463 different gates, appropriate list mode data files, and detailed expected event membership information for each of the gate. Each test set is intended to test a particular gate type, transformation type, or Gating-ML feature, as indicated by the name of the test set.

Files in this test suite are organized as follows:

- The `Summary.csv` file contains an overview of all tests/gates. Each line represents a gate. Columns provide the name of the test set, the identifier of the gate, the name of the Gating-ML file, the name of the corresponding list mode data file, and the number of events expected to be found inside the gate.
- The `Gating-ML Files` folder contains all Gating-ML files. Each of the files represents a single test set.
- The `List-mode Data Files` folder contains FCS data files (`name.fcs`) and their descriptions (`name.pdf`). List-mode data files are shared among several test sets.
- The `Expected Results` folder contains a subfolder for each of the test sets. The name of the subfolder corresponds to the name of the test set. Each of these folders contains several text-based result files – one for each gate. The name of the file corresponds to the name of the gate (with the `.txt` extension). First line in the text file repeats the gate identifier. An ordered sequence of 0/1 follows, one number per line. This sequence corresponds to the order of events appearing in the appropriate list mode data file. The value zero (0) indicates that the event is not in the gate, the value one (1) indicates that the event is in the gate.

Please note that some of the files contain a single number. This is as some of the gates are intended to be tested against a data file containing a single event only.

In addition, some of these folders contain a `.csv` file. This is included in test sets that include transformations. The `.csv` file provides a reference of the calculated transformed data.



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