May 07, 2025

Dockets Management Staff (HFA-305)
Food and Drug Administration
5630 Fishers Lane, Rm. 1061
Rockville, MD 20852

RE: Docket Number FDA-2024-D-2604 titled "Establishing Sanitation Programs for Low-Moisture Ready-to-Eat Human Foods and Taking Corrective Actions Following a Pathogen Contamination Event: Guidance for Industry (Draft Guidance)

Dear Sir or Madam:

FMI, The Food Industry Association welcomes an opportunity to submit comments to the U.S. Food and Drug Administration's ("FDA") notice published January 07, 2025, in the *Federal Register* entitled "Establishing Sanitation Programs for Low-Moisture Ready-to-Eat Human Foods and Taking Corrective Actions Following a Pathogen Contamination Event: Guidance for Industry (Draft Guidance)."

As the Food Industry Association, FMI works with and on behalf of the entire industry to advance a safer, healthier, and more efficient consumer food supply chain. FMI brings together a wide range of members across the value chain — from retailers that sell to consumers, to producers that supply food and other products, as well as the wide variety of companies providing critical services — to amplify the collective work of the industry. More information about our organization is available at www.FMI.org.

FMI members are committed to providing safe, high-quality food products. We are pleased to offer comments on food products that are deemed to be in scope for FDA's Guidance on Low-Moisture, Ready-to-Eat (LMRTE) Foods. One of many specific examples of foods that are deemed by FDA to be in scope for this guidance is infant formula.

Infant formula is one of the most regulated foods in the world and is subject to different safety and quality regulatory requirements than the rest of the food supply. Sanitation programs for powdered infant formula facilities are subject to more rigorous testing and

other evidenced-based procedures to best protect the babies that consume infant formula, which for many is a sole source of nutrition.

Infant formula manufacturers utilize multiple sanitation methods to protect their powdered infant formula manufacturing systems from pathogens that occur naturally and are omnipresent in the environment, including but not limited to closed production systems to prevent cross-contamination, zoning controls for production areas and establishing cascading pressure environments, keeping production and manufacturing areas dry and free from the presence of any water because it is a known requirement for the growth of microbial contamination, dry flushing to support cleaning conditions, and high sampling rates and testing above the regulatorily required quantities to ensure higher probability of detection and a maximum level of product assurance. The combination of utilizing these globally established best practices for powdered infant formula production, ensuring higher statistical detection sensitivities and best practices to prevent the presence of pathogens in powdered infant formula manufacturing, which must remain closed and free from moisture, and continually advancing the rigorous science of evidenced-based sanitation programs to provide the highest level of confidence possible for the safety and quality of powdered infant formula products are essential.

Frequently opening closed systems to require cleaning with water or other moist methods subjects the production environment to higher risk of contamination and additional verification to restart production. This practice could introduce significant risk in powdered infant formula production systems by introducing moisture and could measurably impact infant formula production. Additionally, the added down time could impact supply availability and resiliency because it results in long periods of time to dry out systems that were not built to be opened or to frequently introduce water or other forms of moisture cleanings. Innovation and new practices in cleaning and sanitation should be recognized to advance food safety and control known hazards.

The draft FDA Guidance on LMRTE Foods has widespread applicability for ready-to-eat foods that consumers can safely eat directly from their packaging containers or off the shelf. However, powdered infant formula is a low-moisture food but not a ready-to-eat food as it requires additional steps for preparation, and safe handling and storage by consumers in their home environments. Additionally, the manufacturing of powdered infant formula requires closed systems with dry production processing and even higher standards and exacting science-based requirements, which have been safely practiced and recognized by FDA in the United States and by regulatory agencies around the

world for nearly two decades, prior to the issuance of FDA guidance in March 2023[1] and the FDA Guidance on LMRTE Foods.

Background:

In March 2023, FDA reversed years of precedent and took the position that when a powder infant formula company finds a pathogen as part of its testing program, the infant formula manufacturer is required to view all product produced since the last clean break as potentially contaminated in the absence of a compelling root cause analysis that would identify the time when the contamination occurred.[2] In draft guidance issued in January 2025 the agency expanded that position for all low moisture foods, stating infant formula companies should "consider that all food produced since the last sanitation break is affected."[3]

The agency's change in position is contrary to established science that recognizes the value of high frequency sampling in detecting pathogens when present in powdered infant formula product and in setting brackets on either side of the contamination event to determine product that is safe for release. The infant formula industry adopted high frequency sampling nearly twenty years ago as an effective tool in addressing the unique issues presented by pathogens in the manufacture of infant formula. With the full knowledge and support of FDA officials at the time, the powdered infant formula industry adopted high frequency sampling to find pathogens in finished product and to set brackets for determining potentially implicated product. The published literature predicted the high frequency sampling adopted by the industry would provide a 0.9996 probability of detecting pathogens if present in infant formula.

High frequency sampling is effective. The industry used this robust high frequency sampling program for well over a decade to identify pathogens. In rare instances when a sample tested positive for a pathogen, additional testing would be conducted on

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[1] Letter to Infant Formula Manufacturers, Packers, Distributors, Exporters, Importers, and Retailers from Robert M. Califf, M.D., Commissioner of Food and Drugs and Susan T. Mayne, Ph.D, Director Center for Food Safety and Applied Nutrition (March 8, 2023) (accessed March 11, 2025 at: https://www.fda.gov/media/166044/download?attachment).

[2] Letter to Infant Formula Manufacturers, Packers, Distributors, Exporters, Importers, and Retailers from Robert M. Califf, M.D., Commissioner of Food and Drugs and Susan T. Mayne, Ph.D, Director Center for Food Safety and Applied Nutrition (March 8, 2023) (accessed March 11, 2025 at: https://www.fda.gov/media/166044/download?attachment).

[3] FDA, *Establishing Sanitation Programs for Low-Moisture Ready-to-Eat Human Foods and Taking Corrective Actions Following a Pathogen Contamination Event: Guidance for Industry* (January 2025) available at https://www.fda.gov/media/184815/download.

product produced on either side of the lot that tested positive to determine when the contamination first appeared and when it was no longer present. During this period of time, there were no reports of a causal link between a pathogen infection and the presence of that specific pathogen in powdered infant formula.

Sampling, coupled with appropriate production controls are critical to ensuring that the products produced meet the appropriate microbiological standard and are safe for consumption. High frequency sampling is most effective in setting brackets when it is accompanied by a thorough root cause analysis that identifies potential sources of contamination. Robust, frequent sampling provides a very high probability of detection in the event a pathogen is present. In the event of detection, high frequency sampling must be accompanied by a comprehensive root cause analysis and the brackets should be set on the basis of the sampling results and the findings of the root cause analysis to ensure appropriate corrective actions of implemented.[4]

The agency position that an infant formula manufacturer must use the last clean break as the starting point in determining brackets is imposing significant burdens on the industry without advancing food safety. Many infant formula companies have been required to increase the frequency of sanitation breaks. A sanitation break could take a few days for some assets and in some instances 10 to 14 days. During this time the facility is shut down and unable to produce product which is creating further strains on an already compromised supply chain.

Moreover, whereas a company under the earlier system may have conducted a full sanitation on a monthly, quarterly, biannually, or annual basis, most companies have been required to increase the frequency of cleanings resulting in significant reductions in the capacity to produce much needed infant formula. Even more concerning is the cleaning of some assets involves manual intervention into assets and can run the risk of actually introducing contamination during the cleaning process. This is placing tremendous strain on infant formula availability, runs the risk of increasing contamination of the asset, ignores the science that supports high frequency sampling, and is taking place at a time when the infant formula industry needs to be rebuilding inventories. In guidance issued by FDA in March 2023, ingredient suppliers for the powdered infant formula are also required to comply with the same sanitation

[4] In the January 2025 Draft Guidance FDA mentions a food safety outbreak associated with peanut butter that had been subject to high frequency testing. FDA, however, does not provide any details on the underlying root cause analysis and whether the contamination was due to an isolated event that had been remediated or involved an ongoing source of contamination.

requirements as powdered infant formula manufactures. This has resulted in some domestic suppliers exiting the industry, which has led U.S. infant formula companies to become more dependent on foreign inputs and finished goods to meet the demands of U.S. infant formula consumers. Due to the complexity of the requirements, overall yields are down and less formula is produced.

Recommendations:

FMI infant formula manufacturers are committed to providing safe, high quality infant formula options to the families that rely on their products. Safety and quality are the highest priority. FMI members are working diligently with leading experts, the FDA and other global regulatory agencies and interested stakeholders to continually advance the science of rigorous sanitation programs for the production of powdered infant formula.

The FDA Guidance for LMRTE foods, as it pertains to powdered infant formula production, should be modified to strive for higher standards than currently outlined, recognize high frequency sampling combined with a robust root cause analysis when setting brackets, include those practices that are appropriate and unique for powdered infant formula production, including but not limited to maintaining closed production systems to prevent cross-contamination, zoning controls for production areas and establishing cascading pressure environments, keeping production and manufacturing areas dry and free from the presence of any water because it is a known requirement for the growth of microbial contamination, dry flushing to support cleaning conditions, and high sampling rates and testing above the regulatorily required quantities to ensure higher probability of detection and a maximum level of product assurance.' Input suppliers would continue to be subject to different longstanding controls, including supplier audits, signed contracts, exacting specifications, incoming inspections processes and positive release among other science-based protocols.

If the FDA Guidance for LMRTE can be modified as noted above for powdered infant formula sanitation programs, it should supersede guidance issued to the infant formula industry in March 2023, which lacks scientific merit and fails to recognize the layered controls in place. High frequency sampling combined with a compelling root cause investigation can be powerful when setting brackets for product that is safe for consumption. This recommendation is supported by the underlying science and would provide immediate relief to consumers by addressing certain constraints that are preventing the infant formula industry from building the inventories that are needed to adequately meet consumer demand and maintain sufficient inventories.

In the draft guidance, there are several recommendations for eliminating water in production environments. In section IV B of the LMRTE draft guidance,[5] a recommendation states

- "You should use dry-cleaning techniques to the extent practical, and limit the use of controlled wet-cleaning techniques (e.g., for clean-in-place procedures following a pathogen contamination event)."

This statement needs clarification for industry as well as for FDA investigators as it could be easily misunderstood. Additionally, sanitation protocols including dry cleaning technologies have improved significantly in recent years. We encourage FDA to allow for innovation in the industry and provide pathways for effective dry cleaning and sanitation technologies to be validated and utilized by the industry.

Thank you for the opportunity to comment on this draft guidance document.

Sincerely,

Hilary S. Thesmar

Hilary S. Thesmar, PhD, RD, CFS
Chief Science Officer and SVP Food and Product Safety

[5] https://www.fda.gov/media/184815/download (page 8)