Abstract

METHOD FOR THE (PARTIALLY) AUTOMATED ANALYSIS OF MINERAL OIL CONTAMINATION IN FOODSTUFFS DURING SAMPLE PREPARATION

Disclosed is a method for the (partially) automated analysis of mineral oil contaminants in foodstuffs comprising the following steps in sample preparation: contacting and dissolving resp. extracting the food with an excess of a solution of a hydrocarbon solvent and an alcohol at a temperature between 20 °C and the boiling point of the solvent mixture, after cooling and if an alcohol was used in the previous step, initiating the phase separation by adding water or a mixture of water and an alcohol, contacting the organic phase with an excess of at least 30% hydrogen peroxide and a compound of the general formula (I) R^1-COOH (I), in which R^1 represents H or the general partialformula (II) (R^2)(R^3)C(R^4)- (II), where R^2, R^3 and R^4, independently, represent H, F, Cl, OH or methyl, in the presence of a small amount of a mineral acid at a temperature of above 20°C to 70°C for 5 min to 2h with epoxidation, separation of the reagents by addition of an excess of water, use of the hydrocarbon solvent extract for the following analysis.

Figure 9