Risiken erkennen – Gesundheit schützen

Expert panel confirms: PFC exposure of consumers through foodstuffs is very low

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Data available from the *Länder* have revealed that the exposure of consumers to perfluorinated compounds (PFCs, better known as perfluorinated surfactants or PSs) through foodstuffs is low. Feed monitoring data from the Federal Office of Consumer Protection and Food Safety (BVL) also show that animal feed contains only minimal amounts of these chemicals. They thus constitute no health risk for consumers. This is the central conclusion reached by the PFC colloquium on the risk assessment of food and feed to which the Ministry of the Environment and Conservation, Agriculture and Consumer Protection of North Rhine-Westphalia and the Federal Institute for Risk Assessment invited more than 90 federal and regional *Länder* experts on 29 March 2010 in Düsseldorf. The recently available data from Bavaria, Hesse, Lower Saxony and North Rhine-Westphalia thus again confirmed the evaluation on the health assessment of PS in foodstuffs which was published in a previous Opinion (BfR Opinion 004/2009).

PFC (perfluorinated compounds, better known as perfluorinated surfactants or PSs) refers to a group of industrial chemicals which are intermediate products, adjuvants or degradation products in the production of certain fluorine compounds. These fluorine compounds are used in numerous consumer products. The most widely known chemicals in this group of PSs are perfluorooctanoic acid (PFOA) and perfluorooctane sulphonate (PFOS). Both compounds are very stable and are ubiquitous in the environment due to their widespread use. They have a long half-life within the human organism and can therefore accumulate. The major entry pathways of PFOA and PFOS are municipal wastewater treatment and industrial plants in which PS are processed. They can cause liver damage, cancer and affect reproduction.

Data show that especially feral fish in inland waterways and the offal of wild boars contain increased concentrations of PS. Other foodstuffs of animal origin are only minimally contaminated with either chemical. In these cases, concentrations are only marginally above or even below the limit of quantification. According to BfR assessments, PFOA taken in via the entry pathway food as commonly consumed in Germany makes up 1% of the tolerable daily intake (TDI); PFOS make up 17%. However, this estimation is based solely on data from food samples of animal origin. Yet the initial results based on the analysis of plant foodstuffs such as potatoes, carrots, asparagus and lettuce which were presented at the expert panel by the Bavarian health and food safety authority (LGL) show that these foodstuffs contribute only minimally, if at all, to the total exposure of consumers. The concentrations were generally below the limit of quantification. Only carrots, which were cultivated in a region with higher background presence, were found to have PS concentrations slightly above the limit of quantification. Samples analysed and evaluated by BVL feed monitoring provided a similar picture. PS concentration above the limit of quantification was only detected in a small number of samples.

Federal and *Länder* experts agreed that the entry of PSs into the environment must be minimised. The top priority is to minimise the entry of chemicals via industrial wastewater, wastewater treatment plants and ameliorants from sewage sludge that contains PSs. However, on the part of risk assessment it is not necessary to introduce guidance levels and limit values valid generally for PSs in foodstuffs at present. Yet it may be necessary to declare suggested intake levels for particular groups of the population such as anglers and

hunters and their families in certain areas, so-called “hot spots”, with greater concentrations in waterways and soil.