MODERN TRENDS IN FOOD CONTAMINATION ANALYSIS - AN INDICATIVE RESEARCH PROPOSAL ON MINERAL OIL HYDROCARBONS (MOH) MIGRATION POTENTIAL FROM FOOD CONTACT MATERIAL INTO FOOD PRODUCTS

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Abstract

Consumers may be exposed to mineral oil hydrocarbon (MOH) contamination via packaged foods, but data on the occurrence of MOH are currently available only for a limited number of foods.

In this work, we have carried out an indicative research proposal on the contamination with MOH migrated into milk via food contact material (FCM). Mineral oil saturated hydrocarbons (MOSH) and mineral oil aromatic hydrocarbons (MOAH) were extracted by LC-GC-FID from three sample categories: food contact material (4 samples), milk in directly contact with FCM (4 samples) and milk with no contact with FCM (4 samples). Our results revealed an important contamination given by the contact materials, especially for the MOSH fraction, supported by a common contamination profile, confirmed in the analyzed milk samples. Quantitatively, the MOH contents were variable, with higher values in milk samples in direct contact with FCM, the increase in MOH concentrations being closely related to the important contamination values of FCM (105.4–116.6 mg/g MOSH; 4.3–4.9 mg/kg MOAH).

Key words: *contamination, milk, food contact materials*