

Coordinated Outbreak Response,
Evaluation, & Emergency Preparedness (CORE+EP)

FOOD REPORT

Foodborne Outbreak Overview of Data (FOOD) Report

FOOD 2: *Salmonella* in Tahini
September 2025



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Data compiled and accurate as of August 2025

Background on CORE

FDA's [Coordinated Outbreak Response & Evaluation \(CORE\) Network](#) was established in 2011 to coordinate efforts to detect, stop, and prevent foodborne illness. Since its founding, CORE has evaluated more than 1,300 possible outbreaks, responded to more than 350 outbreaks potentially linked to FDA-regulated food products, identified a specific food in more than 200 outbreaks, and warned consumers to avoid these foods through more than 700 public health advisories (as of August 2025). One of the ways that CORE guides and supports outbreak prevention efforts is by sharing CORE's outbreak investigations and analytic summaries with internal and external stakeholders through publications and presentations. CORE publishes articles on the FDA website, in peer-reviewed scientific journals, and in other food safety and public health related periodicals. CORE staff also present at conferences and scientific meetings.

Overview of FOOD Reports

CORE Foodborne Outbreak Overview of Data (FOOD) Reports provide information for industry and consumers on pathogen/commodity pairs that have caused repeated outbreaks of foodborne illness. FOOD Reports include historical epidemiologic data, laboratory analysis, traceback and investigational findings, and post-response prevention activities taken by FDA and our partners. These reports were developed to identify opportunities for action that may help prevent future foodborne illnesses.

Disclaimer: FOOD Reports tell the story of the outbreak response actions and post-response activities directed or initiated by CORE and may not reflect all activities undertaken by all agencies in response to foodborne illness. The data included here was verified and is accurate as of the date listed on the cover page. Additional actions and prevention activities may have taken place after this date that are not included in this report.

Abbreviations/Acronyms

FSVP [Foreign Supplier Verification Program](#)

PFGE [Pulse Field Gel Electrophoresis](#)

POS [Point of Service](#)

WGS [Whole Genome Sequencing](#)

Tahini Definition

Tahini, sometimes called tahina, is a ground sesame butter or paste that is traditionally used in Mediterranean or Middle Eastern cuisine. It is typically eaten by itself or used as a major ingredient in other foods such as hummus, baba ghanoush, and halva.

Overview of Outbreaks and Inclusion Criteria

This report includes *Salmonella* outbreaks investigated by CORE from 2011 (CORE's inception) through August 2025 linked to tahini.

Associated CORE Outbreak Investigations

1. **November 2011:** *Salmonella* Bovismorbificans linked to Tahini
2. **May 2013:** *Salmonella* Mbandaka and *Salmonella* Montevideo linked to Tahini
3. **October 2018:** *Salmonella* Concord linked to Tahini
4. **April 2019:** *Salmonella* Concord linked to Tahini



Background on the Food-Pathogen Pair

This section summarizes some of the available scientific literature on *Salmonella* outbreaks and the association with tahini. This is not intended to be a comprehensive or authoritative review, but to give a general overview. Outbreak descriptions, case counts, and other quantitative information may vary between this report and other FDA documents based on the data source, data collection methodology, and data inclusion/exclusion criteria.

Past Outbreaks

Outbreaks linked to *Salmonella* in tahini have been described several times in the literature. In 2002 and 2003, officials from Australia and New Zealand reported three distinct outbreaks of *S. Montevideo* associated with imported tahini sourced from Egypt [1, 2]. Product sampling in response to international notifications found *Salmonella* contamination in tahini offered for sale in Canada and the United Kingdom [3].

Again in 2012, New Zealand identified a multi-serotype outbreak of 27 illnesses of salmonellosis linked to the consumption of imported tahini paste from Turkey. Clinical and food product samples recovered isolates of *S. Montevideo*, *S. Mbandaka*, and *S. Maastricht* [4].

Laboratory Findings and Surveillance

In 2004, researchers in Germany conducted surveillance sampling of tahini and sesame seeds to assess the prevalence of *Salmonella* in these products. Out of 117 ready-to-eat sesame food samples, 11 (9.4%) tested positive for *Salmonella* species, including multidrug-resistant *S. Typhimurium*, *S. Offa*, *S. Tennessee*, and *S. Poona* [5].

Canadian investigators conducted sampling of a variety of Eastern Mediterranean foods as a part of an investigation of a cluster of *S. Redding* infections in 2014-2015. While the outbreak strain was not recovered, samples of tahini were found to be contaminated with *S. Meleagridis* [6].

Outbreak Data Analysis

Epidemiologic Findings

Between 2011 and August 2025, four outbreaks with a total of 61 confirmed illnesses, zero hospitalizations, and zero deaths were reported from 22 states; linked to the tahini/*Salmonella* food-pathogen pair. Ready-to-eat tahini or hummus containing tahini were confirmed as the food linked to illnesses in all four outbreaks. Ready-to-eat tahini or hummus containing tahini were confirmed as the sources of all four outbreaks. According to the CDC, the true number of sick people in these outbreaks is also likely higher than the number reported – some ill people recover without medical care and are not tested for *Salmonella*. The [CDC resource page on *Salmonella*](#) has more information about the pathogen and salmonellosis.

1. *Salmonella* Bovismorbificans/Tahini/November 2011: A total of 23 confirmed illnesses with zero hospitalizations and zero deaths were reported from six states.
2. *Salmonella* Mbandaka and *Salmonella* Montevideo/Tahini/May 2013: A total of 24 confirmed illnesses with zero hospitalizations and zero deaths were reported from 15 states.
3. *Salmonella* Concord/Tahini/October 2018*: A total of eight confirmed illnesses with zero hospitalizations and zero deaths were reported from four states.
4. *Salmonella* Concord/Tahini/April 2019*: A total of six confirmed illnesses with zero hospitalizations and zero deaths were reported from three states.

* The 2018 and 2019 outbreaks were caused by genetically distinct strains of *S. Concord*.

2011–2019 Impacts of Multistate Outbreaks

Linked to the Tahini and
Salmonella Food-Pathogen Pair



4
Outbreaks



61
Illnesses



0
Hospitalizations



0
Deaths



22
States



Figure 1A: *Salmonella* Bovismorbificans illnesses linked to tahini, by state, 2011 (n=23)

Figure 1A: Number of *Salmonella* Bovismorbificans illnesses linked to tahini, by state, 2011 (n=23)

State/Territory	Cases
DC	10
Maryland	7
Virginia	3
California	1
Michigan	1
New Hampshire	1

Figure 1B: Number of *Salmonella* Mbandaka/Montevideo illnesses linked to tahini, by state, 2013 (n=24)

State/Territory	Cases
Texas	7
Minnesota	2
California	2
Georgia	2
Iowa	1
Louisiana	1
North Dakota	1
New York	1
Wisconsin	1
Arizona	1
Colorado	1
Arkansas	1
Pennsylvania	1
New Jersey	1
Ohio	1

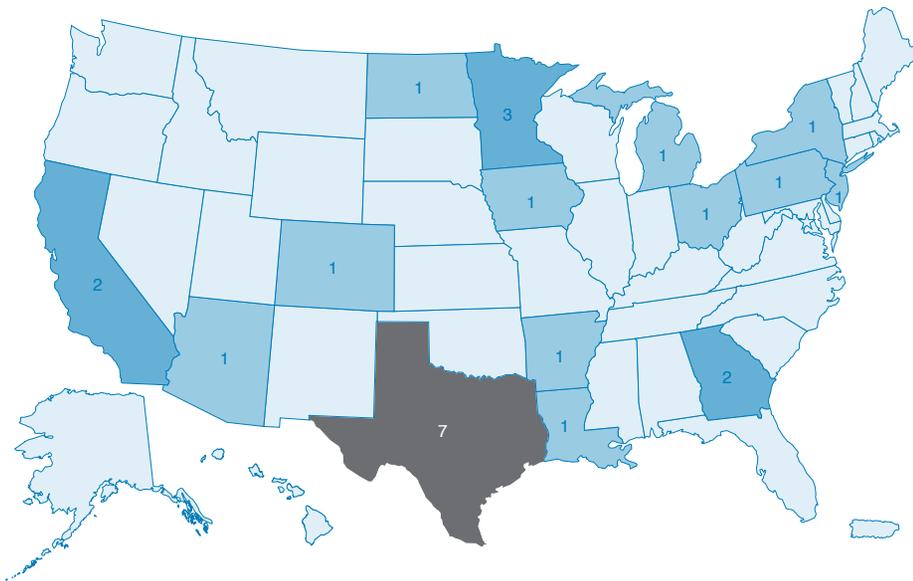


Figure 1B: *Salmonella* Mbandaka/Montevideo illnesses linked to tahini, by state, 2013 (n=24)

Figure 1C: Number of *Salmonella* Concord illnesses linked to tahini, by state, 2018 (n=8)

State/Territory	Cases
New York	5
Massachusetts	1
Michigan	1
Hawaii	1

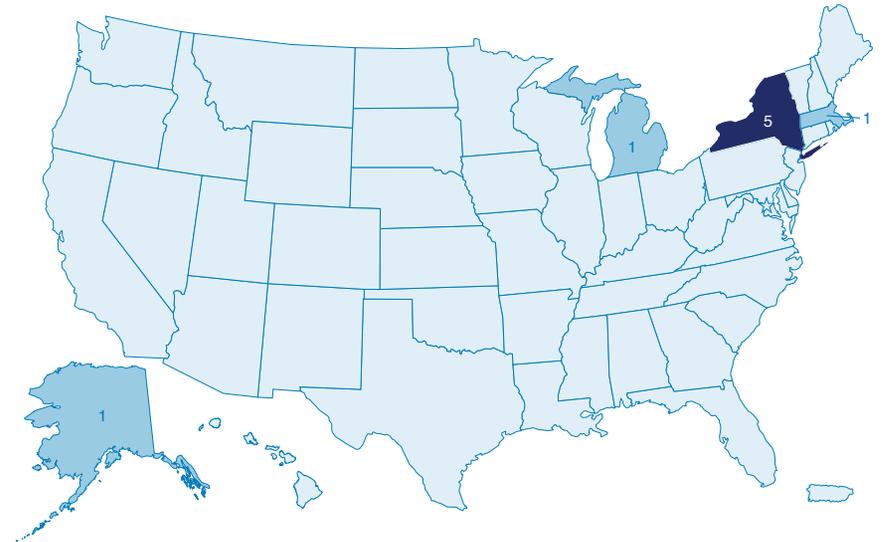


Figure 1C: *Salmonella* Concord illnesses linked to tahini, by state, 2018 (n=8)

Figure 1D: Number of *Salmonella* Concord illnesses linked to tahini, by state, 2019 (n=6)

State/Territory	Cases
New York	4
Massachusetts	1
Texas	1

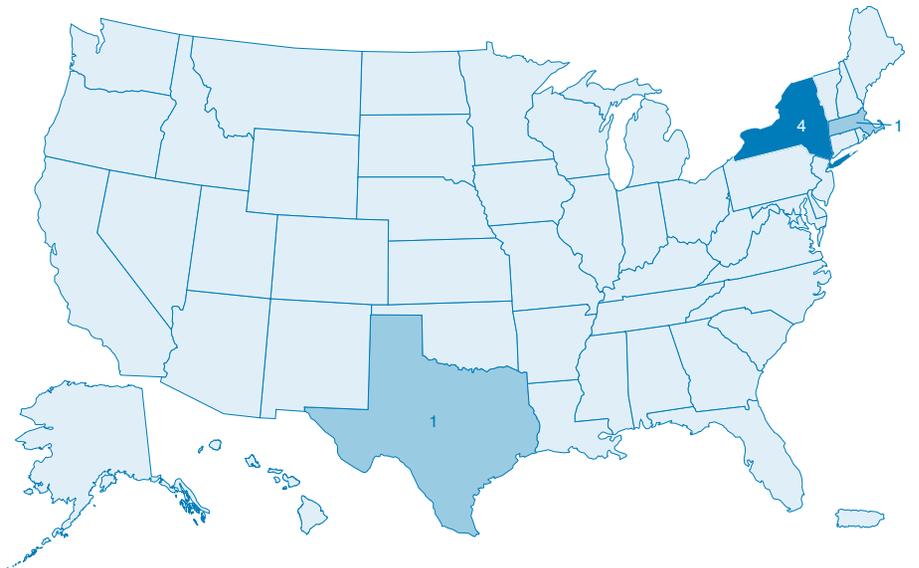


Figure 1D: *Salmonella* Concord illnesses linked to tahini, by state, 2019 (n=6)

Salmonella Outbreaks Linked to Tahini, Illnesses by Month (2011, 2013, 2017, 2019)

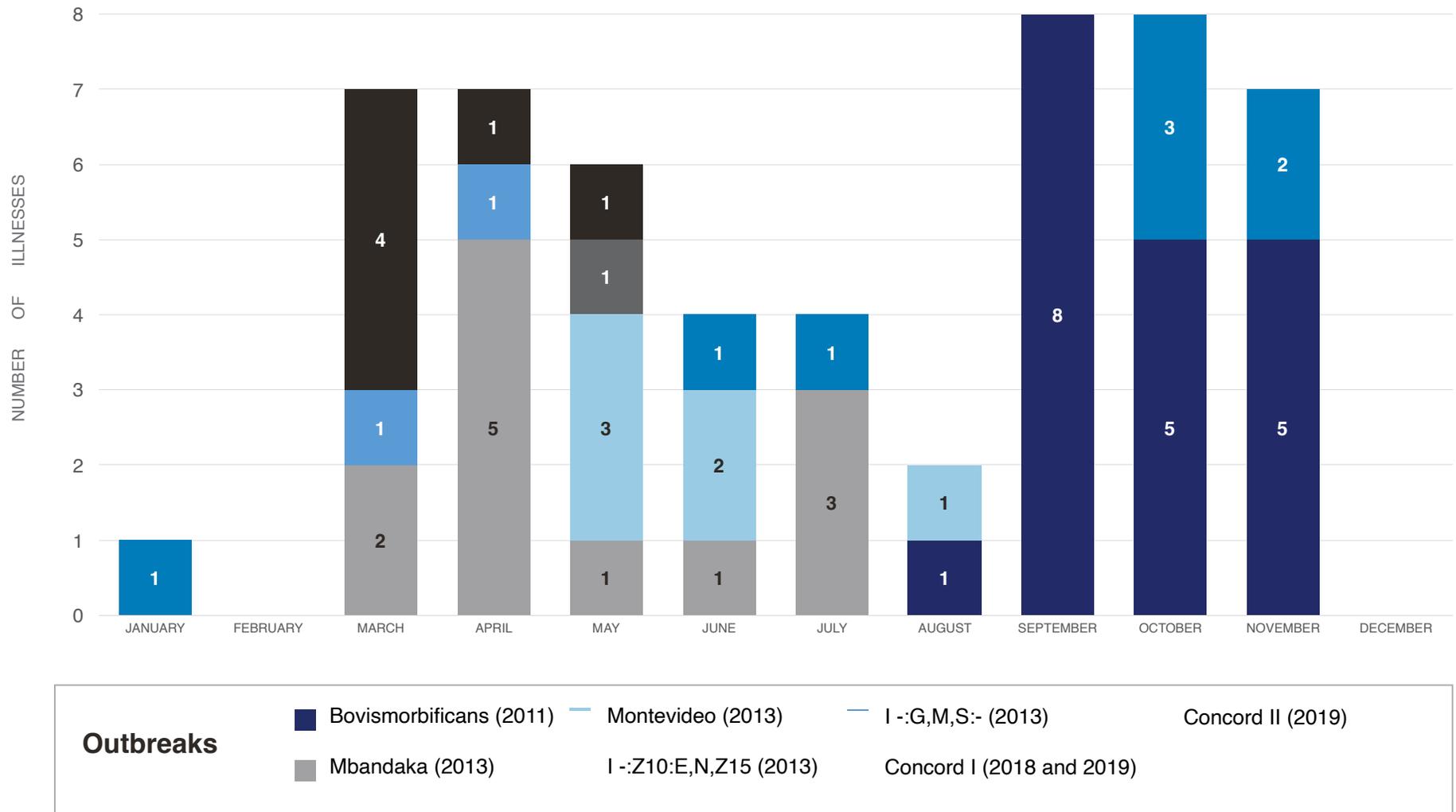


Figure 2: *Salmonella* Outbreaks Linked to Tahini, Illnesses by Month (2011, 2013, 2017, 2019)

Laboratory Findings

Laboratory analysis helps identify products that may be contaminated and making people sick. Once a pathogen is found, molecular techniques such as PFGE and WGS can help investigators find linked cases and determine the source of an outbreak.

Samples of both tahini products and food facility environments were collected and analyzed during each of the four outbreaks. *Salmonella* was recovered from finished tahini and hummus products with five serotypes of *Salmonella* isolated (*S. Bovismorbificans*, *S. Montevideo*, *S. Mbandaka*, *S. Maastricht*, and *S. Concord*). There were no positive environmental samples identified during any of the four *Salmonella*/Tahini related outbreak investigations.

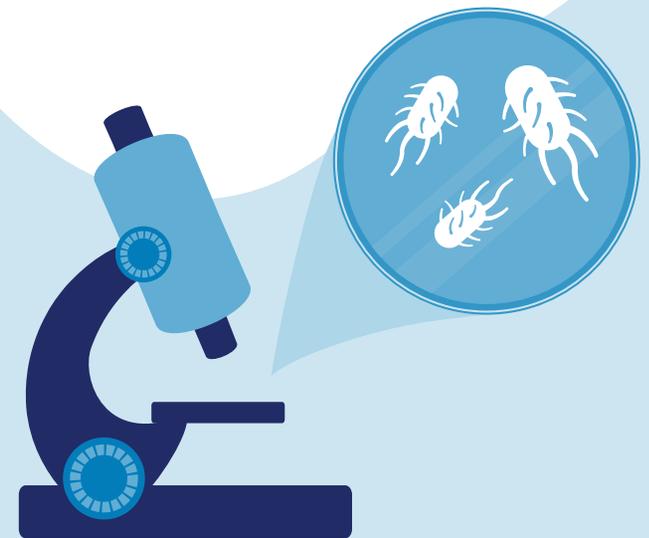
Out of 69 product samples collected during the outbreak investigations, 17 (25%) were found to be contaminated with *Salmonella*. These samples were collected by FDA, state, and foreign partners from restaurants, retail, manufacturers, importers, and the household of an ill person. A total of 12 out of the 17 positive samples (71%) were found to have the outbreak strain under investigation.

Product samples are often collected during an outbreak investigation once a food is suspected of being the source of illness. The prevalence of *Salmonella* in these samples should not be assumed to be the prevalence of *Salmonella* in the food overall.

Traceback Findings

Once foodborne illness is detected, FDA and our public health partners attempt to identify the food linked to illnesses. Traceback investigations examine supply chain data to identify the source of food sold or served at a specific location. Traceback findings complement laboratory and epidemiologic evidence during a public health investigation. To learn more about the traceback investigation process and how they help protect public health, read FDA's explainer on [How the FDA Uses Traceback to Respond to Foodborne Illness Outbreaks](#). Learn more on [An Overview of Traceback Investigations](#).

Traceback findings revealed tahini products associated with foodborne illness were often imported from western Asia (Turkey, Egypt, and Israel).



Traceback revealed products were often imported from western Asia (Turkey, Egypt, Israel). Challenges presented during the traceback phase of investigations included the need for language services to translate traceback documents, limitations of traceback due to the type and volume of records retained by firms in the supply chain, and limitations of the data available for detecting illness clusters.

Historical Inspections, Events, and Actions

Establishment Inspections and Investigations

Field inspections were completed for all four tahini outbreaks. A total of 11 facility inspections were conducted by FDA (4), state and local partners (5), and foreign agencies (2). Facility types included point-of-service (POS)/retail food establishments, food importers, repacking firms, and foreign food manufacturers. More information about the FDA [Inspectional Observations and Citations](#) are available on the FDA website. For general information on FDA Form 483s, see [FDA Form 483 Frequently Asked Questions](#).

Inspection Results

- **Retail POS:** Five inspections were performed by state and local public health partners, for which FDA has records for three. All three inspections (100%) resulted in deficiencies related to facility maintenance, construction, and design; sanitary operations, facilities, and controls; general sanitation; and improper cooking/holding temperature.
- **Importers:** Two inspections were performed by FDA. One firm was found to have significant foreign supplier verification program (FSVP) deficiencies.
- **Repackers:** Two inspections were performed by FDA. Both facilities were found to have objectionable conditions noted on an FDA Form 483.
- **Foreign Manufacturers:** FDA was informed by foreign government partners of two inspections conducted at foreign manufacturing facilities.

Firm inspections identified the following deficiencies (number of firms):

- Sanitary Operations (4)
- Improper Cooking/Holding Temperature (3)
- Facility Maintenance, Construction, and Design (3)
- Sanitary Facilities and Controls (2)
- Pest Control/Animal Intrusion (2)

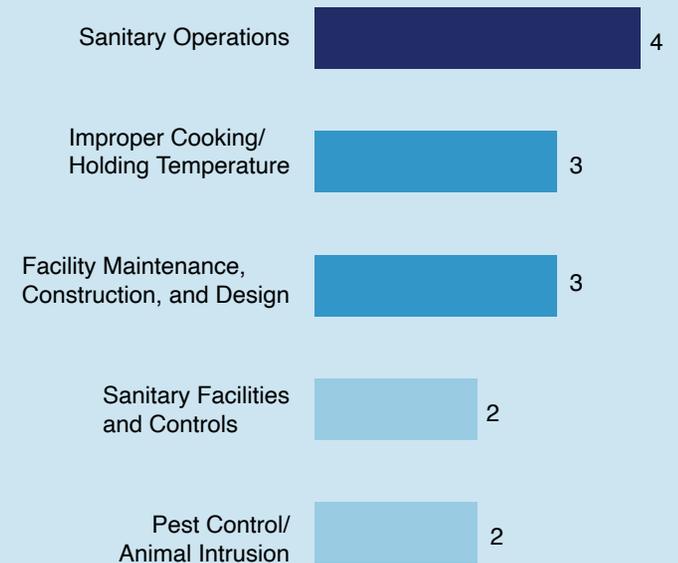
Product and Compliance Actions

Product actions are measures taken to remove affected products from the marketplace and mitigate their risk to consumers. Compliance actions are steps taken to correct and prevent violations of food safety regulations. These activities may include [recalls](#), court-ordered product seizures, [warning letters](#), [import controls](#), and [other enforcement actions](#) needed to [protect public health](#).

Recalls

Outbreak	Date	Firm	Product(s)
S.Mbandaka & S.Montevideo	4/23/2013	Krinos Foods, LLC	Tahini pastes
S. Concord	11/23/2018	Achudt Ltd.	Tahini products
S. Concord	11/28/2018	Altra Foods Inc. / S&F Food Importers (Canada)	Tahini products
S. Concord	2/13/2019	Soom Foods	Tahini spread
S. Concord	5/15/2019	Brodt Zanatti Holdings	Tahini products

Firm Inspections Deficiencies





FDA Research Publication:
[Risk Profile on Pathogens and Filth in Spices](#)

Product Seizures

One product embargo and one seizure were conducted by state and local partner agencies.

Warning Letters

[Warning Letter to Brodt Zanatti Holdings, July 30, 2019](#)

Import Alerts

Implicated products and firms were added to [Import Alert 99-19 “Detention Without Physical Examination of Food Products Due to the Presence of Salmonella”](#) and [Import Alert 99-43 “Detention Without Physical Examination Of Ready-To-Eat Human Food Products That Appear To Have Been Prepared, Packed, Or Held Under Insanitary Conditions”](#).

Post-Response Analysis

The list below provides a summary of related activities that have occurred and were shared with CORE as of August 2025.

Education and Outreach

FDA conducted outreach to the regulatory authorities in major sesame growing regions globally for the *Salmonella* Mbandaka and *Salmonella* Montevideo outbreak in May 2013.

Research

A research project to understand the survival and growth of *Salmonella* in tahini was recommended. The results of the study are available at: [Risk Profile on Pathogens and Filth in Spices](#) (*Salmonella* Concord/Tahini/October 2018 and *Salmonella* Concord/ Tahini/April 2019).

Conclusions

Repeated outbreaks associated with *Salmonella* and tahini pose a public health risk that identify a need for mitigation. *Salmonella* species were identified by analysis of product samples collected from domestic POS, ill patient households, and food offered for import into the United States. The isolates from these samples matched the outbreak strain(s).

The international nature of the product and supply chain complicates nearly every aspect of outbreak investigations, including illness detection, traceback, and foreign inspections. This, combined with processing and handling deficiencies discovered at multiple levels across the supply chain, increases the ongoing risk for continued contamination, which calls for coordinated prevention efforts.

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Acknowledgements

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