

Testing Surface Disinfectants

This series of knowledge sharing articles is a project of the Standardized Biofilm Methods Laboratory in the CBE

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Introduction to a set of ruminations on the terms and statistics associated with efficacy testing surface disinfectants

The mission of the graduated National Science Foundation Center for Biofilm Engineering (CBE) is to advance the basic knowledge, technology, and education required to understand, control and exploit biofilm processes. In support of this mission, the CBE is launching a series of Knowledge Sharing Articles with the purpose of disseminating information that is the topic of presentations, posters, workshops or discussions that occur at the CBE. Each Knowledge Sharing Article will be a concise discussion on a specific topic. The information is not peer reviewed, in the traditional sense, but these concepts have been debated, tested, refined and used at the CBE. Within one series, the terms and concepts will build on each other, similar to how concepts are presented in a college course, implying that it is best to read the articles sequentially. These articles will be a part of the CBE newsletter and archived on the CBE web site.

The first series of articles focuses on laboratory tests for surface disinfectants. The articles present ideas that Professor Marty Hamilton explored and developed while participating as the biostatistician on interdisciplinary research teams in the CBE and elsewhere. Through this experience, he acquired a breadth and depth of knowledge that guides the process employed in the CBE Standardized Biofilm Methods Laboratory. Together with his collaborators, Marty adopted and standardized many of the concepts and terms that are presented in these articles. By consistently applying these terms and concepts in his numerous presentations, publications, and technical reports, much of the terminology has become a part of the vernacular for the field, with many people unaware of where the term, or concept, originated.

These articles present concepts that define the field; they are not a series of statistical equations. Marty's goal is to facilitate and encourage statistical thinking when testing surface disinfectants. After the first few articles, the reader should know:

- the broad classification used to define the various disinfectant tests,
- the statistical parameters used to define the desirable attributes of a method,
- the phases a method goes through on its way to standardization, and
- why, contrary to conventional wisdom, the statistical methods suitable for chemical assays are mostly inappropriate for disinfectant tests.

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