

Institute of Aerospace Medicine
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Advanced flow cytometric methods for drinking water analysis

Accurate monitoring of microbial dynamics in engineered and environmental aquatic ecosystems is critical for a better understanding of the causes and consequences of microbiological changes. However, the common practice of infrequent grab-sampling and quantification with outdated cultivation-based methodology hampers sensible characterization of such dynamics. Flow cytometry has become a standard tool for accurate microbial quantification and characterization in drinking water during the last two decades. I will present the basic technology, the methods that work (and the ones that don't), and then specifically focus on the development and implementation of automated flow cytometry to track dynamic microbiological events online and in near real-time.