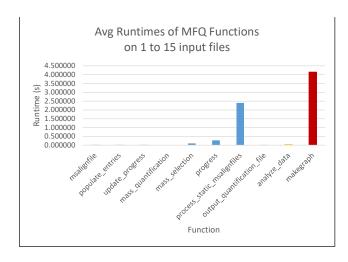
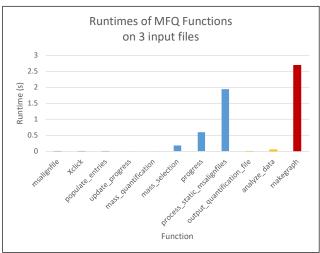
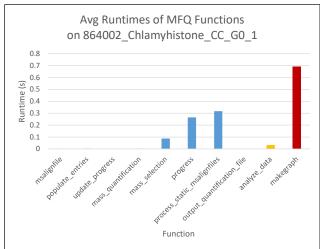
## **Average Runtime of MFQ Functions on Various Input Files**

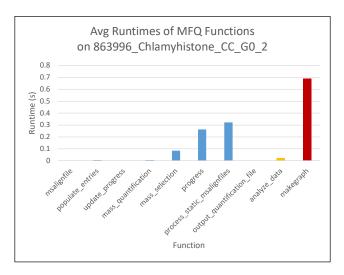
I ran MassFinderQuantifier\_mingus.py on three input files: 864002\_Chlamyhistone\_CC\_G0\_1, 863996\_Chlamyhistone\_CC\_G0\_2, 863999\_Chlamyhistone\_CC\_G0\_3, then on all three at once, using Xclick to remove one of the uploaded files before reuploading and running. For each of these four, I ran 10 tests. Below are the average runtimes of all testable functions in each situation. To the right is the average runtime of each function across the fifteen tests with increasing numbers of input files (from 1 to 15). The graphs of the individual functions are on the next page.

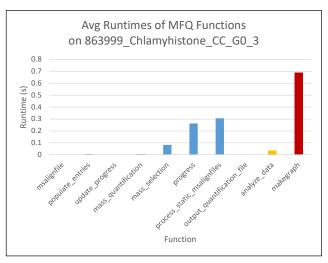
Class
FileSelection
SearchParams
QuantOutput
QCGraphs











## Runtimes for Increasing # of Input Files

I ran MassFinderQuantifier\_mingus.py fifteen times, starting with one input file and increasing by one up to fifteen. For consistency, I uploaded one file (864002\_Chlamyhistone\_CC\_G0\_1\_rerun\_ms1) multiple times. Some functions were called many times per run and their graphs didn't seem to contain any valuable information. These functions, like msalignfile and update\_progress, never seem to make much time (judging by the tests on the three separate input files, all of them together, and the avg values from these tests), but should still be considered since they're called a lot often for greater numbers of input files. Also, progress is sus. But anyway the runtimes of process\_static\_msalignfiles and makegraph increase linearly with the number of input files. These other three are weird, especially analyze\_data.

