



Seismo Info 09/2022



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The FSVO compiles the most important food safety information every month:

[FSVO website](#)

★★★ very important info ★★ important info ★ interesting info

Dear reader, we are improving our processes. As you will see, the information is now presented according to defined areas: microbiology, chemistry, nutrition, fraud/deception and allergens. At the same time, we recall that the newsletter focuses on new hazards that are likely to be central to early detection. Enjoy your reading!

Microbiology

★★★ **Hepatitis E in seaweed salad:** A notification has been submitted to the European Rapid alert system for food and feed (RASFF) for **Hepatitis E in wakame salad** (seaweed salad). [FoodWorld](#), 1 page. (12.08.2022). Original Publication: [RASFF](#).

★★★ **Emergence and spread of NDM-1-producing *Vibrio* spp.:** Carbapenemase-producing *Vibrio* spp. have become **increasingly prevalent** and pose a severe **threat** to public health. The emergence of novel plasmids has contributed to the variable genetic contexts facilitating the spread of such genes between *Vibrio* spp. and other zoonotic pathogens, leading to a **rapid dissemination of antibiotic resistances** in bacterial pathogens worldwide. [JAnti-micrChem](#), 1 page. (18.08.2022).

★★★ **Enteroaggregative *E. coli* (EAEC) O104:H4:** A type of *E. coli* similar to what caused a **large outbreak** in 2011 (mainly in Germany) has recently been detected in Europe. Two cases of **Shiga toxin-producing Enteroggregative *E. coli* (EAEC) O104:H4** were reported in the Netherlands in 2019 and 2020 and in one food isolate in 2017. There was also a patient from Austria in 2021. [FSN](#), 1 page. (18.08.2022). Original Publication: [EmergInfDis](#).

- ★★★ **Campylobacter spp. in shellfish:** A new study aimed to assess the presence of **thermotolerant Campylobacter spp.** in mussels, oysters and queen scallops. The samples were collected from nine locations in the Istrian aquatory, Croatia. Among 108 examined samples, **mussels** dominated and were the **only ones found positive** for the presence of *Campylobacter* (25.6%). [Pathogens](#), 9 pages. (19.08.2022).
- ★★★ **Clostridium botulinum in fresh-cut produce:** An article discusses the **increasing consideration** of *Clostridium botulinum* as an **emerging pathogen** in **fresh-cut vegetables, fruits, and mushrooms**. [FoodSafetyMag](#), 4 pages. (15.08.2022).
- ★★★ **Arcobacter spp. in foodstuffs:** Spanish scientists have established the presence of **various species of the Arcobacter genus** in a wide range of foodstuffs. A total of 220 samples were analysed (seafood, vegetables, meat products and fresh cheese). *Arcobacter* were **detected in > 22% of the samples** and the most abundant species in all of them was **A. butzleri**. [Affidia](#), 1 page. (08.08.2022). Original Publication: [IntJFoodMicr](#).
- ★★ **Nutritional drink:** An American company, which **recalled 53 products** (nutritional and beverage products) last month, has added more than 30 more drinks to the call back due to potential for **botulism contamination** as well as a **Cronobacter sakazakii** threat. [USAToday](#), 2 pages. (11.08.2022). Original Publication: [PRNNewswire](#), [FDA](#).
- ★★ **Antimicrobial resistance of Salmonella Serovar Kentucky:** *Salmonella* Serovar Kentucky was identified in the US as having its origin mainly **outside the USA**. The recent introduction of **sequence type (ST) 198 strains** in the human population in the United States likely results from consumption of **foods that are imported** or consumed while traveling. [FoodSafetyMag](#), 1 page. (15.08.2022). Original Publication: [FoodbPathDis](#).
- ★★ **Escherichia coli from patients and swine:** A new study shows that isolates from swine and humans had the **stx2 gene**, which could cause severe disease. **Antimicrobial resistance** was significantly higher in pigs than in patients. These results suggest that **pig could act as a reservoir** in human infection and antimicrobial resistance could be transferred to human from pigs. [BMCMicrobiol](#), 10 pages. (16.08.2022).
- ★★ **Dill recalled because of Listeria contamination:** A Canadian company is recalling **quick freezing dill** because of *Listeria monocytogenes* contamination. [FSN](#), 1 page. (17.08.2022). Original Publication: [GovCanada](#).
- ★★ **Hepatitis E in water environments:** A systematic **review of published data** aimed to assess the **prevalence of Hepatitis E virus (HEV)** in water matrices (untreated and treated wastewater, surface water, drinking water, groundwater, and other water environments). In **drinking water**, the study established an overall **prevalence of HEV of 4.7%**. The overall prevalence obtained of this study was generally higher in industrialized countries. [FoodEnvironVirol](#), 13 pages. (29.08.2022).
- ★ **Campylobacter prevalence in broiler and human campylobacteriosis cases:** A recent study explores the relationship between the **incidence of campylobacteriosis** and the **prevalence of Campylobacter spp.** in poultry broilers batches in Sweden between 2009-2019. The study suggests that there is a **two-week time lag** between human cases and broiler prevalence. [FoodSafetyMag](#), 1 page. (08.08.2022). Original Publication: [IntJFoodMicr](#).
- ★ **Salmonella outbreak linked to watermelon:** Norway is reporting a **national outbreak** caused by **monophasic Salmonella Typhimurium**. So far, infection has been detected in 18 people. Source of infection is consumption of **watermelon**. [OutbreakNewsToday](#), 1 page. (13.08.2022).
- ★ **Microbiological contamination of hamburger buns:** An American company is voluntarily recalling **hamburger buns** and related products due to a potential microbial contamination with **Cronobacter sakazakii** and **Clostridium botulinum**. [FDA](#), 2 pages. (13.08.2022).
- ★ **Brucella in dairy products:** High *Brucella* contamination rates have been found in **ricotta, cheese, and raw milk** samples in Tunisia, posing a **serious risk** to consumers. [FSN](#), 1 page. (21.08.2022). Original Publication: [Foods](#)
- ★ **Escherichia coli O157:H7 in hamburgers' lettuce:** The American Centers for disease control and prevention (CDC) reported that **37 people** in four states have been **sickened by E. coli O157:H7** – likely after consuming hamburgers with lettuce at a fastfood restaurant. The **lettuce seems to be of relevance**, not the burger. [FoodPoisonJournal](#), 2 pages. (21.08.2022). Original Publication: [CDC](#).
- ★ **Protective cultures on tomatoes:** A study was carried out to identify **protective microbial strains** in tomato cultures. The effectiveness of eight strains belonging to **Pseudomonas, Bacillus and Enterobacter** genera was confirmed in in vivo assays, carried out on tomato fruit artificially inoculated with *A. alternata* and *B. cinerea*. [IntJFoodMicr](#), 12 pages. (16.10.2022).

★ **Bacterial pathogens in insect-based food:** A variety of 73 food products with **insect or other arthropod ingredients** on the occurrence of potential **bacterial pathogens** were analysed. Most of the investigated food products complied with food safety standards. *Salmonella* spp., *Bacillus cereus* (s.lato), *Bacillus cytotoxicus*, *Clostridium perfringens* were detected. No detection of STEC or *Clostridioides difficile*. [IntJFoodMicr](#), 11 pages. (16.10.2022).

★ **Multi-drug resistant *Salmonella* Infantis in chicken:** The U.S. Department of Agriculture's Food Safety and Inspection Service (USDA's FSIS) has published an after-action review of a **foodborne illness outbreak** that was linked to **chicken products** involving a **multi-drug resistant (MDR) *Salmonella* Infantis** strain. [FoodSafetyMag](#), 2 pages. (29.08.2022). Original Publication: [FDA](#).

★ **Wastewater in agriculture and parasites:** The German federal institute for risk assessment (BfR) has published a **risk assessment** of transmission of *Cryptosporidium* spp., *Giardia duodenalis* and *Toxoplasma gondii* to humans related to using **reclaimed wastewater** in agriculture. [BfR](#), 41 pages. (27.07.2022).

Chemistry

★★★ **Migration of styrene:** 17 dairy products packed in polystyrene from the Italian and German markets were investigated. **Styrene concentrations** ranged from 5 to 30 µg/kg at the best before date of yogurt and cream products. In single serving portions of coffee creamer, stored at room temperature until the best before date, 401 µg/kg were measured. [Foods](#), 17 pages. (17.07.2022).

★★★ **Microplastics in bottled water:** A test by a French association has highlighted the presence of microplastics in **bottled water**. [ActuEnv](#), 3 pages. (28.07.2022). Original Publication: [AgirPourEnv](#), [Laboceia](#).

★★★ **Red meat and cardiovascular disease:** Researchers found that eating red meat leads to the **production of metabolites** in the body's microbiome that are associated with a **higher risk of atherosclerotic cardiovascular disease** in people over 65. The metabolites were **trimethylamine N-oxide (TMAO)** and its key intermediates, gamma-butyrobetaine, and crotonobetaine. TMAO is derived from L-carnitine, which is a popular fitness supplement, as is iron heme. The authors recommend caution in consuming such supplements until their health effects are better understood. [MedNewsToday](#), 3 pages. (08.08.2022). Original Publication: [ATVB](#).

★★ **Food packaging as organophosphate ester source:** A study assessed organophosphate ester (OPE) contamination of **Chinese foodstuff** and evaluated whether the chemicals originated from the packaging. [FoodPackForum](#), 1 page. (16.08.2022). Original Publication: [JAgrFoodChem](#).

★★ **Upcycling of banana peel flour:** A recent study found that **banana peels** that are blanched, dried and ground into a fine flour can be **used for baked goods**. [news24](#), 2 pages. (18.08.2022). Original Publication: [ACSFoodSciTech](#). Additional Information: [Why do bananas require so many pesticides?](#).

★★ **Food safety of smoothies:** An article discusses **smoothies** from a **nutritional and toxicological** point of view. It addresses what should be observed when selecting the ingredients and preparing them in order to **avoid health risks**. [Ernährungsumschau](#), 10 pages. (08.2022).

★★ **Unauthorized veterinary drug residues in seafood:** A global comparison of reported food fraud across 80 countries and **72 seafood species** is the subject of a new article. More than half of the issues reported involved the presence of **illegal or unauthorized veterinary drug residues** in seafood originating from Asia. [SeafoodSource](#), 2 pages. (09.08.2022). Original Publication: [CompRevFoodSciFS](#).

★★ **PFOS and liver cancer:** Exposure to **PFOS** (Perfluorooctanesulfonic acid) is linked to **non-viral hepatocellular carcinoma**, the most common type of liver cancer, according to a new study. [JHEPReports](#), 26 pages. (08.08.2022).

★★ **Fertilizers from used batteries:** A company in Finland makes **organic certified fertilizers** from **used batteries**, hopes circular economy solutions can prove a vital tool. [FoodNavigator](#), 2 pages. (31.08.2022). Additional Information: [Tracegrow - Company homepage](#).

★ **Lead in game meat:** A new study concludes that eating **pheasant killed using lead shot** is likely to expose consumers to **raised levels of lead** in their diet, even if the meat is carefully prepared to remove the shotgun pellets and the most damaged tissue. [EurekAlert](#), 2 pages. (22.08.2022). Original Publication: [PLOSOne](#) Additional Information: [NewFoodMagazine](#).

Nutrition

★★★ **Vegetarian women have greater risk of hip fracture:** A study from the University of Leeds found that **women** who followed a **vegetarian diet** were at a **33% higher risk of hip fracture** compared with those who regularly ate meat. [Conversation](#), 2 pages. (11.08.2022). Original Publication: [BMC Med.](#)

★★★ **Ultra-processed foods:** More research suggests that eating a **diet high in ultra-processed foods (UPF)** is **harmful for the aging brain**. Results from a Brazilian study showed that higher intake of UPF was significantly associated with a faster **rate of decline** in both executive and global cognitive function. [Medscape](#), 3 pages. (01.08.2022).

★★ **Ultra-processed food and body mass index:** A study in the USA shows **ultra-processed food (UPF) intake** is associated with **BMI**. Among US adults, abdominal and visceral adiposity indicators were positively associated with UPFs and inversely associated with minimally processed food. [Obesity](#), 11 pages. (04.08.2022).

★★ **Ultra-processed food and mental health:** Results of a new study showed that individuals who **consumed the most ultra-processed foods** as compared with those who consumed the least amount had statistically significant **increases** in the adverse mental health symptoms of **mild depression**, “mentally unhealthy days” and “anxious days.” [EurekAlert](#), 2 pages. (25.08.2022). Original Publication: [PubHealthRes.](#)

★★ **Vitamin D and inflammation:** New research shows a direct link between **low levels of vitamin D** and **high levels of inflammation**, providing an important biomarker to identify people at higher risk of or severity of **chronic illnesses** with an inflammatory component. [EurekAlert](#), 1 page. (07.08.2022). Original Publication: [IntJEpid.](#)

★ **Vegan milk:** Most plant-based “milks” have **lower amounts of four key micronutrients** – phosphorus, magnesium, zinc and selenium – than cow’s milk. The exception is milk substitutes made from pea protein, which has broadly similar levels to cow’s milk. [NewScientist](#), 1 page. (24.08.2022).

★ **Sugar, microbiome, obesity and diabetes:** A study of mice found that **dietary sugar** alters the gut **microbiome**, setting off a chain of events that leads to **metabolic disease, pre-diabetes, and weight gain**. [EurekAlert](#), 2 pages. (29.08.2022). Original Publication: [Cell.](#)

★ **Ultra-processed foods and colorectal cancer:** A new study links **ultra-processed foods** and **colorectal cancer** in men. Indeed, researchers found that men who consumed high rates of ultra-processed foods were at higher risk for developing colorectal cancer than those who did not. [EurekAlert](#), 2 pages. (31.08.2022). Original Publication: [BMJ.](#)

Fraud / Deception

★★★ **Illegal trade of pesticides:** Pesticides are the newest counterfeit product spreading through the EU. In their latest annual operation, dubbed Silver Axe VII, that targeted the **illegal trade**, European law enforcement seized more than **one thousand tons of illegal pesticides** and arrested ten people. The operation also found evidence that while some of the counterfeit goods are being smuggled into the EU from neighboring regions, other pesticides were being made locally on EU soil. [OCCP](#), 1 page. (27.07.2022). Original Publication: [Europol.](#)

★★ **Identification of species used in fish burgers:** An Italian study highlighted the presence of 16 marine and 2 mammalian taxa in fish burgers with an overall **mislabelling rate of 80%**, including cases of **species substitution**, the undeclared presence of **molluscs** and of taxa whose use are not permitted in Italy. [IJFS](#), 5 pages. (11.08.2022).

★ **Fake vanilla:** In 2021 and 2020, the German authority LAVES tested a total of 64 samples of **vanilla ice cream** for the use of real vanilla. These were 21 samples from unpacked ice creams (gelateria) and 43 samples in pre-packages. A total of 26 samples were **not compliant**, of which 16 were unpacked samples and 10 in pre-packages. [LAVES](#), 2 pages. (16.08.2022).

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