



## EVALUATION OF THE EFFECT OF PH, ACIDITY OF 4 PROBIOTIC STRAINS IN WATERMELON JUICE FOR THE DEVELOPMENT OF A FUNCTIONAL DRINK

Carmen Lucia González Hernández, Ruth Belmares Cerda, Ana Verónica Charles Rodríguez,  
\* Mario Cruz Hernández.

Universidad Autónoma Agraria Antonio Narro, Department of Food Science and Technology, 1923  
Calzada Antonio Narro Saltillo Coahuila Mexico Buenavista CP 25315

\* myke13\_80@hotmail.com

*Key words: Probiotics, watermelon juice, anaerobe fermentation*

**Introduction.** In the last decade, probiotics have been widely studied and incorporated into dairy products. However, people intolerant and allergic to lactose, vegetarians and people with high cholesterol levels, cannot eat these products, suggesting the need to develop new alternatives such as non-dairy beverages and supplements in tablets (Prado et al, 2008)

This paper aims to develop a functional beverage based watermelon juice to study the viability of lactic microorganisms in the juice kinetically to evaluate the growth of probiotics and select the strain present greater adaptation juice (strains collection UAAAN-DCTA).

**Methodology.** Fermentations were performed for strain MZ, Sotol, corn and whey watermelon juice. For each of the fermentations were prepared from 20mL inoculum in a reactor designed for use under anaerobic conditions, containing the composition of the culture medium of MRS liquid together watermelon juice. Incubated for 24 hours under anaerobic conditions at 37 ° C the fermentation was performed for 5 days, stopping the fermentation every 24 hours for each of the strains was determined where acidity (acid basis), PH (potentiometer), sugars total biomass color.

**Results.** Figure 1C shows higher acidity index at 72 hours compared with the other strains. While in Figure 1A is maintained constant acid value of 24 to 48 h. Figure 1B is observed as the acid value is not affected during fermentation. Figure 1D shows a slight decrease in acidity after 48 h. The acid number of the developed beverage is directly related to the growth of microorganisms and hence, with the adaptation to the culture conditions.

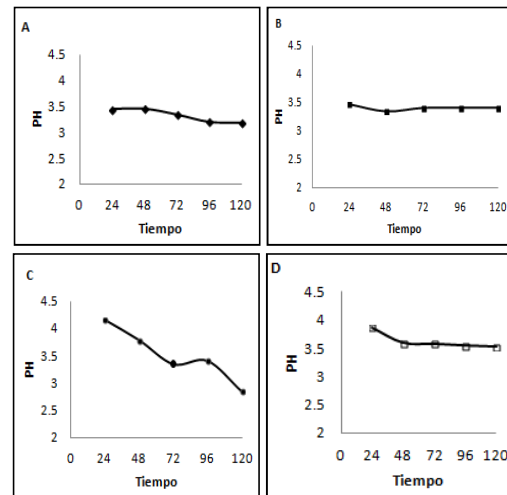


Figure 1 A) Serum strain (♦), B) strain of corn (■) C) Sotol strain (●) D) strain of apple (□).

**Conclusions.** Therefore the results obtained so far it can be concluded that the strain best adapted to local conditions is the watermelon juice that was isolated from the plant stool.

**Acknowledgements.** The Department of Food Science and Technology (DCTA) Universidad Autónoma Agraria Antonio Narro.

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