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Sensory properties and nutritional benefits of gluten-free cookies

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Gluten is a composite of storage proteins termed as prolamins and glutelins found in wheat and related grains, including barley, oat, rye, and all their species and hybrids (such as khorasan, emmer, triticale, etc.). A gluten-free diet is a diet that strictly excludes gluten. This type of diet has been proven to be beneficial for people struggling with inflammatory diseases and autoimmune disorders. The reaction to gluten ingestion by sufferers of celiac disease is the inflammation of the small intestine leading to the malabsorption of several important nutrients including iron, folic acid, calcium and fat soluble vitamins. It is wrong when a gluten-free diet is recommended as a method for weight loss and as a method for improving health. The replacement of gluten is a huge technological challenge, because it is a basic protein to create high-quality wheat supplies. The aim of this research is optimization of gluten-free cookies production in terms of sensory characteristics and comparison with conventional cookies that contain gluten. For this purpose, four types of gluten-free cookies were developed according to various recipes. Sensory evaluation is a critical component to that process because it is responsible for generating new product ideas based on unique sensory properties or unique consumer segments identified only through sensory behavior. In order to choose the most acceptable product, sensory analysis were done by trained panelists. The final gluten-free product showed differences in terms of sensory characteristics exterior designs and texture (with bright yellow color and with greater friability). The taste and smell were tied at two products, so the purpose of this research was achieved. The fact that respondents like gluten product more than a gluten-free product can be offset by targeting product target customer group that is ready to make a small compromise sensory properties for health and nutritional benefits of the aglutenic product.

Biography

Valentina Pavlova completed her Doctor of Science in Chemistry at Ss. Cyril and Methodius University, Faculty of Natural Sciences and Mathematics, Republic of Macedonia in 2007, where she worked for a period of 2002-2009 as a Teacher and Research Assistant. She has completed Post-doctoral studies in Food Technology and Nutrition at Alexander Technological Educational Institute of Thessaloniki, Thessaloniki, Greece in 2015. She is working at Faculty of Technology and Technical Science, St. Kliment Ohridski Bitola, and is teaching several subjects: Chemistry, Biochemistry, Nutrition, and Sensory Analysis of food. She is the author/co-author of more than 100 articles; participated in more than 90 diploma works, 12 master and doctoral dissertation and 10 research projects. She is a Reviewer of four international journals. Her scientific interest includes “Chemical and sensory analysis of food, human nutrition”.

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