



Prioritizing chemical management in the age of wellness and sustainability

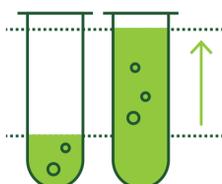


The use of synthetic chemicals in the modern era



Pre-WWII era
Needs met with natural organic chemicals.¹

1955-1970
Volume of synthetic organic chemicals tripled from 50 million to **150 million tons.**²



1970-2014
Estimated global sale of chemicals **increased 25-fold**, changing the universe of chemicals to which people are exposed.³



2019-2030
In 2019, the UN's Global Chemical Outlook II report estimated that current chemical production capacity of **2.3 billion metric tons** will double by 2030.⁴

The EPA has inventoried more than **86,000** chemicals substances.



48% or **41,587** of those are currently used in commerce.⁵

A sampling of chemicals and health impacts*



Bisphenol A (BPA)
Found in plastics that are often used in food and beverage containers

Testing in animals has observed interference with hormones and concerns for fetus development and reproduction in adult animals⁶



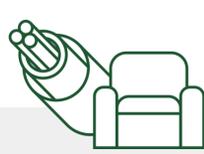
Polybrominated diphenyl ethers (PBDEs)
Used as fire retardants and found in an array of products from furniture to clothing, from TVs to textiles

Accumulates in the human body and environment and has been associated with neurobehavioral effects in children and effects in birds and fish⁷



Triclosan
Used in hand and dishwashing soaps as well as personal care products

May lead to bacterial resistance to other anti-microbials; testing in animals has observed decreases in thyroid hormone levels⁸



Perfluorochemicals (PFCs)
Designed to resist heat, oil, stains, grease, and water, is often used in clothing, furniture, adhesives, food packaging and electrical wire insulation

Testing of some PFCs in animals has hindered growth, development and reproduction and compromised liver function⁹

*toxicity in animal testing is usually observed at higher exposures to these chemicals than humans are exposed to and requires a risk assessment to determine the actual risk for health impacts in humans.

Growing regulatory landscape

A growing number of regulations worldwide are designed to reduce, eliminate or increase awareness of the use of hazardous chemicals.



66% of companies surveyed have goals to reduce chemicals of high concern.¹⁰



Ways to prioritize chemical management and regulatory compliance



Gain visibility into your supply chain

72% of consumers have low confidence in chemical manufacturers' communications concerning the environmental impact of their products.¹²

Maintain material Safety Data Sheets



33% of checked Safety Data Sheets (SDS) were non-compliant with the requirements checked in the project.¹⁴

Know which chemicals are in use

30% of companies are managing between 100 and 1,000 substances with 1-10 of those substances being chemicals of concern.¹³



Understand regulatory landscape



60% of companies said they were reactive toward compliance.¹⁵

Keep records

33% of reported mixtures had incorrect labeling.¹⁶



Get started with chemical management and solutions for improved visibility with some help from the experts. Explore additional insights at [UL.com/Insights](https://www.ul.com/Insights)

Sources:

¹ Institute of Medicine, "Identifying and Reducing Environmental Health Risks of Chemicals in Our Society: Workshop Summary," 2014.
² Institute of Medicine, "Identifying and Reducing Environmental Health Risks of Chemicals in Our Society: Workshop Summary," 2014.
³ Institute of Medicine, "Identifying and Reducing Environmental Health Risks of Chemicals in Our Society: Workshop Summary," 2014.
⁴ UN Environment Programme, Global Chemicals Outlook II, 2019.
⁵ Environmental Protection Agency, "TSCA Chemical Substance Inventory," 2020.
⁶ Environmental Protection Agency, "Risk Management for Bisphenol A (BPA)," 2014.
⁷ Environmental Protection Agency, "Polybrominated Diphenyl Ethers (PBDEs)," 2014.
⁸ Food and Drug Administration, "5 Things to Know About Triclosan," 2014.
⁹ Environmental Protection Agency, "PFOA, PFOS and Other PFASs," 2014.
¹⁰ Chemical Footprint Project, "Taking the Journey to a Smaller Chemical Footprint," 2019.
¹¹ Chemical Watch, "Global Service Providers Guide 2019," 2019.
¹² Accenture, "Accenture Chemicals Global Consumer Sustainability Survey," April 2019.
¹³ Chemical Watch, "Global Service Providers Guide 2019," 2019.
¹⁴ The National Law Review, "ACTA Update: Top International News in Chemical Policy and Regulations," January 23, 2020.
¹⁵ Chemical Watch, "Global Service Providers Guide 2019," 2019.
¹⁶ The National Law Review, "ACTA Update: Top International News in Chemical Policy and Regulations," January 23, 2020.



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