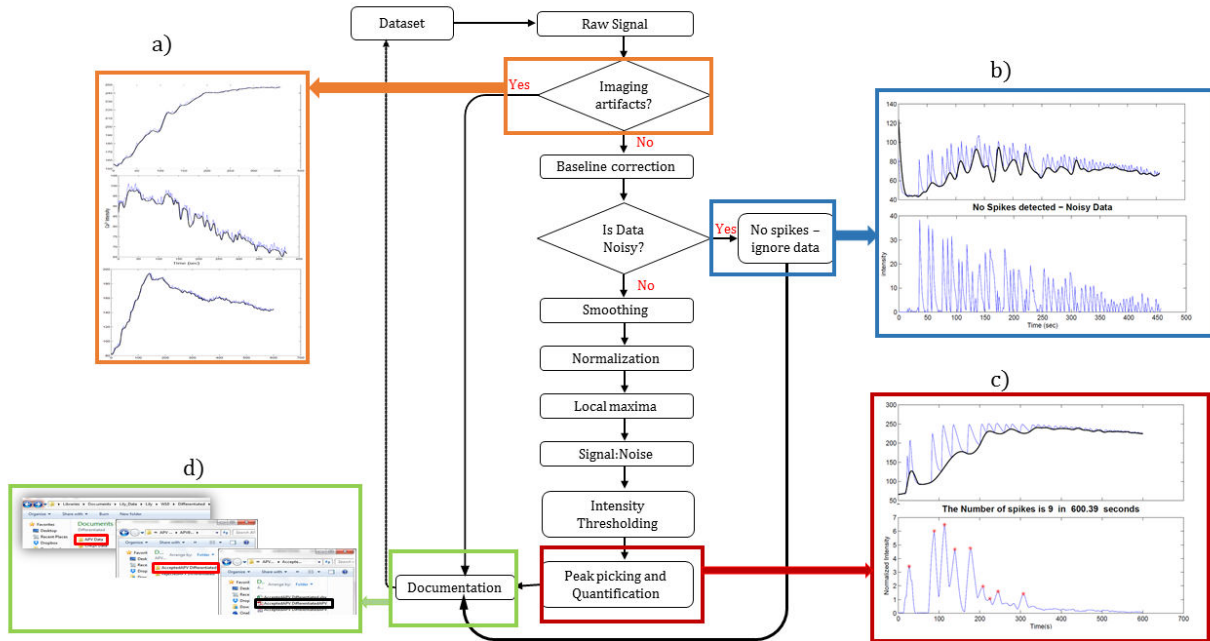


CALCIUM SIGNAL PROCESSING SOFTWARE



Description: Calcium signal processing flowchart. The software takes in data sets in a spreadsheet of calcium fluorescent data, sorts for imaging artifacts (rapid photobleaching and saturation), adjusts the baseline of the signal, sorts out data with a low chance of spikes, attenuates noise by soothing, and subjects the signal to spike quantification. The results are compiled in appropriate documents and organized in folders. (a) Samples of data classified to have rapid photobleaching and saturation defects. (b) Noisy data. The black plot is the baseline fitted to the signal. The inset at the bottom shows the signal after baseline correction. (c) Data before and after spike quantification. (d) Illustration of how the software creates folders for each data file showing separate folders for processed data and defective data. The folders contain raw data and plots giving insights of the data.

Reference: Ndyabawe, K.; Haidekker, M.; Kisaalita, W.S. Spheroid trapping and calcium spike estimation techniques toward automation of neurospheroid culture. *SLAS Technology* (2020), DOI: 10.1177/0123456789123456.