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CANS IN CONTACT WITH INFANT FORMULAS: IDENTIFICATION OF POTENTIAL MIGRANTS

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Food packaging may be considered as a source of contamination because their components can be transferred from the packaging into the packed food affecting their safety and quality. This fact is undesirable and had raised many concerns, particularly to vulnerable groups like infants. Since milk and dairy products are the main components of pediatric nutrition, there is a special interest to evaluate this type of matrices [1].

In this work, several infant formulas (growth milk and continuation milk) packed in cans, were analysed. A screening approach based on GC-MS using a Trace 1300 Series Gas Chromatograph with a Trace ISQ LT mass detector was applied to simply and rapidly determine the identity of potential migrants in the packaging through the solvent extraction technique. Moreover, as epoxy resins are used as internal surface coating for food cans, the presence of bisphenol A diglycidyl ether (BADGE) and bisphenol F diglycidyl ether (BFDGE) was checked by analyzing acetonitrile extracts using an HPLC-FLD method. The type of coating material was tentatively identified by IR.

The results obtained revealed the presence of several compounds used in the polymer and plastic industry such as acetyl tributyl citrate and dibutyl phthalate in the lid, and diethyl phthalate and octocrylene in the can. No detectable amounts of BADGE and BFDGE were found in the samples analyzed.

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