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**Chemical  
Insights**

A Research Institute of Underwriters Laboratories Inc.

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# Foresight

*Highlighting Chemical Insights' Research and Education  
for Safer Environments and Healthier People*

## Our Featured Initiatives

### Indoor Air Quality



#### **Top 10 VOCs – Decamethylcyclopentasiloxane**

The common air pollutant, decamethylcyclopentasiloxane (D5), is a volatile organosilicon based cyclic compound frequently found in the indoor air. Common personal care use includes shampoos, lotions, and deodorants/antiperspirants. Human exposure occurs via dermal, inhalation, and oral routes. Studies to date indicate the liver and the lungs to be the vulnerable organs to D5 exposure as well as developing tumors. Read more in our newest technical brief, ["Decamethylcyclopentasiloxane – A Common Air Pollutant."](#)

### Furniture Flammability



## Chemical Insights Research Institute (CIRI) Partners with the American Society of Interior Designers (ASID)

Through rigorous [research](#), CIRI has identified that the use of fire barriers in furniture design is an easy and direct way to prevent and delay flaming ignition of upholstered furniture while also protecting people from chemical hazards found in flame retardants. That is why we are proud to [announce](#) that ASID now features CIRI's continuing education (CE) course, "[Specifying Residential Upholstered Furniture to Safeguard Human Health](#)," on its ASID Academy catalog of resources. This CE course, and [other valuable tools](#), build upon CIRI's ongoing research projects on flame retardants and furniture flammability and their impact on human health.

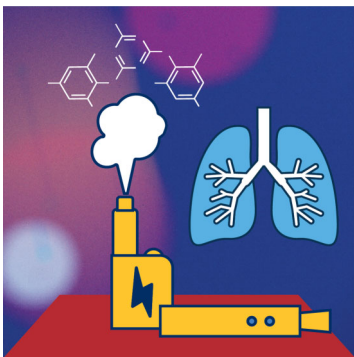
## Wildfires



## New Guidance Document: Use of Do-It-Yourself Filtration Devices During Wildfires

CIRI and the Standards and Engagement organization of Underwriters Laboratories published [UL 200A Guidance Document, "Use of Do-It-Yourself Filtration Devices During Wildfires."](#) This Guidance Document presents evidence-based, actionable procedures to help communities construct and safely use DIY air cleaners (furnace air filters attached to electric box fans) during wildfire smoke events. The Guidance Document follows research conducted by CIRI along with the US EPA's Office of Research and Development on potential fire risks resulting from operation of DIY air cleaners. CIRI was assisted in development of this Guidance Document by an expert scientific volunteer group.

## Toxicology



## CIRI Presents at the Society of Toxicology's Annual Meeting and ToxExpo

CIRI's recent research on the toxicological profiles of aerosols from various types of electronic nicotine delivery systems (ENDS) was presented at the Society of Toxicology's (SOT's) 61st Annual Meeting and ToxExpo by Dr. Christa Wright, Director of Toxicology and Human Health. The presentation, "[Oxidative Stress, Toxicity, and DNA Damage across the Device Lifetime](#)," demonstrated toxicity on small airway epithelial cells. CIRI was also selected as a feature organization in the SOT [official broadcast](#) highlighting our research institute and work.

## CIRI Happenings



### CIRI Acquires Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for Research

CIRI has installed an ICP-MS system for its Advanced Measurement and Toxicology Laboratory. This state-of-the-art instrumentation will enable CIRI researchers to study trace metals in aerosols and biological materials.

## Recent Publications and Events



### Publications:

1. Technical Brief, "[Decamethylcyclopentasiloxane – A Common Air Pollutant.](#)"
2. Press Release, "[Chemical Insights Research Institute Releases Actionable Scientific Tools to Help Save Lives During House Fires](#)"
3. [UL 200A Guidance Document](#), "[Use of Do-It-Yourself Filtration Devices During Wildfires](#)"

Visit us to hear about our research at conferences:

1. [AIHce EXP 2022](#), May 23-25, 2022, "Pop-up: Exposures Associated With 3D Printing in Schools"
2. [2022 NFPA Conference and Expo](#), June 6-9, 2022, "Balance Between Human Health and Fire Safety in the Built Environment"
3. [NeoCon](#), June 13-15, 2022, "Design it Healthy, Build it Healthy, Keep it Healthy: Strategies to Support Resilient, Health Interiors"
4. [AIA Conference on Architecture 2022](#), June 21-23, 2022, "Resiliency, Urban Wildfires and Materials"
5. [CSHEMA Annual Conference](#), July 8-13, 2022, "Investigating and Mitigating the Health Impacts of 3D Printer Emissions"
6. [SOT Annual Meeting and ToxExpo Summary Slides](#), March 27-30, 2022, "The Unknowns of Vaping: Oxidative Stress, Toxicity, and DNA Damage across the Device Lifetime"
7. [NSTA National Conference Summary Slides](#), Mar. 31-Apr. 2, 2022, "Achieving Good Indoor Air Quality."



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