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March 2021

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# **MARKET NEWS**

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### **International News**

### EU extends changes to control rules again because of COVID-19



Temporary rules covering official controls in Europe because of the coronavirus pandemic have been extended for the fourth time. The implementing regulation covers a variety of activities to ensure food and feed law, as well as rules on animal health and welfare and plant health and protection products.

The controls initially came into force in March 2020 and will now last until July 2021. Official controls are done by authorities in EU countries to verify business compliance with legislation.

Member states told the Commission that because of the crisis linked to COVID-19 there are "serious disruptions" in the functioning of their control systems. There are also difficulties to perform official controls and other tasks on certificates and attestations with respect to movements of animals and goods into and within the EU and problems organizing physical meetings with operators and their staff.

### Interim changes

The temporary rules were originally planned to end in June 2020, but that was extended to August, then to October 2020, and again in February. The termination is now set for July this year.

It was previously disclosed that 19 countries including Belgium, Denmark, Germany, France, Italy, Ireland, Netherlands, Poland and Sweden had taken up the measures to contain risks to human, animal and plant health and animal welfare. They include remote official controls and scanned or electronic documents being accepted for some commodities.

Issues included the clinical examination of animals, certain checks on products of animal origin, plant products and on food and feed of non-animal origin, and testing of samples in official laboratories.

The latest update reintroduces the option to allow people authorized by national authorities to perform official controls and other such tasks. They must follow instructions given by the authority, act impartially and not have any conflicts of interest.

The European Consumer Organisation (BEUC) previously said the flexibility for member states to carry out food checks has included the possibility, under certain conditions, to have staff working for a food business to perform the

#### controls.

"While the need for exceptional, temporary measures may arise in times of crisis, transparent communication and information is needed on the concrete effects of any derogations on the ground. Moreover, it is essential to ensure that any exceptional arrangements last for no longer than necessary and do not put food safety and consumer health at risk," according to officials.

#### Online food offers relating to COVID-19

Meanwhile, the EU Commission has updated findings from an operation on online offers and advertising of food related to COVID-19.

National authorities observed that more products sold via the internet are being advertised as being able to cure or prevent infection by coronavirus. This claim is not supported by scientific evidence.

Notified national and cross border cases have hardly changed since an update in December 2020 with the number of notifications recently going down. As of Feb. 12, there are 539 national alerts and 85 cross-border ones.

The operation began in April this past year and the way forward will be discussed with member states in the coming weeks with it planned to end in spring this year.

Action has now been taken in almost 500 cases, with this being in co-operation with e-commerce platforms on nearly 100 occasions. The number of ongoing investigations has fallen from about 300 to 150.

The main outcomes are the offer being taken down or the health claims removed or changed, but injunctions and fines have been issued.

Italy has been involved in more than 200 reports, with Germany's 61 the next highest followed by Netherlands, France and Czech Republic. Dietetic foods, supplements and fortified foods is the main product category with 585 alerts, while only a handful relate to cocoa preparations, coffee and tea; herbs and spices; honey and royal jelly; or fats and oils.

### New study predicts food irradiation market growth over coming years



An intelligence report published by Advance Market Analytics details insights about the potential future of food irradiation around the world, pointing to food safety among the benefits.

United States companies will contribute to the maximum growth of the global food irradiation market throughout the predicted period of 2021-2026, according to the report "Food Irradiation Market Outlook to 2026."

Food irradiation — the application of ionizing radiation to food — is an ideal food safety practice because it does not make foods radioactive, compromise nutritional quality, or noticeably change the taste, texture, or appearance of them according to food safety experts in the United States and around the world. The process is mandatory for some foods imported to the United States. Some U.S. companies irradiate their raw ground beef.

Food irradiation improves the safety and extends the shelf life of foods by reducing or eliminating microorganisms and insects. Like pasteurizing milk, irradiation can make food safer for the consumer according to the study. The Food and Drug Administration is responsible for regulating the sources of radiation that are used to irradiate food. The FDA approves a source of radiation for use on foods only after it has determined that irradiating the food is safe.

With food irradiation, pathogens such as Salmonella or E. coli can be eliminated. In addition to this, food irradiation reduces the need for other pest controls which can harm food. This process has been widely accepted to maintain the quality of the food. These benefits are increasing the market growth, the researchers reported.

A thorough analysis of these factors including economic slowdown, local and global reforms and COVID-19 impact were conducted to determine future growth prospects in the global market. The report provides a detailed overview of key factors in the food irradiation market and factors such as driver, restraint, past and current trends, regulatory scenarios and technology development.

Overview of insights:

#### Market Drivers

Increasing concerns of food safety are contributing to the market growth. There

have been increasing foodborne diseases that are caused through contamination. In addition, there has been increasing consumption of meat and raw food that can be protected from microorganisms through food irradiation. These factors are fueling the food irradiation market.

#### Market Trend

There is rising usage of irradiation in fresh fruits and vegetables.

#### Restraints

There is a lack of awareness about food irradiation that may hamper the market growth.

#### Opportunities

There is increasing consumption of raw foods, such as lettuce and spinach.

#### Challenges

There is a reluctance of some individuals to use the technology.

#### Major Players

Food Technology Service Inc. (United States), Sterigenics International Inc. (United States), IONISOS SA (France), ScanTech Sciences Inc. (United States), GRAY STAR Inc. (United States), REVISES Services (United Kingdom), STERIS Isomedix Services (United States), MDS Nordion (Canada), and SADEX Corp. (United States).

# X-rays for food safety: Two common misconceptions about X-ray inspections

X-ray inspection of food products is becoming increasingly popular worldwide.

This is likely due to two factors. First and foremost are the high costs associated with a food recall caused by foreign body contamination. Second, studies performed by the FDA and other organizations have concluded scanning food with X-ray scanners does not pose a health risk – putting to rest any lingering concerns on that front.

During this uptick, recognition is building that this sophisticated approach to inspection can detect more than just metal. This distinction is important, because food suppliers and end users typically identify glass, ceramics and even dense plastics as frequent foreign substance culprits.

X-ray scanners also can perform quality control functions above and beyond foreign substance detection. For example, in yogurt cups or ketchup bottles, X-ray systems can be utilized to verify accurate fill levels. In other food segments, pizzas can be checked to assure adequate roundness, pralines can be counted in the equipment tray prior to packaging and, perhaps most impressively, cheese can be classified according to ripeness.

Despite its wide array of potential benefits, however, misconceptions persist about X-ray inspection and its applications. Let's dispel two of the most common myths.

Myth 1: The Higher the Density, the Higher the Detectability

It is widely understood that the effectiveness of an X-ray inspection module largely depends on the density of the foreign bodies it is tasked with detecting. And while this may be the case in some application scenarios, this size-centric view of detectability is by no means a universal commonality.

The reality is that the primary characteristic that determines the unit's absorption of radiation – and therefore its detectability – is the foreign object's

atomic number. The more it "radiates," the easier it is to detect; and while size tends to increase this characteristic, the complete picture is far more complex.

Take glass, for example. For X-ray scanners tasked with finding glass-cased foreign objects, a key factor is the type of glass. Unlike, say, Stainless Steel 316, glass is not a strictly defined material composition. Glass used for packaging applications like bottles and jars constitutes the highest risk for contamination, due to the varying nature of its composition. This presents a wide range of scenarios where an X-ray scanner needs to distinguish between the proper glass material of the container and any bit of glass contamination caused by a foreign material hidden in the product.

Meanwhile, "soda-lime glass" consists mainly of silicon dioxide – but there is a strong variation concerning the percentage. Another factor fomenting composition variability is that today's glass is mostly recycled.

All this leads to quite a bit of variation owing to different ingredients, additives and contaminants that can increase the absorption of the glass dramatically. For example. silicon alone has an atomic number of 14, just slightly more than aluminum (13); this leads to similar absorption rates. But if the glass is contaminated by something like lead (atomic number 82), it will have a much higher absorption even if the overall density remains similar to standalone glass.

This effect becomes particularly important during comparison tests between X-ray systems. Here, it is ill-advised to compare detection results of competing modules, because the glass they are testing may not be created equal. In this scenario, the machine detecting glass containing even trace amounts of a substance with a higher atomic number has an inherent, unfair advantage. In other words, comparing glass detection to glass detection is often like

### comparing apples to oranges.

Nevertheless, the commonly perceived density paradigm employed in day-to-day applications is not entirely misguided. If a foreign object issue occurs in the factory, this simplified approach to quality assurance is usually sufficient to efficiently determine whether the matter should be investigated more thoroughly. If the contaminant floats in the water, it is not necessary to perform further testing as – under usual circumstances – a single energy X-ray system will not be able to find it. If it does not float, it is worthwhile to have a discussion with X-ray experts, who might have local test facilities for further investigation.

Myth 2: X-ray Inspection Requires Lots of Space – Even for Small Products

While X-ray inspection units certainly require some amount of additional space, their overall impact on precious floorspace can easily be mitigated.

The hesitance is understandable: In the food industry in particular, space is always at a premium, especially when it concerns integrating new equipment into existing production lines. One approach is to fully integrate a special X-ray unit into a thermoforming and filling machine (FFS) – a tidy solution in, for example, yogurt cup production.

Another novel approach involves combining compatible units. Despite the specified space requirements for radiation protection, an X-ray scanner can nonetheless share space utilized for other inspection tasks, such as checkweighing. In fact, efficiency-minded solutions exist that proficiently combine X-ray and checkweighing inspection functions in a surprisingly condensed space. Such dual-task modules also can be equipped with vision systems that bring additional benefits, including faster product changeover via software-centric label recognition and manufacturing metrics analysis for

optimized line efficiency.

Many of these units are exceedingly functional despite their compactness, combing contaminant detection with the ROI-centric goal of minimizing giveaway through precision weighing. Applications where these types of joint solutions are especially valuable include retail-packed convenience food, ready meals in foil trays and small end-of-line packaged goods. Many offer advanced quality control systems that distinguish whether a product was rejected for weight or contamination – a helpful, downtime-reducing first step toward remediation. For ease of operation, some offer linked, icon-driven touchscreen HMIs for integrated equipment communication and seamless product transfer.

In addition, an X-ray scanner can be downscaled to match the size of the products it inspects. Such downsized models are specifically designed for small products such as soup pouches, cereal bars, chocolate or small trays. Despite their diminutive stature, these units often deliver impressive throughputs without sacrificing accuracy or versatility, making one module suitable for various small-item inspection applications.

### Norway analyzes COVID-19 impact on other infections

The decline in testing referrals for certain diseases during the coronavirus pandemic was greatest for foodborne and waterborne infections, according to an analysis in Norway.

The project compares the number of referrals for diagnostic testing of selected notifiable pathogens and the proportion that tested positive during six months of the COVID-19 pandemic — March to September 2020 — with normal laboratory work before it started, defined as October 2019 to February 2020.

Results showed COVID-19 related control measures led to a reduced risk of infection and fewer consultations for suspected cases but there were also signs of a reduced performance in the monitoring of diseases.

positive.

Since April 2020, the Norwegian Institute of Public Health (FHI) has been looking at the impact of COVID-19 on the Norwegian Surveillance System for Communicable Diseases (MSIS). There was a 50 percent to 60 percent reduction in reports of other communicable diseases between March and September 2020, compared to the corresponding period of 2019.

The amount of referrals from primary healthcare such as general practitioners and outpatient clinics was reduced after March 2020 for all pathogens. The largest decline was for Cryptosporidium spp., down 44 percent, followed by Salmonella spp. with 41 percent and Campylobacter spp. with 40 percent. The highest reduction in hospital referrals was seen for Campylobacter, which was down 44 percent, and Salmonella with a 46 percent decline.

A previous study, published in the Journal of the Norwegian Medical Association, found a decline in other notifiable infectious diseases during the coronavirus pandemic.

#### Reduced referrals but more positives

The FHI asked 22 microbiological labs in Norway to send information on referrals for diagnostic testing of 11 pathogens that represent the most frequently diagnosed infectious diseases in the country. Eleven labs submitted data and nine pathogens were included in the report.

Trends for Campylobacter, Cryptosporidium, Staphylococcus aureus (MRSA) and Rotavirus show conflicting data with a sharp reduction in the number of lab analyzes requested during COVID-19 but an increasing proportion testing



The number of referrals for campylobacteriosis decreased at the start of COVID-19 in March to May, but increased in the summer months. The proportion of positive tests went up from 3 percent in May to 16 percent in July 2020.

For cryptosporidium, in March to May, 40 to 50 percent fewer tests were referred. In June to September, test activity increased, but was still about 20 percent below the level before COVID-19. The share of positives increased 10-fold from January to August which could be due to seasonal variation in exposure to the parasite.

A reduction in testing referrals and increase in the proportion of positive tests may indicate reduced surveillance sensitivity which could affect interpretation of disease risk or the identification of an outbreak. It may signal a change in health-seeking behaviors, availability of healthcare or limited lab resources,

which could lead to referral for testing of suspect cases with more serious symptoms, according to the report.

#### Impact on Salmonella

For Salmonella, a decline in the number of testing referrals and proportion that tested positive can be seen. Decreasing trends in both these areas could indicate a reduced risk of salmonellosis due to effective control measures that lead to a decline in suspected cases who consulted physicians and were referred for testing.

The number of requested analyzes of Salmonella was reduced in the beginning of the COVID-19 epidemic in March 2020. In June, the number increased but was at a lower level than normal.

Most Salmonella infections reported to MSIS are from people infected abroad. A reduction in foreign travel after March 2020 can explain the drop in the number of tests and proportion of positive cases of salmonellosis, according to the report.

Reference laboratory activity followed the trends of diagnostic lab referrals for Salmonella with a decrease in submissions in March to April 2020. Those for Campylobacter increased during June to September 2020.

# FDA reminds baby food industry to follow the regulations for lead, other toxins

In response to a recent congressional report about lead and other toxins in baby food, the Food and Drug Administration has posted a public notice and included a link to an industry letter sent by Susan T. Mayne, director of the Center for Food Safety and Applied Nutrition. Mayne's letter cites federal regulations chapter and verse and reminds industry to operate within those rules.

Here is the FDA statement, including the link to the industry letter.

The U.S. Food and Drug Administration takes exposure to toxic elements, such as arsenic, mercury, cadmium and lead, in the food supply extremely seriously, especially when it comes to protecting the health and safety of the youngest and most vulnerable in the population. That is why today, we are announcing new actions aimed at further preventing or reducing chemical hazards that may be present in foods for babies and young children.

First, today we issued a letter to industry reminding manufacturers of these types of foods of their existing responsibilities related to these efforts. Secondly, the agency is announcing that we'll soon be putting into action a plan aimed at reducing toxic elements in foods for babies and young children to levels as low as is reasonably achievable.

As parents and caregivers ourselves, we recognize and understand concerns about toxic elements and how they could impact the health of children. We share the public's concerns for the health of America's children, and want to reassure parents and caregivers that at the levels we have found through our testing, children are not at an immediate health risk from exposure to toxic elements in foods. The FDA routinely monitors levels of toxic elements in food, and if we find that they pose a health risk, the FDA takes steps to remove those foods from the market. Research has shown that reducing exposure to toxic elements is important to minimizing any potential long-term effects on the developing brains of infants and children. A report released last month by the U.S. House of Representatives Committee on Oversight and Reform's

Subcommittee on Economic and Consumer Policy also highlighted important questions on what more can be done to reduce toxic elements in baby food.



The FDA issued a letter to manufacturers of foods for babies and young children covered by the preventive control provisions of the Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food rule, as well as persons covered under other rules requiring a hazard analysis. The letter reminds them of their existing responsibility to consider risks from chemical hazards, including toxic elements, when conducting a hazard analysis, including for products for babies and young children. The preventive control provisions require industry to implement controls to significantly minimize or prevent any identified chemical hazards requiring a control. For example, some manufacturers may conduct verification activities like testing the final product. Ultimately, we want consumers to be reassured that manufacturers of foods for babies and young children have a legal responsibility under the Federal Food,

Drug, and Cosmetic Act to ensure the safety of their products.

To build on our ongoing work with regulated industry in this area, we intend to address the following areas:

Issuing guidance to identify action levels for contaminants in key foods, with plans to revisit those levels on a regular basis and lower them if appropriate, as well as providing guidance to industry on how to meet their obligations under current regulations;

Increasing inspections and, as appropriate, taking compliance and enforcement actions;

Boosting sampling of foods for babies and young children, including sharing results; and

Working with government, academia and industry to support research and development of additional safety information on toxic elements in foods for babies and young children and additional steps that industry can take to further reduce levels.

Our new activities will further efforts that the agency has continued to take in this area, including our work in 2020 to finalize an action level for inorganic arsenic in infant rice cereal. We'll be working to develop additional action levels, finalize our draft guidanceon reducing inorganic arsenic in apple juice and publish a draft guidance that will establish action levels for lead in juices. These activities, along with an increase in sampling and reporting, will help continue to drive down levels of toxic elements in foods.

It's important to understand that toxic elements are present in the environment, including in our air, water and soil, and therefore are unavoidable in the general

food supply. This is why another part of our plan is to ramp up availability of consumer information and resources that underscore how the key to a healthy diet including for infants and young children is variety.

For example, the FDA has communicated advice about the importance of feeding infants a variety of grain-based infant cereals. Rice cereal fortified with iron is a good source of nutrients for infants, but it shouldn't be the only source and does not need to be the first one. The FDA does not recommend throwing out packaged foods for babies and young children or eliminating certain foods from children's diets. The agency recommends that parents and caregivers speak with a pediatrician about a diet that includes a variety of age-appropriate healthy food in order to get needed nutrients. While not directly related, it's also important to remind parents and caregivers not to make their own infant formula, as this has resulted in infants that have suffered severe illness due to nutrient deficiencies and microbial foodborne illness. We'll continue working with key stakeholders to develop messaging to provide important tips for parents and caregivers on developing varied and nutritious meal plans for babies and young children.

Engaging stakeholders and our federal partners on issues such as developing and setting standards will help to identify impactful solutions for reducing toxic elements in foods commonly

consumed by babies and young children. As such, we'll also soon be announcing a public workshop to discuss the science surrounding levels of exposure that result in developmental impacts, and the foods that may contribute to those exposures, to identify solutions to protect our youngest consumers.

The FDA is committed to reducing exposure to toxic elements in foods to the

greatest extent feasible and to further advance progress in this area. We look forward to providing additional updates in the near future.

## Singapore plans bill to manage food safety risks; posts updates on outbreaks



Singapore is to introduce a bill on food safety and security later this year to better manage new and emerging risks.

The Singapore Food Agency (SFA), formed in 2019, will propose the act to consolidate and strengthen official powers that are currently in several pieces of legislation.

Desmond Tan, minister of state for sustainability and the environment, revealed the plans at the Ministry of Sustainability and the Environment (MSE)'s Committee of Supply debates earlier this month.

Rules will provide greater clarity on the regulatory framework for novel foods, including mandating a pre-market safety assessment is done before approval for sale is granted. SFA will also inspect and sample novel food products, as is done for other food items.

The bill would continue to impose existing requirements for companies on packaging labels to indicate the true nature of the food and help consumers make informed choices.

Food delivery companies are not licensed by the agency because they are not involved in food preparation or processing. SFA is looking at whether these companies need to indicate hygiene and cleanliness information on their platforms.

Amy Khor, senior minister of State for Sustainability and the Environment, said that gastroenteritis incidents affected more than 1,200 people in 2018 and 2019.

### Outbreak updates

Meanwhile, the Ministry of Health (MOH) and Singapore Food Agency are investigating an outbreak that has sickened 82 people.

People reported gastroenteritis symptoms after eating food prepared by Chilli Api Catering Pte, at Bedok North Street, between March 10 and 12. Fourteen people are currently hospitalized and in stable condition.

SFA suspended operations at the food business in mid-March until further notice.

Finally, a food poisoning outbreak linked to a restaurant in the country earlier this year affected more than 100 people.

Officials received reports of gastroenteritis involving 101 people who had consumed food from Eng's Heritage between Jan. 6 and 9. A dozen people were hospitalized but have since been discharged.

The operating license was suspended by the Singapore Food Agency from Jan. 13 to Feb. 26. The authority has since lifted the measure at Eng's Heritage in Northpoint City mall. The SFA said it would continue to place the restaurant under close surveillance to ensure it adheres to food safety requirements.

It was initially reported that 26 people were sick and six needed hospital treatment. An investigation into the cause of illness is ongoing, said the SFA and Ministry of Health.

Eng's Heritage disposed of all ready-to-eat and thawed food, food ingredients and perishable items, and also cleaned and sanitized their premises, including the equipment and utensils.

Staff involved in food preparation have since re-attended and passed a food hygiene course. Eng's Heritage has also assigned another trained food hygiene officer to replace the previous one.

### Foodborne outbreak illnesses, deaths increase in Europe

The number of people getting sick and dying in foodborne outbreaks in Europe went up in 2019, based on figures from the annual report on zoonoses.

Salmonella was behind the majority of outbreaks followed by norovirus, according to data published by the European Food Safety Authority (EFSA) and European Centre for Disease Prevention and Control (ECDC).

During 2019, 27 member states reported 5,175 foodborne outbreaks involving 49,463 illnesses, 3,859 hospitalizations and 60 deaths. Slovakia did not send in

data. It had 522 outbreaks, 2,454 cases and 531 hospitalizations annually, on average in the five previous years. Another 117 outbreaks, 3,760 illnesses and 158 hospitalizations were recorded by Iceland, Montenegro, Norway, Republic of North Macedonia, Serbia and Switzerland.

Totals are up from 2018, excluding delayed data from the Netherlands, when there were 5,098 foodborne outbreaks with 48,365 illnesses, and 40 deaths. In 2019, a germ was identified in 60 percent of foodborne outbreaks with almost 36,000 cases, 3,300 hospitalizations and 54 deaths.



Focus on vulnerable people and children

Outbreaks reported by Belgium, France, Netherlands, Poland and Spain accounted for three-quarters of the total with more than 4,000 and two-thirds of cases at almost 33,000. France had the most with 1,785 outbreaks, followed by Netherlands with 735, Belgium with 571, Spain with 506, Poland with 445 and Germany with 402.

France and the United Kingdom both reported 15 deaths among outbreak cases. In France, 10 were in outbreaks that occurred in a residential institution. For the UK, seven deaths were from an outbreak in hospitals. Spain also had a high number of deaths with nine. Three were linked to a large outbreak of Listeria monocytogenes from chilled roasted pork meat sold by Magrudis.

Most deaths were in settings such as residential institutions such as nursing home, prison or boarding school, and hospitals. This calls for attention to the increased risk of vulnerable people, including children, elderly and chronically ill patients to foodborne hazards, said EFSA and ECDC.

Another critical aspect is outbreaks in schools and kindergartens. A large Salmonella outbreak in Hungary affected almost 600 people and 11 countries recorded school and kindergarten outbreaks. EFSA and ECDC said there is a need to strengthen the standard of hygiene and procedures for food manufacturing and preparation, plus the HACCP plans for such sites.

More than 40 percent of outbreaks took place in a domestic setting which reinforces the importance of continued recommendations to consumers about the correct mode of preparation, storage and consumption, according to the report.

### Listeria, Salmonella, STEC and Campylobacter

Listeria monocytogenes was responsible for 349 illnesses and more than half of all outbreak associated deaths at 31, which is 10 more than 2018. Twenty deaths were because of meat and meat products. The number of outbreaks was 21, which is up from 14 in 2018. Outbreaks, patients and hospitalizations associated with Listeria infections have continuously gone up during the past four years.

Salmonella remained the most frequently detected agent and caused 926 outbreaks, accounting for almost a fifth of the total. It also caused the most hospitalizations with half of the total and seven deaths. Salmonella was the main cause of outbreaks in Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia and Iceland.

Among 606 outbreaks with information on the Salmonella serovar involved, Enteritidis was top with 439 outbreaks followed by Typhimurium with 85, monophasic Typhimurium with 12 and Infantis with 10. The outbreaks caused by Salmonella Enteritidis was 596 fewer than 2018. Missing data from Slovakia contributed to this drop., according to the reportShiga toxin-producing E. coli (STEC) was the third most frequent bacterial agent detected in the EU, with 42 outbreaks, 273 cases, 50 hospitalizations and one death. STEC O157, O26 and O145 were identified in nine, seven and one outbreak, respectively.

Campylobacter caused 319 outbreaks, 1,254 illnesses and 125 hospitalizations. It was the leading outbreak agent in Austria and Germany. Outbreaks were mostly small with less than 10 cases. However, larger events including up to 91 cases were reported by Denmark, France, Germany, Spain, Sweden and the UK. A waterborne outbreak in Norway affected 2,000 people.

Shigella was detected in 22 outbreaks, involving 106 cases and 19 hospitalizations. Norway and Serbia reported three outbreaks with 38 cases and four hospitalizations.

Fifteen outbreaks, 14 hospitalizations and 149 illnesses from Yersinia were reported by seven member states. Vibrio was identified in four small outbreaks in France and Italy.

Arcobacter butzleri was detected in an outbreak in Belgium involving 40 people.

Francisella tularensis was reported in two outbreaks in Norway and Serbia, causing 24 illnesses and six hospitalizations.

Latvia, Spain and Sweden had four outbreaks caused by enterotoxigenic E. coli (ETEC) which involved 199 patients and seven hospitalizations. The largest in Sweden led to 130 cases. Another outbreak by enteropathogenic E. coli (EPEC) with 38 cases was reported by Sweden. Latvia and Norway recorded one outbreak each caused by EPEC.

#### Toxins, viruses and parasites

Toxins produced by Bacillus cereus caused 155 outbreaks, 1,636 illnesses and 44 hospitalizations. Those produced by Clostridium perfringens were responsible for 75 outbreaks, 2,426 illnesses and 27 hospitalizations and S. aureus for 74 outbreaks, 1,400 illnesses and 141 hospitalizations. Two large outbreaks of the latter agent caused 380 illnesses in Hungary and 300 including one hospitalization in France.

Fatalities also increased due to Bacillus cereus to seven, which is six more than 2018. This was because of an outbreak in France in a residential setting, with five deaths. Six deaths were caused by Clostridium perfringens and other bacterial toxins. Clostridium botulinum led to seven outbreaks, 17 illnesses, 15 hospitalizations and one death.

Norovirus, and other Calicivirus, was the second most frequent causative agent in foodborne outbreaks, according to the report. In Denmark, Finland, Lithuania, UK and Norway it was the leading cause. Norovirus was associated with 457 outbreaks and 11,125 related illnesses. Two large outbreaks in Greece and France involved 638 and 593 illnesses, respectively.

In total, 22 hepatitis A outbreaks involving 135 illnesses were reported. The

Republic of North Macedonia and Norway also had three and one outbreak, respectively.

Giardia caused the most outbreaks that involved parasites with 14. An outbreak caused by Giardia intestinalis in Italy resulted in 199 illnesses. Trichinella was named in five outbreaks. Cryptosporidium led to 11 outbreaks and 468 cases.

In 2019, 96 outbreaks caused by histamine were recorded and 48 because of marine biotoxins. France reported 19 incidents caused by Ciguatoxin. The UK had an outbreak with 13 illnesses involving okadaic acid, a heat stable toxin found in various species of shellfish.

### Food and pathogen pairings

Eating food of animal origin was associated with most, 469, strong-evidence foodborne outbreaks and 5,709 illnesses. It was mainly implicated in incidents caused by Salmonella, norovirus, histamine, Clostridium perfringens and Campylobacter.

Noroviruses in fish and fishery products caused the highest number, 145, of outbreaks that had strong evidence implicating a food source, mainly driven by a rise in France.

Eggs and egg products, the next most frequently reported foodstuff, were implicated in 108 strong-evidence outbreaks. There was one large outbreak with more than 100 patients. Salmonella in this food group was the second top pathogen and food vehicle pairing with 98 outbreaks and the most hospitalizations followed by Salmonella in meat products with 72 outbreaks.

The number of strong-evidence outbreaks associated with cheese fell to four, which is the lowest since the beginning of data collection in the EU.

Fifty-one outbreaks were associated with foods of non-animal origin (FNAO). Vegetables and juice were the most frequently reported vehicle of this group with 30 outbreaks.

In Hungary, consumption of various types of mixed food was associated with five outbreaks that involved 946 illnesses. The largest ,with 575 illnesses, was associated with types of contaminated mixed food, also involving cross-contamination, by Salmonella Enteritidis. This was the largest outbreak by mixed food registered since the start of EU surveillance. Seven other large outbreaks with more than 100 patients were reported by Belgium, Denmark, Hungary, Poland and Romania.

In Germany, frozen Wakame algae was responsible for an outbreak with 53 cases. In Sweden, salad dressing basil oil contaminated with EPEC caused 38 illnesses.

### **Safety Alerts**

Date	Brand	Product	Product Type	Recall	Company
	Name(s)	Description		Reason	Name
				Description	
03/23/	Bobo's	Maple Pecan	Food &	Undeclared	Bobo's
2021		Oat Bar	Beverages,	Peanuts	
			Allergens,		
			Snack Food		
			ltem		
03/22/	Taste of	Parmesan	Food &	Due to	Food Lion
2021	Inspiratio	Garlic Wing	Beverages	undeclared	
	ns	Sauce		fish	
03/22/	Taste of	Parmesan	Food &	Due to	Hannaford

2021	Inspiratio	Garlic Wing	Beverages	undeclared	Supermar	03/08/	Alqosh	Sesame oil	Food &	Salmonella	Mediterra
	ns	Sauce		fish	kets	2021		"Tahin"	Beverages		nean Food
03/19/	Fresh to	Turkey wrap	Food &	Due to	MG Foods						lnc.
2021	You, MG	sandwich	Beverages	possible	dba	03/06/	Hu	Chocolate	Food &	May contain	Hu
	Foods	wraps		Listeria	Canteen	2021		Covered	Beverages	Undeclared	Products
				monocytoge	lnc.			Hunks-Sour		Almonds	
				nes				Goldenberries			
03/18/	Gelson's	Yogurt Raisins	Food &	May contain	Western	03/05/	Kareem	Tahina	Food &	Potential for	Kareem
2021			Beverages	undeclared	Mixers	2021	Chef	(Ground	Beverages	Salmonella	Mart
				Peanuts	Produce &			Sesame			
					Nut			Paste)			
					Company	03/03/	Wilton,	Sprinkle	Food &	May Contain	Wilton
03/18/	Mindo	Coffee Toffee	Food &	Due to	Mindo	2021	Tasty by	Products	Beverages,	Undeclared	Brands
2021	Chocolat	Chocolate Bar	Beverages	undeclared	Chocolate		Wilton,		Allergens	Milk	
	e Makers			milk	Makers		and				
03/16/	Bravo	Pet food:	Animal &	Due to	Bravo		Holiday				
2021	Packing,	Performance	Veterinary,	Potential	Packing,		Home				
	lnc.	Dog, beef,	Foodborne	Salmonella	lnc.	03/03/	Ridley	CRYSTALYX	Animal &	Elevated	Ridley
		green tripe,	Illness, Pet	and Listeria		2021	Block	Sheep-lyx	Veterinary,	levels of	Block
		and bone	Food, Food &	monocytoge			Operatio		Food &	copper	Operation
			Beverages,	nes			ns		Beverages		S
			Foodborne			03/03/	El	Queso Fresco,	Food &	Listeria	El
			Illness, Pet			2021	Abuelito,	Quesillo, and	Beverages	monocytoge	Abuelito
			Food				El Viejito	Requeson		nes	Cheese
03/12/	Whole	Cranberry	Food &	Undeclared	Whole		and more	Products			
2021	Foods	Biscotti	Beverages	tree nuts	Foods	03/03/	Bravo	Ground Beef	Animal &	Potential for	Bravo
	Market			(pistachio)	Market	2021	Packing,	and	Veterinary,	Salmonella	Packing,
03/10/	MG	Sandwiches	Food &	Listeria	MG Foods		lnc.	Performance	Foodborne	and Listeria	lnc.
2021	Foods		Beverages	monocytoge				Dog, frozen	Illness, Pet	monocytoge	
	and Fresh			nes				raw pet food	Food, Food &	nes	
	to You								Beverages,		

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Γ					
			Foodborne		
			Illness, Pet		
			Food		
03/01/	Quaker	Rice Crisps	Food &	May Contain	The
2021		Sweet	Beverages,	Undeclared	Quaker
		Barbecue	Allergens,	Soy	Oats
		Flavor	Snack Food	Ingredients	Company
			Item		
02/27/	El	Queso Fresco,	Food &	Listeria	El
2021	Abuelito,	Quesillo, and	Beverages	monocytoge	Abuelito
	El Viejito	Requeson		nes	Cheese
	and more	Products			
02/26/	Haug,	Taco products	Food &	Listeria	J&J
2021	Fresh		Beverages	monocytoge	Distributin
	Tyme &			nes	g
	more				
02/24/	El	Queso Fresco	Food &	Listeria	El
2021	Abuelito,		Beverages	monocytoge	Abuelito
	Rio			nes	Cheese,
	Grande,				lnc.
	Rio Lindo				

### **Enterprise News**

### Salads and wraps recalled over Listeria contamination

St. Paul, MN-based J&J Distributing has recalled approximately 33 pounds of ready-to-eat meat and poultry salads and wrap products that may be adulterated with Listeria monocytogenes (Lm), according to the U.S.

Department of Agriculture's Food Safety and Inspection Service (FSIS).

The fully cooked, not shelf stable salads and wraps were produced and packaged on Feb. 23, 2021, and list a "Sell-by" date of Feb. 28, 2021, on the packaging label. The following products are subject to recall:

9-oz. plastic container of "COBB SALAD" on the product label.

10-oz. plastic container of "Because life is delicious. tastebuds Bacon Lettuce Avocado Tomato Wrap" on the label.

10-oz. plastic container of "Because life is delicious. tastebuds Turkey Ranch Club Wrap" on the label.

10-oz. plastic container of "Because life is delicious. tastebuds Chicken Caesar Wrap" on the label.

12-oz. plastic container of "Because life is delicious. tastebuds Southwest Style Chicken Salad" on the label.

12-oz. plastic container of "Southwest Style Chicken Salad" on the label.

The products subject to recall bear establishment number "EST. 38450" inside the USDA mark of inspection. These items were shipped to retail locations in Minnesota and Wisconsin.

The contamination was discovered when the firm received confirmation from their third-party lab that a product contact surface sample returned positive for Lm.

There have been no confirmed reports of adverse reactions due to consumption of these products. Anyone concerned about an injury or illness should contact a healthcare provider.

Consumption of food contaminated with Lm can cause listeriosis, a serious infection that primarily affects older adults, persons with weakened immune systems, and pregnant women and their newborns. Less commonly, persons outside these risk groups are affected.

Listeriosis can cause fever, muscle aches, headache, stiff neck, confusion, loss of balance, and convulsions sometimes preceded by diarrhea or other gastrointestinal symptoms. An invasive infection spreads beyond the gastrointestinal tract. In pregnant women, the infection can cause miscarriages, stillbirths, premature delivery, or life-threatening infection of the newborn. In addition, serious and sometimes fatal infections in older adults and persons with weakened immune systems. Listeriosis is treated with antibiotics. Persons in the higher-risk categories who experience flu-like symptoms within two months after eating contaminated food should seek medical care and tell the health care provider about eating the contaminated food.

FSIS is concerned that some products may be in consumers' refrigerators. Consumers who have purchased these products are urged not to consume them. These products should be thrown away or returned to the place of purchase.

### Re-inspection issue forces recall of 150 tons of corned beef from Australia

A California company is recalling almost 300,000 pounds of ready-to-eat corned beef that was imported and distributed in the United States without the benefit of import re-inspection, according to the USDA's Food Safety and Inspection Service (FSIS).

Milky Way International Trading Corp., doing business as MW Polar of Norwalk, CA, imported the corned beef from Australia on various dates. The products

have various "best before" dates. The product cases are labeled with various shopping marks.

"The problem was discovered after FSIS received a tip from an industry representative indicating that corned beef product received from Milky Way did not undergo FSIS import reinspection," according to the FSIS recall notice.

Consumers and businesses can use product codes to determine whether they have the recalled corned beef on hand. Please click here to view a table of implicated codes. The products subject to recall bear "Australia Inspected" number "39" and were shipped to retail locations nationwide.

There have been no confirmed reports of adverse reactions because of the consumption of these products. Anyone concerned about a reaction should contact a healthcare provider.

FSIS is concerned that some products may be in consumers' pantries or in their refrigerators.

"Consumers who have purchased these products are urged not to consume them. These products should be thrown away or returned to the place of purchase, according to the FSIS.

### Food recalls in Finland continue to rise

The number of food recalls in Finland increased for the fifth year in a row in 2020.

According to data collected by the Finnish Food Authority (Ruokavirasto), food was withdrawn from the market 267 times this past year compared to 200 occasions in 2019.

Microbiological contamination and ethylene oxide in sesame seeds both caused 17 percent of the total followed by allergens and pesticide residues.

The total was elevated because of recalls due to ethylene oxide residues found in products that contained Indian sesame seeds. This led to 45 recalls and has continued into 2021. However, excluding these cases, withdrawals in Finland would still have increased by 11 percent compared to the previous year.

Ethylene oxide contamination is an EU-wide issue causing thousands of recalls and has also spread to other products such as fruits, vegetables, herbs and spices.



### Pathogens, allergens and pesticides

Bacteria and other microbiological problems in food caused 12.5 percent more withdrawals than a year earlier with 45 in 2020. Salmonella was found in 14 foods, mostly meat imported from Europe. In seven cases, the withdrawal was because

of Listeria.

Incorrect labels on food packaging, packaging intended for another product, or an undeclared allergen ingredient caused 38 recalls this past year. Fourteen of those were because of milk allergen concerns. Such products can be donated to charity or returned for sale by the company if labels are corrected.

Withdrawals because of pesticide residues increased significantly from 2019. In fruits, vegetables or other foods of plant origin, the need for action was identified 36 times. In many cases, limit values were only slightly exceeded so there was no acute consumer risk from the products, according to officials.

Labeling errors such as a wrong dates or missing Finnish language caused 16 recalls. Food contact material withdrawals caused the same number.

### Reasons for more recalls

There were 16 recalls because of unapproved novel foods. This mostly involved food supplements but also products such as beverages. Additive errors resulted in 15 recalls. Either the food contained an additive that is not permitted in it or the amount exceeded the maximum allowed level.

The Finnish Food Safety Authority said a rise in recalls doesn't automatically mean more products are unsafe. Increased consumer vigilance, more regulatory risk-based controls and better self-monitoring from companies may have played a role in the increase.

Of all recalls, excluding ethylene oxide in sesame seeds, 35 percent came from another EU country. About 18 percent were Finnish and 36 percent were from non-EU countries.

Many cases were reported to Finland through the EU's Rapid Alert System for

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Food and Feed (RASFF). Of those 92 recalls, 27 were related to sesame seeds. A company notified the authorities of a recall on 41 occasions in 2020. Finnish customs checks led to 38 recalls this past year with 21 due to pesticide residue findings.

### Coriander suspected as source of 2018 Shigella outbreak



An outbreak of Shigella in England in 2018 was likely caused by contaminated coriander, according to researchers.

The national food poisoning outbreak highlights the potential for a multi-drug resistant strain of Shigella sonnei to be transmitted via a food vehicle that is distributed across a wide geographic area, according to the accepted manuscript in the journal Epidemiology and Infection.

It was linked to food at multiple restaurants in different areas that were not part of a franchise. Whole genome sequencing helped the identification of potential links between the restaurants.

Poor hygiene practices during cultivation, distribution or preparation of fresh produce were likely contributing factors to the contamination, said researchers.

### Found to be related incidents

In March 2018, Public Health England was told of Shigella sonnei infections in people who had eaten at three different catering outlets in England. The outbreaks were initially investigated as separate events but whole genome sequencing showed they were caused by the same strain.

A total of 33 patients, linked to seven different venues specializing in Indian or Middle Eastern cuisine were identified. Five outlets were linked to two or more patients. All outlets used fresh coriander, although a shared supplier was not found.

Two-thirds of confirmed cases were male. The age of patients ranged from 12 to 59 years old. Symptom onset dates for the bulk of them ranged from March 26 to April 3, 2018. Four people were hospitalized for between two and five nights.

Patients were exposed at the implicated venues between March 24 and 31, 2018. The earliest exposure was at a site in Bedford, followed by venues in the West Midlands and two sites in Bradford.

Environmental health officers noted poor temperature control and cleaning standards plus a lack of hand hygiene facilities at one of the West Midlands outlets. It had a food hygiene rating of 1. Following the outbreak, the restaurant was refurbished, and given advice on kitchen routing improvements.

Food traceback investigations revealed fresh coriander leaves were the only common ingredient supplied to all venues attended by patients. In total, 86

percent of cases in the cohort study reported eating dishes containing coriander.

Three venues purchased fresh coriander from local markets and the other bought it from a national supermarket chain. It was not possible to identify where the coriander was grown.

### Likely point of contamination

The outbreak control team said the most plausible explanations for the outbreak were either coriander was contaminated at the point of production or during wholesale distribution.

Bulk supplies of coriander entering the wholesale market are broken down into smaller batches or bunches at multiple locations. This is done by hand, providing an opportunity for contamination by an infected food handler. There was no evidence infected food handlers contaminated the coriander in restaurants as none were known to be sick.

Because of the time-lag between local identification of outbreaks and confirmation by WGS, coriander leaves were not sampled as part of initial outbreak investigations.

Food samples were collected six and nine days after patient exposures, making it unlikely that they were the same batch as people had consumed prior to onset of illness.

Analysis of WGS data also demonstrated a close association between the outbreak strain and isolates from UK cases with recent travel to Pakistan.

### Norovirus in Sweden linked to shrimp from Estonia

Outbreaks of norovirus in Sweden linked to shrimp from Estonia may have

affected about 100 people.

Reports from local authorities have not been fully compiled yet but based on preliminary information officials believe more than 100 people have fallen sick.

It is mostly local outbreaks at workplaces where people have eaten shrimp sandwiches or a popular product in Scandinavia called "smörgåstårta." This food, also called a sandwich cake, looks like a cake but instead of sponge uses bread and often includes cheese, vegetables, cold meats and fish.

Peeled shrimps in brine from the implicated batch were mostly distributed within one region which was named by local media as Varnamo in Jönköping County in southern Sweden.

### Outbreak investigation

The outbreak began on the last weekend of February. The implicated batch was withdrawn from the market on March 1 when the distributing company received information about the first illnesses.

Mats Lindblad, from Livsmedelsverket (the Swedish Food Agency), said the link was made by patient interviews with product testing results pending.

"So far it's based on interviews with cases and backwards and forward tracing of food. Results from product testing are still pending, but samples of shrimps from the implicated batch have been sent to the Swedish Food Agency for microbiological analysis of norovirus," he said.

"The product has only been sold to food business operators producing shrimp sandwiches or smörgåstårta. Therefore, no public recall has been deemed necessary."

Lindblad said because of the limited distribution and withdrawal measures more illnesses are not expected.

The most common symptoms of norovirus are diarrhea, vomiting, nausea and stomach pain. Other symptoms may include low-grade fever, headache, chills, muscle aches and a sense of tiredness.

A person usually develops symptoms 12 to 48 hours after being exposed to norovirus. Most people with illness get better within one to three days. People who are ill should drink plenty of liquids to replace lost body fluids and prevent dehydration.

Norovirus is transmitted by having contaminated food or water or from person to person through contact with the skin, objects or inhaling airborne particles.

### Denmark investigates botulism outbreak



Three confirmed cases of foodborne botulism are being investigated in Denmark.

The outbreak occurred earlier this month at a private company in Southern Denmark. Six people had eaten together and three initially developed symptoms. Two other people have since shown signs of being affected.

Fødevarestyrelsen (the Danish Veterinary and Food Administration), the National Food Institute (DTU- Food) and Statens Serum Institut are trying to identify the source of infection.

Following a private party on March 5, three adults have been hospitalized because of botulism. They are being treated with botulism antitoxin and the condition of all of them is improving. Analysis of stool from one patient shows it is toxin type B.

Another two people from the company have developed mild symptoms and samples from them are being studied.

The Statens Serum Institut examined samples from the patients to confirm the botulism hypothesis. The agency is also analyzing the ingredients and leftovers of food that was eaten at the company. No other patients with botulism are known outside this business.

Botulism is a rare condition caused by toxins produced by Clostridium botulinum bacteria.

In 2018, a botulism outbreak involving nine people at a company in Sønderborg was caused by a homemade, savory jelly dish. Four became seriously ill requiring intensive care and mechanical ventilation and were hospitalized for up to eight weeks. A sample from the food was positive with botulinum toxin type A. The

same type was identified in the patients.

#### About botulism

While a variety of illnesses can result from eating under-processed food, one of the most dangerous is botulism poisoning. Untreated, botulism can paralyze the muscles needed for breathing, resulting in sudden death.

Anyone who has developed signs of botulism poisoning should immediately seek medical attention, according to the U.S. Centers for Disease Control and Prevention (CDC).

"In foodborne botulism, symptoms generally begin 18 to 36 hours after eating contaminated food. However, symptoms can begin as soon as 6 hours after or up to 10 days later," according to the CDC website.

The symptoms of botulism may include some or all of the following: double or blurred vision, drooping eyelids, slurred speech, difficulty swallowing or breathing, a thick-feeling tongue, dry mouth, and muscle weakness. People with botulism poisoning may not show all of these symptoms at once.

These symptoms result from muscle paralysis caused by the toxin. If untreated, the disease may progress, and symptoms may worsen to cause paralysis of specific muscles, including those used in breathing and those in the arms, legs, and the body from the neck to the pelvis area.

### Apricot kernels with excessive levels of toxin recalled; cyanide risk cited

Advantage Health Matters Inc. is recalling Organic Traditions brand dried bitter apricot kernels from retailers nationwide in Canada because of excessive levels of a natural toxin that can cause cyanide poisoning. Some of the apricot pits do not expire until December this year, according to a recall notice posted by the Canadian Food Inspection Agency. Health officials are urging consumers to check their homes for the recalled product. No one should eat any of the implicated apricot kernels.

"Apricot kernels naturally contain amygdalin, which can release cyanide after being eaten. The human body can eliminate small amounts of cyanide, but larger amounts can result in cyanide poisoning, which could lead to death," according to the notice.

Symptoms of cyanide poisoning include weakness and confusion, anxiety, restlessness, headache, nausea, difficulty breathing and shortness of breath, loss of consciousness, seizures and cardiac arrest.

Anyone who has consumed any of the recalled apricot pits and developed symptoms of cyanide poisoning should seek medical attention at once.

### Recalled apricot kernels are:

Brand	Product	Size	UPC	Codes
Organic Traditio ns	Dried Bitter Apricot Kernels	227 g	6 277 33 00 900 3	LOT:AHM900190228D EXP:05/2020 LOT:AHM900190321 D EXP:05/2020 LOT:AHM900190417 D EXP:05/2020 LOT:L200421135 EXP:12/2021

On Jan. 25, 2020, Health Canada established a maximum level (ML) of 20 parts per million (ppm) total extractable cyanide in apricot kernels sold as food. This ML allows Canadians choosing to consume apricot kernels to do so in a similar fashion as other more common types of seeds and nuts sold in Canada, while protecting them from the risk of cyanide poisoning, according the national agency.

Apricot kernels used as an ingredient in other foods must also meet this ML. Apricot kernels that do not meet Health Canada's ML will not be allowed to be sold in Canada.

According to European health officials, apricot kernels are safe to eat in processed products, like almond biscuits, as the baking process reduces levels of the toxin. They resemble small almonds and have an almond-like taste.

A 2016 European Food Safety Authority (EFSA) opinion found eating more than three small raw apricot kernels, or less than half of one large kernel, in a serving can exceed safe levels. Some sellers promote them as a cancer-fighting food and promote intake of 10 and 60 kernels per day for the general population and cancer patients, respectively.

According to European Commission Regulation No. 2017/1237, apricot kernels must not contain more than 20 milligrams per kilogram of hydrocyanic acid.

### **MARKET NEWS - REPLY**

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