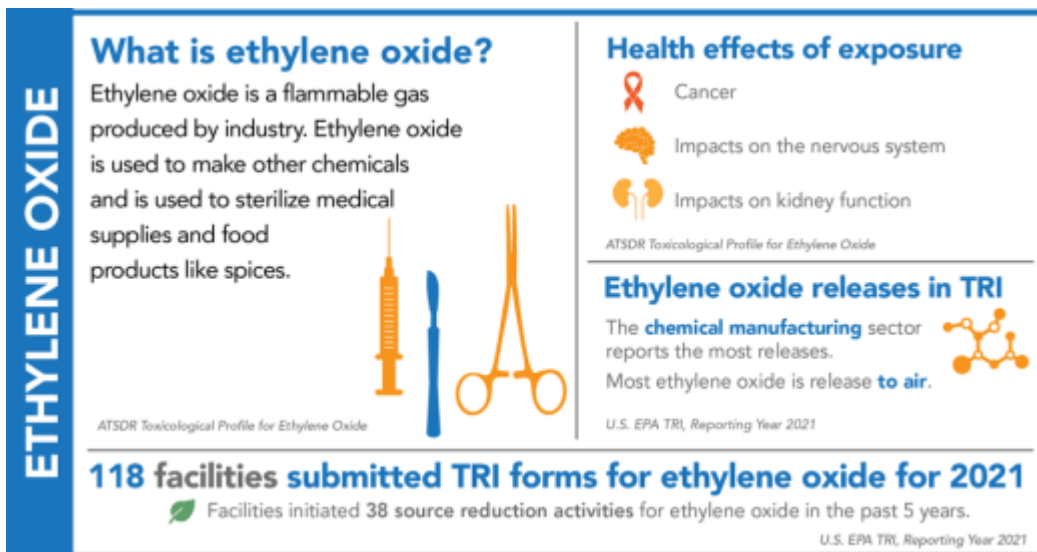


Ethylene oxide (EtO) is produced in large volumes and is primarily used as an intermediate in the production of several industrial chemicals, the most notable of which is ethylene glycol. It is also used as a fumigant in certain agricultural products and as a sterilant for medical equipment and supplies.




Ethylene oxide has been implicated in many product recalls in Europe. As a result, the European Union has added it to the list of pesticides and has passed a new legislation that requires the presence of this pesticide to be tested.



ETHYLENE OXIDE

What is ethylene oxide?
Ethylene oxide is a flammable gas produced by industry. Ethylene oxide is used to make other chemicals and is used to sterilize medical supplies and food products like spices.


Health effects of exposure

-  Cancer
-  Impacts on the nervous system
-  Impacts on kidney function

ATSDR Toxicological Profile for Ethylene Oxide

Ethylene oxide releases in TRI
The **chemical manufacturing** sector reports the most releases. Most ethylene oxide is release **to air**.

U.S. EPA TRI, Reporting Year 2021

118 facilities submitted TRI forms for ethylene oxide for 2021
 Facilities initiated 38 source reduction activities for ethylene oxide in the past 5 years.

U.S. EPA TRI, Reporting Year 2021

Following the new legislation, from 2023 to 2026, European countries will be required to collect and test samples of specific local and imported foods for ethylene oxide. Samples will be analyzed to measure the levels of pesticide residues to assure compliance with the accepted residual levels of pesticides. The food to be tested are wheat, barley, oats, dry beans, rye and brown rice.

The spectrum of analysis comprises more than 100 chemicals including chlorpyrifos, glyphosate, folpet, in products with plant origin such as bananas, cantaloupe, tomatoes, onions, and carrots. Products with animal origin should be checked for about 30 pesticides. Items like chicken eggs, cow's milk, and poultry fat will be tested for DDT, fipronil, and lindane.

Processed baby food made from cereal, infant formula, follow-on formula, and diets for infants and young children other than infant formula, are also part of this monitoring program.

Source: Food Safety News; Global Food Consumers' Forum.

See Phenomenex Resources for Pesticides Analysis

Webinar: [Testing Insights and Analytical Challenges: Pesticides Methods](#)

Technical Notes

- [Analysis of 21 Residual Solvent Residues from Cannabis Matrix by FET Headspace on a Zebron™ ZB-624PLUS™ GC Column](#)

- [**Analysis of California Residual Solvent Targets in Cannabis Extract**](#)

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