News story: CEN updates affecting chemical measurements October 2018

EN ISO 3961:2018 – Animal and vegetable fats and oils – Determination of iodine value (ISO 3961:2018)

The iodine value (IV) is the mass of halogen, expressed as iodine, absorbed by the fat or oil component in a sample expressed as the mass fraction in grams per 100 g of fat. It is considered a measure of the relative degree of unsaturation of the fat or oil component where a high iodine value is indicative of greater unsaturation.

EN ISO 3961:2018 updates and replaces EN ISO 3961:2013 describing the determination of the iodine value for animal fats or vegetable oils but not fish oil. The method is based on the dissolution of the sample in a solvent and reacting with 'Wijs' solution, followed by the addition of potassium iodide and water where the liberated iodine is titrated using standardised sodium thiosulfate solution.

EN ISO 18363-2:2018 – Animal and vegetable fats and oils – Determination of fatty-acid-bound chloropropanediols (MCPDs) and glycidol by GC/MS – Part 2: Method using slow alkaline transesterification and measurement for 2-MCPD, 3-MCPD and glycidol (ISO 18363-2:2018)

The glycidyl fatty acid esters 3-monochloropropane-1,2-diol (3-MCPD) and 2-monochloropropane-1,3-diol (2-MCPD) are contaminants which can form during the refining of oils and fats along with glycidol which occurs with the formation and decomposition of 3- and 2-MCPD.

The toxicological relevance of glycidyl fatty acid esters has not yet been fully elucidated but glycidol is categorised as probably genotoxic and carcinogenic to humans.

EN ISO 18363-2 describes a procedure for the parallel determination of glycidol together with 2-MCPD and 3-MCPD in bound or free form present in the fat or oil. The method is based on alkaline-catalysed ester cleavage, transformation of the released glycidol into monobromopropanediol (MBPD) and derived free diols (MCPD and MBPD) with phenylboronic acid (PBA) and determined by gas chromatography with a mass spectrometer detector (GC-MS).

The method is considered applicable to solid or liquid fats and oils including animal fats and frying oils but a validation study is required to be undertaken before the analysis for these matrices. Milk and milk products (or fat coming from milk and milk products) are excluded from the scope of this standard.

EN 17093:2018 – Domestic appliances used for drinking water treatment not connected to water supply – Jug water filter systems – Safety and performance requirements, labeling and information to be supplied

EN 17093 describes chemical and microbiological safety requirements and tests for gravity fed devices for treating drinking water that are not connected to the mains water distribution system in buildings, known as jug water filter systems.

Further information on food and feed legislation can be found on the Government Chemist website:

Food and feed law: Compendium of UK food and feed legislation with associated context and changes during April to June 2018 – Government Chemist Programme Report