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Assessment of toxic effect and endocrine potential of food packages extracts

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In the scientific literature related to the widely understood issue of packaging materials designed to have contact with food there is much information on raw materials used for their production, their physicochemical properties, types and parameters. There are also a great number of publications on the management and disposal of used packaging. Unfortunately, not much attention is given to the matters concerning migration of toxic substance from packaging and its actual influence on the body of the final consumer of the food packed, even though health protection and food safety are the priority tasks. The main criterion for approving packaging materials for contact with food are the toxic properties of the substances used to produce a given material and the degree of global migration and specific migration. Unfortunately, however, the standard guidelines for assessing the impact of packaging on food quality only take into account the numerical values of these parameters fixed for a small group of compounds. Such approach raises many objections, given that the results of a recent study showed that apart from the monitored compounds leaching from the surface of the package, there are also other contaminants and their derivatives formed by interaction with food components and as a result of technological procedures applied. The goal of tests was to estimate the impact of foodstuff packaging type, production and storage conditions on the degree of leaching of potentially toxic and endocrine active compounds to foodstuffs with the use of the acute toxicity test Microtox® and endocrine potential YES/YAS.

Biography

Natalia Szczepańska has completed her MSc studies in 2014 from Chemical Faculty Gdansk University of Technology. She started PhD studies on Department of Analytical Chemistry in Gdansk University of Technology in 2014. She has published 3 papers in reputed journals and 1 monograph.

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