Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Food Sci

Cudemos E., Izquier A,, Medina-Martínez

M.S.; Gomez-Lopez V.M.:

Effects of shading and growth phase on the microbial inactivation by pulsed light

Czech J. Food Sci., 31 (2013): 189-193

Pulsed light is an emerging technology that kills microorganisms using pulses of an intense broad-spectrum light. This work aimed to determine the effect of population density and microbial growth phase on its microbicidal efficacy. To this, *Pseudomonas fluorescens* cultures were grown, diluted to different populatio densities, flashed, plated, incubated, anc enumerated, Also, cultures of *P. fluorescens, Bacillus cereus,* and *Saccharomyces cerevisiae* were taken a different growth phases, diluted to the same population density, flashed, plated, incubated, and enumerated. Microbial inactivation was lower at high densities, probably as the consequence of the shading effect, and higher at the

exponential phase. This study sets the background information useful for scientists and industrial implementation. The population density and growth phase must be taken into account in the planning experiments and comparing the literature. On the industrial scale, heavily contaminated solids are not suitable for pulsed light (PL) treatment; while liquids should receive several PL flashes under