

One size-only QC process? The good questions to define the QC process of fluorescence imaging systems

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Abstract

Many core facilities implement quality control (QC) processes internally to provide their end users with a fleet of microscopes at a level of performance compatible with their experiments. Establishing the right QC procedure is a project in itself. If the procedure is too heavy or complex, the cost in time may be too high, making the process hard to maintain, or the results hard to exploit. The first rule when performing quality checks is “make it sustainable”. Therefore, finding the right balance is a step that should not be overlooked.

With the efforts of the community and worldwide metrology groups, dedicated literature is emerging to guide the facilities in this thought. With the help of these general guidelines, facilities wishing to establish a QC process will have to tailor it to their true need and capacity. This implies a series of evaluation questions:

- Which systems should be monitored? What are the components that should be paid attention to?
- Are the system(s) shared? What is the experience of the user(s)?
- Which experiments are performed on the system(s)? Which metrics are important for these experiments?
- Are there constraints from outside parties in terms of quality (certification, grants, ISO, GPL, etc.)?
- And, last but not least, what human resources are available?

Many Argolight users approach us for advice on their QC process, looking for empirical advice of what is done by other users. This workshop aims at presenting useful questions to go through when establishing this process. We will also present possible scenarios of QC processes for wide-field and confocal microscopes, based on Argolight’s experience and the feedback gathered from users.

