Lesson plan

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Writing an abstract for research paper/ conferences

What is an abstract:

It is a short overview of your research paper which gives the reader a general but brief idea about your theme/topic, the materials and methods used in your research and indicates the main findings. Some abstracts also end with an outline of the paper/ structure of the paper. However, this is very rare in the field of biochemistry.

N.B an outline is the answer to the question: how is your paper organized?

Elements of an abstract

- Aim of the study: what is the purpose of your research? What do you want to find out?
- The scope of the study (very brief) give a bit of background on your topic.
- The research methods used (analysis). What was your methodology?
- Key findings (highlight your key finding only) (what did you find?)

Bacillus cereus spores have the ability to adhere to solid surfaces, including stainless steel, a material widely used in food industries. Adhesion of spores allows recontamination during food processing, and cleaning and disinfection are largely used by industries to control them. Hence, this study aims to assess the detachment capacity (or removing activity) of detergents based on sodium hydroxide, nitric acid, phosphoric acid, and chlorine against two adhered *B. cereus* spores (one hydrophobic and other hydrophilic) to stainless steel surfaces. Microorganism adhesion on the surfaces reached 5.5 log CFU/cm^2 for the two strains studied. Two protocols composed of combinations of chemical compounds, concentration, temperature, and contact time were tested. The inactivation kinetics shapes were convex and modeled by the Weibull model. The effects of temperature and biocide concentration were quantified using a Bigelow-like model. The temperature applied during the cleaning-in-place treatment is an important factor acting on the speed of inactivation or detachment of *B. cereus* spores. However, this efficiency depends on the hydrophobic characteristics of *B. cereus* spores. The concentration of detergent and acid also affects the inactivation rate, whereas the characteristic of hydrophobicity does not intervene for the chlorine alkaline treatments