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Vegetable matrix as functional food products development

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The people concerns about improving the life quality and health care have impulse the Food Market to develop functional foods. The aim of our project is to study the vegetable matrices as probiotics support. As an example, pumpkin (*Cucurbita moschata* Duchesne ex Poir) was used in the present work to support a *Lactobacillus casei* strain. Different drying technologies: Dry impregnation, forced air convection or vacuum dehydration and dry impregnation followed by vacuum dehydration were applied to stabilize the final product. Edible coating technology was also used. According to the results, it was found that the application of edible coating, allowed extending to 14 days the life of the product. The dehydration processes also contributed to prolong the storage time. The vacuum dried product reached 28 days at 18-20°C. The probiotic viability depended on dehydration process applied reaching a level of microbial load $\approx 10^6$ - 10^7 CFU/g product throughout the storage period (vacuum dried). This level is appropriate for a functional food containing the beneficial microorganism. In turn, the pumpkin vegetable matrix showed a significant protective effect on *Lactobacillus* when subject to simulated gastrointestinal conditions. The presence of the probiotic does not alter the color changes of the pumpkin; nevertheless the stabilization process applied to matrix enriched with *L. casei* significantly affected the color of the final product.

Biography

Marina F de Escalada Pla has completed her PhD in 2006 from Buenos Aires University. Nowadays, she is Member of the National Research Council of Argentina (CONICET) and Professor at Industry Department, FCEyN-UBA and at University Technological National School of Engineering. She is the Adjunct-Director of Industry Department. She has published more than 20 papers and book chapters and two invention patents referred to functional foods and ingredients..

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