

## Ethylene Oxide treatment for spices in U.S. comes under further pressure.

*KREYENBORG's infrared light technology as alternative sterilization method for spices & herbs.*



EtO?

SALMONELLA??

E. COLI???

Growers, processors, and traders worldwide are facing border rejections due to ethylene oxide (EtO) residues in their products. In the first half of 2022 the *European Commission's Food Fraud Report* listed more than 70 EtO alerts in the categories herbs and spices, nuts and seeds, cereals, mixed products, and prepared dishes and snacks.

EtO is commonly used in healthcare facilities as an antimicrobial agent used to sterilize medical equipment and is also used in the spice industry as a sterilization method to control pathogenic bacteria, such as *Salmonella* and *E. coli*. This method has not been permitted for food products in Europe since 1991, and in Australia since 2000 due to its high carcinogenic risk. However, in the United States, and in certain other countries EtO is still allowed for use in processing spices. This situation is about to change: the U.S. *Environmental Protection Agency* (EPA) has recently listed EtO facilities as bringing a “high cancer risk” to neighboring communities, due to emissions that are difficult to prevent using this technology. Now US multinational companies are working toward sterilization methods for spices that are accepted worldwide and that still meet the challenge of sterilizing spices without damaging their organoleptic properties, such as color, flavor, and texture.



**Stay on the safe side with KREYENBORG's infrared technology!**

Sterilization of spices using KREYENBORG's infrared light technology – our *FoodSafety-IRD* - offers several advantages: the process is natural and applicable to organic foods; many world market leaders in the organic food and conventional food sectors – including some in the US - are using our process, which has already been validated for many products. Easy to clean and use, the system is suitable not only for sterilization, but also for drying, roasting, coating, and stock protection. This technology has been used to treat more than 300 different foodstuffs, ranging from spices, herbs, nuts, seeds, tea, onions, dried vegetables, and cereals, among many other products.

The active principle of infrared light enables rapid heating of the product, thus offering shorter treatment times.



KREYENBORG offers trials at its technical center in Senden (Germany) to all interested customers.

Would you like to find out more about our sterilization method using infrared light? Please visit [www.kreyenborg.com](http://www.kreyenborg.com) or contact us at [food@kreyenborg.com](mailto:food@kreyenborg.com).

Meet us personally at **ASTA's Annual Meeting & Exhibits 2023** in San Diego.

**KREYENBORG GmbH & Co. KG**

Udo Gielen  
Managing Director  
[u.gielen@kreyenborg.com](mailto:u.gielen@kreyenborg.com)  
+49 2597 93997 0

Sebnem Karasu  
Sales Representative USA & Canada  
[sebnem.karasu@kreyenborg.com](mailto:sebnem.karasu@kreyenborg.com)  
+1 847 521 6942

