

THE INFLUENCE OF ELECTRIC FIELD ON MICROBIAL GROWTH

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Abstract

The influence of alternating electric fields of various frequency levels (from 10 to 400 Hz) on the growth of various microorganisms was studied. It was shown, that electric fields with frequencies from 10 to 60 Hz were stimulating microbial growth, while higher frequencies were causing its inhibition. No growth of yeasts and streptococci was detected after 1 hr treatment with 400 Hz frequency electric field.

Such influence of the electric field can be used in food production to prevent the development of undesirable microorganisms inside the equipment, in remote areas or during food processing. This also can be used for continuous sterilization or pasteurization of liquid or viscous food products.

Key words: *Electric field, Microbial growth inhibition.*