

Foodsafetynews.com:

Phthalates used in food contact materials

EFSA is launching a public consultation on the draft update of its 2005 risk assessments of five phthalates which are authorised for use in plastic food contact materials.

For the updated draft opinion, EFSA's Panel on Food Contact Materials, Enzymes and Processing Aids (CEP Panel) has established a group tolerable daily intake (TDI) of 50 µg/kg bw per day for four of the substances – di-butylphthalate (DBP), butylbenzylphthalate (BBP), bis(2-ethylhexyl) phthalate (DEHP), and di-isononylphthalate (DINP).

The group TDI is based on a plausible common mode of action underlying the reproductive effects of these four phthalates. For DINP, liver – rather than reproductive – toxicity was nevertheless recognised as the most critical effect.

For di-isodecylphthalate (DIDP), the fifth phthalate not included in the group TDI, an individual TDI of 150 µg/kg bw per day is proposed based on liver toxicity.

Combined dietary exposure to DBP, BBP, DEHP and DINP is estimated to be less than one quarter of the group TDI for all European consumers, including the most sensitive population groups, even in the worst-case scenario. For DIDP, dietary exposure is approximately 1,500 fold below the individual TDI.

Feed additives: online tool upgraded to improve exposure estimates

As of today applicants can make better estimates of exposure to residues of feed additives, thanks to a new release of the Feed Additives Consumer Exposure calculator (FACE).

The FACE calculator is a user-friendly tool for estimating chronic and acute dietary exposure to residues of feed additives and their metabolites present in food of animal origin. It implements the exposure methodology recommended by the Guidance on the assessment of the safety of feed additives for the consumer (see section 4.3 on Consumer exposure).

The latest version of FACE will provide more accurate estimates due to the incorporation of EFSA's new food consumption data on raw primary commodities (RPC, e.g. milk, meat). When FACE was launched in May 2018, it relied on food

consumption data that still required fine-tuning. With the recent finalisation of the RPC model, these consumption data have been significantly improved and integrated into FACE.

Salmonella cases in humans: assessing current EU reduction targets

After several years of decline, salmonellosis cases in the EU have flattened out. EFSA scientists say that setting stricter targets for Salmonella in laying hens at farm level could help reduce cases of this origin by a half.

EU countries are currently required to reduce the proportion of laying flocks infected with certain types of Salmonella to 2%. EFSA experts estimate that if this target was reduced to 1% salmonellosis cases in humans transmitted via laying hens would drop by 50%.

A target of 1% is currently in place for breeding hens – at the beginning of the poultry production chain – for five types of Salmonella that are of human health significance. EFSA recommends maintaining the existing target for three of these types and replacing the other two with types that are more relevant for public health today.

Salmonellosis is the second most common foodborne disease after campylobacteriosis in the EU and Salmonella is an important cause of foodborne outbreaks. In 2017, Member States reported 91,662 cases in humans.

EFSA to share data on open-access platform

EFSA has taken a major step towards becoming a fully open data organisation by committing to publish the scientific data it uses for EU-wide monitoring programmes and surveys and many of its risk assessments.

In a report published today, EFSA lays out how it intends to share data collected in areas such as: food consumption habits; pesticide residues in food; chemical contaminants and additives in food; foodborne disease outbreaks; and antimicrobial resistance.

The data will be made available on Knowledge Junction, EFSA's curated, open repository, which was set up to improve transparency, reproducibility and reusability of evidence in food and feed safety risk assessments. The first datasets will be published this year.

Food safety news:

Brucella in Germany

1 in 5 cheeses in Germany positive for *Brucella*; 9 vendors sold more than half of contaminated samples.

Brucella was detected in 41 of 200 samples from endemic countries sold at weekly markets, in supermarkets, and by delis in Berlin, as well as 15 prepacked cheese samples bought online via eBay.

Cheese made from pasteurized sheep's milk and sold unlabeled or loose by market vendors was the most frequent type associated with the presence of *Brucella* DNA. Cheese samples included loose, non-labelled and pre-packed; labelled samples of brine, cream, soft, semi-hard and hard cheeses; and cheese made from bovine, ovine and caprine milk.

Researchers determined nine vendors sold more than 50 percent of the *Brucella* positive cheese samples, including seven at weekly markets and two supermarkets.

In the European Union brucellosis has been successfully eradicated from livestock in most member states including Germany. The main burden of human disease is due to *Brucella melitensis* and *Brucella abortus* transmitted from sheep, goats and cattle. It is a severe disease with most of the patients reported in the EU needing to be hospitalized.

Almost half of the cheese samples, 48 percent, tested by the researchers were made predominantly with sheep's milk. Goat's milk was used for 22.5 percent and cow's milk for 6.5 percent, with 46 samples having been made with a mixture of the three different types of milk.

Researchers mainly investigated short ripened cheeses such as feta and brine cheese, soft and cream cheese, as well as short ripened semi-hard cheese. They also tested 20 hard cheeses, such as Pecorino and Manchego. Countries of origin were Turkey, France, Bulgaria, Greece, Spain, Italy, Belgium, Croatia, Cyprus, Lebanon, Czech Republic, Germany and The Netherlands.

Preventing foodborne Salmonella infection

Brazilian researchers are investigating which genes important for the survival of *Salmonella* to help prevent foodborne infections in humans.

The team from the School of Agricultural and Veterinary Sciences at the State University of São Paulo (FCAV-UNESP) are looking at survival of the bacterial species *Salmonella* in the intestinal tract of poultry.

Salmonella is able to use the inflammatory process it provokes as a source of energy to survive and multiply inside the gut. This is associated with the use of tetrathionate (ttr) as a by-product of the host inflammatory gut response. After production of ttr, it becomes possible to use propanediol (pdu) as an energy source.

Angelo Berchieri Junior, a professor at FCAV-UNESP, is responsible for a São Paulo Research Foundation (FAPESP) funded a project that will test the effects of deleting ttrA and pduA genes from *Salmonella* Enteritidis, *Salmonella* Typhimurium, and *Salmonella* Heidelberg.

By identifying the genes that allow the bacteria to survive, researchers are able to generate mutant forms that may be used as a vaccine.

When the immune system comes into contact with a variety that does not kill the animal but survives for a period of time, that animal establishes an immunological memory. If it is later exposed to a harmful version of the bacteria its defenses will be ready to attack it.