

## History repeats...

**Recently, the European Union Rapid Alert System for Food and Feed (RASFF) informed the member states of a contamination of certain batches of guar gum, with dioxins and pentachlorophenol (PCP). As a result, several batches of food additives containing guar gum had to be recalled.**

Guar gum is extracted from the guar bean. Besides its use in several industrial applications, it is also widely used in food and animal feed applications, for instance as thickening and homogenizing component in dairy products (yoghurt, soft cheese and ice cream), as a lubricant and binder in meat products, stabilizer in dressings and sauces.

Although essentially different in size and nature, this crisis shows similarities with the "Belgian dioxin crisis" dating from 1999, which is referred to as such because the dioxins were the contaminants found initially. Later on, it was discovered that the dioxins itself were present as "impurities" in polychlorinated biphenyls, the latter being the real source of the contamination (and detected at much higher concentrations than the dioxins).

In this recent crisis, experts believe that the dioxin contamination is most likely linked to the presence of pentachlorophenol, a chemical used as a pesticide (anti mould).

These incidents show that companies involved in food and feed industry should be very aware of the possible dangers of chemical contamination in various ways, caused not only by the chemicals themselves but also by their impurities.

Within SGS Belgium, the Institute for Applied Chromatography (IAC) acts as the SGS global supplier for high tech dioxin and related compounds analysis, using state of the art HRGC/HRMS equipment. As such, the IAC is accredited for the analysis of dioxins and related compounds in a wide range of food and feed matrices and according to the European EC-Directives 2002/69/EC and 2002/70/EC, and has become an expert in this field of testing.

In response to the guar gum crisis the Institute immediately developed an analytical technology enabling the analysis of dioxins in conjunction with the analysis of pentachlorophenol. In the same way as for the dioxin analysis, PCP is analysed using HRGC/HRMS with the isotope dilution technique using <sup>13</sup>C-labelled PCP. Only by this methodology the highest quality, selectivity and sensitivity is obtained. Many of the analytical tests resulting from this crisis have been performed by SGS Belgium within a very fast response time.

Additionally, our highly skilled team working with "state of the art" equipment, can act and respond very quickly on crisis situations, producing fast and high quality results, enabling output of immediate corrective or preventive measures.

SGS Multilab in Rouen also performs the PCP analyzes in food. As PCP is a forbidden substance the method needs to reach a LOQ of 10 ppb. As technique, GC/ECD after derivation with acetic anhydride is used. In case lower quantification limits need to be reached, GC/MS/MS is implemented. Don't hesitate to contact us if you need any further information

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