

Title: Data Standards for Flow Cytometry

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Abstract:

First developed in 1984, the Flow Cytometry Standard (FCS) specification has kept pace with many years of technological evolution. ISAC has adopted FCS for the common representation of FCM data, and this standard is supported by all analytical instrument and third party software suppliers. Scientists can choose among instruments and software with no major compatibility issues for the raw fluorescence values that FCS captures. Previous versions of the FCS included data, metadata and analysis components within the same file. However, metadata and analysis components, if included at all, are not recorded in a standardized fashion or in sufficient detail for use by independent parties. This is assuming that independent parties can access experimental results, as important data sets supporting publications are almost invariably unavailable. Finally, if metadata annotation takes place at any time subsequent to data capture, the all-inclusive format of FCS necessitates the generation of a new version of the file, which replicates the (hopefully unmodified) primary data.