BITTER AFTERTASTE

Local, protein-rich sweet lupins are a popular feed alternative to imported soya. Unlike bitter lupins, sweet lupins have a lower concentration of toxic bitter substances that can negatively affect the health and capacity of animals. However, analyses by BfR researchers show that sweet lupins can also contain a higher concentration of these substances, quinolizidine alkaloids (QA). Feed experiments have also proven that QA can pass into cow's milk. The consumption of animal-based products can thus also entail health risks for humans. Therefore further investigations regarding QA in sweet lupins are planned in order to better assess their suitability as livestock feed.

More information

BfR communication
"Alkaloids from sweet lupines pass into the milk in small quantities when fed to cows"
(pdf)

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Tiny terrors?

93% of people in Germany know what microplastics are. 0.001 to 5 millimetres in size, these tiny plastic particles are a recurring topic in the media. The BfR has been researching them for 10 years. According to current scientific knowledge, these plastic particles in food do not pose any negative health risks. How they are absorbed by the body from the intestine, however, has not yet been sufficiently clarified. There is still not enough human and animal data available. In addition, there is a lack of reliable analysis methods for detecting these particles in humans or food. Demonstrating the presence of microplastics in vegetables or intestines is more difficult than in water or honey, for example. But analytics continues to develop.

More information

BfR information
"Microplastics"

Ongoing investigation

At the BfR, standardised measurement procedures are continually being developed to detect chlorinated paraffins in food and feed. The substances are used as plasticisers in plastics, in textiles, paints, and in fire-proofing agents or lubricants, for example. The problem is that they can also be released into the environment. As they are largely non-degradable, they accumulate in the food chain and sometimes even end up on our plates. We know that chlorinated paraffins can damage organs such as the thyroid and kidneys. The use of certain chlorinated paraffins is now prohibited. To date, exact identification in a laboratory is difficult because chlorinated paraffins consist of many different individual substances that only minimally vary from one another in their chemical composition.

Idealised nature

Plants produce substances as a defence against herbivorous animals and microorganisms. Some of these can be poisonous for humans. A well-known example is solanine in potatoes – green flesh or sprouted parts contain a lot of this. However, only just over a quarter of the population are worried about naturally occurring plant-based toxic substances, as revealed by a representative BfR survey. A possible reason for this could be that many of those surveyed know nothing about the substances. In addition: unlike the usually higher risk perception for synthetic substances, natural toxins in food are often given less thought.

More information

BfR Consumer Monitor
"Naturally occurring, plant-based toxins"
(pdf)

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More information

BfR opinion
"Hexahydrocannbinol (HHC) in foodstuffs" *(pdf)*

HHC Fruit Gums:
Poisoning Possible

Hexahydrocannabinol (HHC) behaves similarly to its better-known relative, THC (tetrahydrocannabinol), the most significant psychoactive cannabinoid in the cannabis plant. Unlike THC, HHC is not yet listed under the Narcotic Drugs Act or the New Psychoactive Substances Act and is often sold as a "legal" alternative, despite significant legal concerns. The substance is used in various products, such as e-cigarette liquids and oils. There are also products containing HHC that resemble wine gums, which is especially dangerous for children. They could accidentally poison themselves severely by consuming what they believe to be a normal snack. Such cases have been documented in Germany. Currently, there is a significant lack of scientific research on the general health risks of HHC.