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Chemical Insights
An Institute of Underwriters Laboratories Inc.

VOLUME 24
NOVEMBER 2022

Foresight

Indoor Air Quality

4-Phenylcyclohexene—A Common Air Pollutant

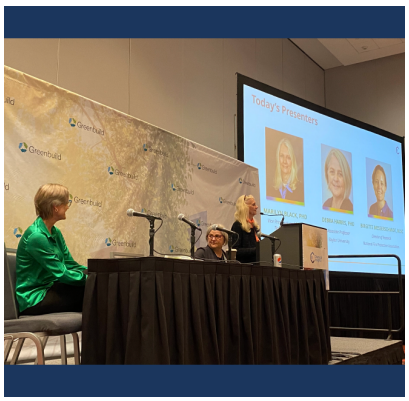
The common air pollutant, 4-phenylcyclohexene (4-PCH), is a volatile organic compound (VOC) that is often recognized as the “new carpet odor” in indoor environments. This chemical is an unintentional byproduct of the manufacturing of styrene butadiene latex used in some carpet backings and cushioning materials and, as a result, can outgas from those products. 4-PCH is a reactive VOC that may react specifically with ozone to produce formaldehyde, a known human respiratory irritant and carcinogen. Read more in our latest technical brief "4-Phenylcyclohexene—A Common Air Pollutant."

E-Cigarettes and Vaping

New Report Details VOC Emissions from Vaping

Chemical Insights Research Institute (CIRI) has released its latest research on VOC emissions related to consumer use of electronic nicotine delivery systems (ENDS). Findings show that ENDS smoke can consist of more chemicals than are listed in the ingredients. More than 70 different VOCs were identified in ENDS smoke including numerous aldehydes, glycols, alcohols, fragrances, siloxanes, and aromatics. Key VOC emissions were linearly correlated with the number of puffs, or the mass of e-liquid consumed, although specific amounts varied across vaping devices and e-liquids. Read the full report "Volatile Organic Compounds (VOCs) Released from Electronic Nicotine Delivery Systems (ENDS)."

Wildfires and the WUI



Wildfire Experts Discuss WUI Trends and Public Health at Greenbuild

CIRI convened a panel of experts to discuss “Wildfires + Resilience: Whole Building Approach from Design to Occupancy” at the recent Greenbuild International Conference and Expo. They examined the intersection of wildland fires and the built environment, also known as WUI, the wildland-urban interface. Panelists provided the latest scientific knowledge about trends and locations, fuel sources, residential and community health impacts, and available mitigative strategies. This presentation came on the heels of the recent National Academies of Sciences, Engineering, and Medicine consensus report, “The Chemistry of Fires at the Wildland-Urban Interface,” which

featured content on human exposure and the health impacts of toxicants and mitigative strategies co-authored by Dr. Marilyn Black of CIRI. Additional educational materials can be found at chemicalinsights.org/wildfires.

Flame Retardants and Furniture Flammability

Sharing Scientific Knowledge on Flame Retardants with Interior Designers

As an American Society of Interior Designers (ASID) Knowledge Contributor, CIRI is a trusted source for interior designers seeking to apply scientific knowledge to their practice. As part of these efforts, CIRI presented "Specifying Residential Upholstered Furniture to Safeguard Human Health" virtually to the ASID Virginia Chapter on November 14. Attendees learned design and specification strategies that safeguard human health from both fire and chemical hazards, such as the use of a barrier material. This course is available on ASID's Learning Academy and is approved for one continuing education (CE) hour with IDCEC and GBCI.

Chemical Exposure

Chemistry Basics for Building Practitioners

Understanding the basic chemistry behind how common indoor pollutants are introduced in buildings and how they behave can lead building professionals to foster healthy indoor environments. CIRI's "Chemistry 101" education course reviews key chemicals including PFAS substances, phthalates, terpenes and formaldehyde, their sources, human exposure potentials, and mitigative strategies for reduction. Webinars in partnership with key industry associations, including the International Facility

Management Association (IFMA), Ron Blank & Associates, and the Campus Safety, Health, and Environmental Management Association (CSHEMA) have reached hundreds of attendees. A recording of the presentation given to facility managers through IFMA can be viewed on YouTube.

CIRI Happenings

Join Our Team

CIRI is recruiting key science and communication talent to join our team! Our organization is dedicated to scientific discovery research, education, and communication of environmental exposures and steps for reducing human risks. We are seeking driven, results-oriented, and passionate people who want to contribute to safe working, living, and learning environments. Click each bullet to learn more about the specific role.

- Communications Specialist
- Digital Communications Specialist
- Events Coordinator
- PR and Amplification Manager
- Research Manager for Field Operations
- Senior Toxicologist
- Toxicologist
- Toxicology Sciences Laboratory Manager

Recent Publications and Upcoming Events

Recent Publications

- Technical Brief, "4-Phenylcyclohexene—A Common Air Pollutant"
- Report, "Volatile Organic Compounds (VOCs) Released from Electronic Nicotine Delivery Systems (ENDS)"
- KUNR Public Radio, "Millions of Homes are Being Built in Fire-Prone Areas of Mountain West as Wildfire Risks Grow"

Upcoming Events

- Green Schools Conference, February 27 – March 1, "Emerging Indoor Air Quality (IAQ) Challenges and Solutions in Our Schools: Assessing New Technologies and their Safety"
- Society of Toxicology Annual Meeting & ToxExpo, March 27 - 31, "The Future of Fire Safety: Exploring the Intersection of Wildfires and Human Health"

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