



AMERICAN SPICE TRADE ASSOCIATION, INC.

1101 17th Street, N.W. • Suite 700  
Washington, DC 20036 USA  
Tel: 202-331-2460 • Fax: 202-463-8998  
E-mail: info@astaspice.org  
Web: www.astaspice.org

March 14, 2023

Senator Brian J. Feldman  
Senate Committee on Education, Energy and the Environment  
2 West Miller Senate Office Building  
11 Bladen Street  
Annapolis, MD 21401

**RE: SB 916 – UNFAVORABLE - Environment – Ethylene Oxide – Prohibition**

Dear Chair Feldman and Members of the Committee:

ASTA was established in 1907 and serves as the expert voice of the U.S. spice industry in the global market. Member companies are involved in all aspects of the spice trade: importing, growing, processing, and marketing at both the wholesale and retail levels. Approximately 200 companies are members of ASTA. ASTA members manufacture and market the majority of spices sold in the U.S. for industrial, food service, and consumer use. The highest priority of ASTA and our members is ensuring the supply of clean, safe spice to American consumers.

ASTA represents a number of companies based in Maryland that would be severely harmed if ethylene oxide is no longer able to be used on spices. Banning ethylene oxide as a pathogen control method would result in there not being sufficient capacity to treat spices to ensure their safety. Moreover, SB 916 would ban any sale or distribution of ethylene oxide, which would have far-reaching implications of prohibiting any product containing detectable levels of ethylene oxide from being sold in the state.

The spice industry recognizes and supports federal and state policymaker's goals of reasonably minimizing ethylene oxide emissions. To this end, ASTA and spice companies that use ethylene oxide have worked for the last twenty years to reduce residues and emissions, while still achieving the objective of ensuring spices are treated to control food safety hazards. We are continuing to work to identify alternatives and reduce emissions.

As explained in more detail below:

- Ethylene oxide is critical for ensuring the safety of spices and complying with Food and Drug Administration (FDA) regulations.
- There are not currently viable alternatives for all spice products and where alternatives exist, there are serious limitations.
- The Environmental Protection Agency (EPA) is in the process of proposing new regulations to put in place additional emissions controls to protect workers and communities.

We appreciate you taking the time to consider our request for an **UNFAVORABLE** report on **Senate Bill 916**.



AMERICAN SPICE TRADE ASSOCIATION, INC.

1101 17th Street, N.W. • Suite 700  
Washington, DC 20036 USA  
Tel: 202-331-2460 • Fax: 202-463-8998  
E-mail: [info@astaspice.org](mailto:info@astaspice.org)  
Web: [www.astaspice.org](http://www.astaspice.org)

**Ethylene oxide is of critical importance for the spice industry for food safety purposes.**

The most critical food safety issue for the spice industry is the need to manage potential contamination by microbial pathogens that cause foodborne illness that could result in serious illness or death. Spices are commonly exposed to conditions that could result in microbial contamination. *Salmonella*, in particular, is a pathogen that must be controlled by treatment.

Under the Federal, Food, Drug and Cosmetic Act, 21 U.S.C. 301 et seq, all food companies are required to develop a food safety plan that identifies microbiological hazards and create a validated treatment plan to address these hazards. Spice companies must comply with the Preventive Controls for Human Food rule under the FDA Food Safety Modernization Act regulations, 21 C.F.R. Part 117, which requires that processes to control hazards such as *Salmonella* must be validated to ensure that they are effective.

In FDA's [risk profile for spices](#)<sup>1</sup>, the only wide-spread technologies available to achieve validated reduction of *Salmonella* in spices are steam, irradiation, and ethylene oxide treatment:

The most common spice processing treatments that impact the viability of microorganisms, including human pathogens such as *Salmonella*, can generally be grouped into three categories: 1) steam treatment, 2) gamma radiation, and 3) fumigation with ethylene oxide (E.O.). These treatments are also commonly used for other materials such as pharmaceuticals and biologics as described by the U.S. Pharmacopeia (U.S.P., 2011). Other treatment options have been studied and are described in the scientific literature; however, they are not currently used or are only minimally used on a commercial basis for spice treatment.

Steam and irradiation are capable of performing the necessary microbial reduction for *Salmonella*, however, both have significant limitations and without the availability of ethylene oxide, there would not be sufficient total capacity to treat the entire spice supply.

Limitations of the use of steam on spices include cost, capacity, and quality degradation. Importantly, steam cannot be used to treat packaged products, which creates the potential for post-process contamination. Additionally, steam is not a suitable alternative for herbs or ground spices. Steam treatment can result in discoloration or loss of flavor, thus destroying certain spice products – for which the primary purpose is to add flavor to foods.

While irradiation is a valid pathogen control, there is limited capacity for spice irradiation due to shortages of cobalt-60. There are also a limited number of irradiation facilities currently available to treat spices. Further, labeling requirements limit the commercial viability of the technique in certain

---

<sup>1</sup> Center for Food Safety and Applied Nutrition Food and Drug Administration U.S. Department of Health and Human Services. FDA Risk Profile: Pathogens and Filth in Spices (2017). Available at <https://www.fda.gov/media/108126/download>



AMERICAN SPICE TRADE ASSOCIATION, INC.

1101 17th Street, N.W. • Suite 700  
Washington, DC 20036 USA  
Tel: 202-331-2460 • Fax: 202-463-8998  
E-mail: [info@astaspice.org](mailto:info@astaspice.org)  
Web: [www.astaspice.org](http://www.astaspice.org)

circumstances. There continues to be a substantial reluctance on the part of the customer in the U.S. to accept irradiated products, which is a concern that is not limited to spice products.

**Forthcoming federal regulations will strengthen controls on emissions of ethylene oxide.**

Ethylene oxide emissions are federally regulated by the EPA and the Maryland Department of Environment routinely enforces compliance with EPA's ethylene oxide regulations. EPA has announced that it will soon propose new requirements that will strengthen protections for workers and community members. In the meantime, EPA is planning to conduct community outreach events for facilities near ethylene oxide facilities in Maryland. Nonetheless, the industry has not waited for new regulations to make great strides in reducing emissions and companies are continuing to strive to minimize emissions every day.

In conclusion, ethylene oxide is essential for public health to prevent serious illness or death from harmful pathogenic bacteria. It remains an essential and necessary tool for the spice industry to comply with food safety requirements and to ensure a supply of clean, safe, spices. Moreover, **Senate Bill 916**, if passed, would create irreparable harm for Maryland businesses and create serious health consequences for Marylanders. For these reasons, ASTA respectfully requests an **UNFAVORABLE** report on **SB 916**.

Respectfully submitted,

Laura Shumow  
Executive Director  
American Spice Trade Association