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Micro and nanoplastics in food: EFSA's activities

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Trusted science for safe food

Micro/nanoplastics
as an emerging
risk for food safety

CONTAM Panel
statement

The EFSA
Colloquium

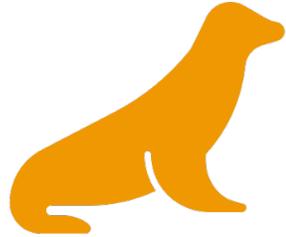


Preparedness to the future: emerging risks identification

Interacting drivers

- Socio-economic
- Environmental
- Technological
- ...





EREN meeting – 2013:

- microplastics in marine ecosystem: known as an environmental issue
- potential emerging food safety issue?
- because of lack of data, no decision on food safety risk
- recommendation: EFSA to monitor the issue, consult other bodies and collect info



BfR's request to EFSA - 2015

EFSA to issue a scientific opinion on the presence of plastic microparticles and nanoparticles in food, with particular focus on seafood.

■ Occurrence

- seafood (fish, shrimp and bivalves), honey, beer and table salt;
- digestive tract of marine organisms;
- an average portion of mussels: 7 μg of plastic.

■ Effects

- >90% of ingested micro/nanoplastics excreted
- particles >150 μm :
not absorbed, could cause only local effects on immune system and gut inflammation
- particles < 150 μm :
could translocate across gut epithelium, causing systemic exposure
- particles <1.5 μm :
could penetrate organs.



Analytical methods (further) developed & standardised – QA demonstrated



Generation of occurrence data



Research on toxicokinetics and toxicity - including studies on local effects in the GI tract



Research on degradation of microplastics & potential formation of nanoplastics in human GI tract



A coordinated approach to assess the human health risks of micro- and nanoplastics in food



further efforts are needed to generate the data necessary for a comprehensive human health risk assessment.



expertise of different stakeholders, coordinated research initiatives and international cooperation



full life-cycle risk assessment, transparent communication, risk perceptions and stakeholders' priorities.

Thank you! Questions?

