

IMPACT OF MICROBIOLOGICAL QUALITY OF THE RAW MATERIAL AND THE TECHNOLOGICAL PROCESS IN THE MICROFLORA OF FINAL PRODUCT (CONFECTIONERY PRODUCTS)

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Abstract

The purpose of the study is to evaluate the microbiological quality of raw materials and the impact of the technological process used in the final quality of the some confectionery sweet products.

For this purpose several microbiological parameters were analyzed as: total aerobic mesophilic bacteria, yeasts, molds and coliform bacteria. These parameters were determinate in both, raw materials (cocoa, flour, eggs powder milk) and in the respective final product (Dolce with chocolate-coated and dolce non chocolate-coated). Colony forming unit counting method was used for quantitative evaluation, using decimal scale dilution and plate count agar cultivation method. Standard and selective media were used: Plate Count Agar (PCA) for total aerobic mesophilic bacteria, Potato Dextrose Agar (PDA) for yeasts and molds, and Mc Concey for coliform bacteria. By comparing the microbiological indicators in the raw materials and the final product, were evaluated the impact of the physical-chemical parameters (pH, Aw) of the raw materials and the effects of the technological process on the resistance of the microorganisms. Products are assessed according to the limit values of the number of microorganisms defined in the Codex Alimentary of one EU country.

In our study all samples were contaminated by total count bacteria. From raw material samples the highest of total count bacteria load was in flour samples 10^3 cfu/g while wasn't in egg powder samples. Also the samples of the final products resulted a total bacteria load of 10^2 cfu/g. Yeast was resulted in cocoa samples and also in the final product samples (chocolate-coated sweet).

The study found that the technological process also quantity and mostly the type of microorganisms present in the raw material affects the microbiological quality of the final product.

Key words: *Sweet with chocolate coated, Miicrobial quality, Raw materials, Cocoa, flour, Eggs powder, Bacteria.*