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Influence of different starches in sensorial, physical and chemical properties of freeze dried snacks

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Freeze dried process is a technique that consist in removing water from the product by sublimation, which cause it changes directly from solid phase to vapor phase without changing to liquid form. This technique allows to obtain high quality products, because they keep their molecular structure intact, avoiding nutritional and organoleptical losses. Starches are often used in freeze dried technique, to improve the organoleptic, physical and chemical properties of the final products. In this sense, it is very important to select the right starch for each product. In this work, we have developed five different fruit formulas for snack, one of them without starch and the others with different origins starches: maize, potatoes, rice and tapioca. We analyzed water activity and pH of the formulas, and we made organoleptic evaluation with professional tasters. The results of the evaluation of texture attribute showed that the analytical and organoleptic results are related. Statistical analysis proves meaningful differences between the formulas. Hence, starches used in freeze dried fruit formulas reduce acid taste and improve the texture. The origin of the starch is not relevant in the valuation of these two parameters.

Biography

Africa Jimenez obtained a degree in Chemistry from Extremadura University, Spain in 2001. She has a Master's in Clinical Nutrition from Food Technology and Nutrition Institute in Granada University, Spain in 2006. Her academic research has been focused in enteral nutrition, specially the influence of omega 3 fatty acids in elderly diets and oral bioavailability of taurine and leucine in enteral standards diets, with several published articles in this matter. She has been working at the R&D Department in Vegenat, S.A. since 2001, in the design and development of dehydrated mixes, modified texture foods, and clinical nutrition products, and also improving different food technologies (air dried, freeze dried, pasteurization, UHT). At present, she continues working in new projects, and she is in charge of the R&D Department.

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