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## Mass. firefighters seek ban on flame retardants

*Source: [The Boston Globe, April 24, 2016](#)*

*Author: David Abel*

Amid growing concern that flame retardants are responsible for elevated cancer rates in firefighters, Massachusetts lawmakers are pushing legislation that would go further than any other state's in banning the use of chemicals meant to slow the spread of fires.

Fire officials and environmental advocates, who have joined forces to support the restrictions, contend that at least 10 chemicals used in flame retardants endanger firefighters, while doing little to stop fires. They support two bills that would prohibit manufacturers and retailers from using the chemicals in children's products and upholstered furniture and authorize state environmental officials to ban other retardants they designate as health risks.

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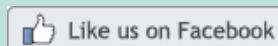
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## Characterizing Flame Retardant Applications and Potential Human Exposure in Backpacking Tents

Source: *Environmental Science & Technology*, April 15, 2016

Authors: Genna Gomes, Peyton Ward, Amelia Lorenzo, Kate Hoffman, and Heather M. Stapleton

Flame retardant (FR) chemicals are applied to products to meet flammability standards; however, exposure to some additive FRs has been shown to be associated with adverse health effects. Previous research on FR exposure has primarily focused on chemicals applied to furniture and electronics; however, camping tents sold in the United States, which often meet flammability standard CPAI-84, remain largely unstudied in regards to their chemical treatments. In this study, FRs from five brands of CPAI-84-compliant, two-person backpacking tents were measured and potential exposure was assessed. Dermal and inhalation exposure levels were assessed by collecting hand wipes from 20 volunteers before and after tent setup and by using active air samplers placed inside assembled tents, respectively. Organophosphate flame retardants (OPFRs) were the most commonly detected FR in the tent materials and included triphenyl phosphate (TPHP), tris(1,3-dichloro-2-propyl)phosphate (TDCIPP) and tris(2-chloroethyl)phosphate (TCEP). Levels of OPFRs measured on hand wipes were significantly higher post-tent setup compared to pre setup, and in the case of TDCIPP, levels were 29 times higher post setup. OPFRs were also detected at measurable concentrations in the air inside of treated tents. Significant, positive correlations were found between FR levels in treated textiles and measures of dermal and inhalation exposure. These results demonstrate that dermal exposure to FRs occurs from handling camping tents and that inhalation exposure will likely occur while inside a tent.

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## New York Assembly passes children's products bill

Source: *Chemical Watch*, May 11, 2016

Author: Kelly Franklin

New York's Assembly has passed a bill aimed at regulating substances of concern in children's products, through reporting requirements, substance bans and retail signage.

The "Child Safe Products Act" (AB 5612) passed the Assembly by a 112-29 margin, and now moves to the Senate.

The bill says the state Department of Environmental Conservation (DEC) should establish lists of priority chemicals and chemicals of high concern. Requirements for products, containing the substances, would include:

- reporting their presence, along with additional data, to the DEC, with the information to be made available on the agency's website;
- a Prop 65-style requirement for retailers to "conspicuously post notice to consumers, identifying such products and the priority chemicals they contain"; and,
- a sales ban on covered products containing them from 1 January 2019.

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## Organic pesticide being tested

Source: *Albuquerque Journal*, April 25, 2016

Author: Kevin Robinson-Avila

ALBUQUERQUE, N.M. -- A new organic pesticide developed at New Mexico State

University is being tested this spring in California's Salinas Valley, where some of the world's biggest organic commercial growers are based.

If the tests show the product, called NMX, is successful in killing fungal and bacterial infections, it could find a ready market in California and beyond, particularly among growers of leafy vegetables, which today have very few natural pesticides to protect their crops, said Luke Smith, an NMSU graduate and head of EcoSeal, the new company working to market NMX.

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## **The \$100 billion business case for safer chemistry**

*Source: [GreenBiz.com](#), May 6, 2016*

*Author: Libby Bernick*

What would be the value to businesses and our economy if safer chemistry replaced conventional approaches? Is there a way to put a monetary value on the risks and opportunities?

Economic benefits might include more jobs or a reduction in societal costs due to an accidental release of hazardous chemicals. Business benefits might include increased revenues for new products or reduced operating expenses, because hazardous chemicals no longer require special handling and management.

Two long-time thought leaders on the topic of safer chemistry, the American Sustainable Business Council (ASBC) and the Green Chemistry & Commerce Council (GC3), set out to determine the business and economic case for safer chemistry. Trucost was engaged to research the value of safer chemistry and devised an eight-part framework to look at both risks and opportunities for businesses and economies.

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## **Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming, Field**

*Source: [Environmental Science & Technology](#), March 29, 2016*

*Authors: Dominic C. DiGiulio and Robert B. Jackson*

A comprehensive analysis of all publicly available data and reports was conducted to evaluate impact to Underground Sources of Drinking Water (USDWs) as a result of acid stimulation and hydraulic fracturing in the Pavillion, WY, Field. Although injection of stimulation fluids into USDWs in the Pavillion Field was documented by EPA, potential impact to USDWs at the depths of stimulation as a result of this activity was not previously evaluated. Concentrations of major ions in produced water samples outside expected levels in the Wind River Formation, leakoff of stimulation fluids into formation media, and likely loss of zonal isolation during stimulation at several production wells, indicates that impact to USDWs has occurred. Detection of organic compounds used for well stimulation in samples from two monitoring wells installed by EPA, plus anomalies in major ion concentrations in water from one of these monitoring wells, provide additional evidence of impact to USDWs and indicate upward solute migration to depths of current groundwater use. Detections of diesel range organics and other organic compounds in domestic wells <600 m from unlined pits used prior to the mid-1990s to dispose diesel-fuel based drilling mud and production fluids suggest impact to domestic wells as a result of legacy pit disposal practices.

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See articles from *Ars Technica*, "[Ex-EPA scientist published Wyoming fracking study that agency abandoned](#)" and *The Guardian*, "[Scientists find fracking contaminated Wyoming water after EPA halted study](#)".

Also see information from the Wyoming Department of Environmental Quality, "[Pavillion Investigation](#)"; the US EPA, "[Pavillion](#)"; and various articles on the topic from the [Wyoming Public Media Statewide Network](#).

## **New Report: Agricultural Pesticides Increasingly Linked to Childhood Cancers & Neurological Harm**

[Source: Pesticide Action Network \(PAN\) - North America, May 10, 2016](#)

Oakland, California -- A new report released today spotlights pesticides used in the food system and the harmful effects they are having on the nation's children. In particular, the report finds that children living or attending school near agricultural fields face some of the greatest risk of exposure from pesticides linked to cancers and the developing brain.

Kids on the Frontline: How pesticides are undermining the health of rural children provides a rigorous assessment of dozens of independent studies reviewed by leading academic experts in the field. The report finds that the research has grown increasingly strong surrounding the links between pesticides used in food production and health harms, like cancers -- particularly leukemia and brain tumors -- and developmental disorders or delays, including autism spectrum disorders.

"Children in agricultural communities are on the front line of exposure to pesticides that don't stay where they're put," said Emily Marquez, PhD, an endocrinologist and staff scientist at PAN, as well as one of the authors of the report. "Pesticides linked to cancer and neurological harm travel through air, water and dust, ending up in homes and schools -- and eventually in children's bodies."

Children are facing what leading researchers have termed a "silent pandemic" of diseases driven by environmental factors, including pesticides. Rates of childhood leukemia and brain tumors have risen more than 40 percent in the last fifty years, and one in every six U.S. children are now diagnosed with one or more developmental disabilities.

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See report from PAN North America, "[Kids on the Frontline: How pesticides are undermining the health of rural children](#)".

Also see article by Elizabeth Grossman, "[Children in Farm Communities Pay a Steep Price for the Food We Eat](#)".

## **What Stinks? Toxic Phthalates in Your Home**

[Source: Environmental Health Strategy Center and Prevent Harm, May 2016](#)

[Authors: Mike Belliveau, Emma Halas O'Connor, and Elyse C. Tipton](#)

Maine is a national leader in protecting public health from dangerous chemicals in everyday products. In 2008, the Pine Tree State passed one of the first and strongest state-based chemical policy reform known as the Kid Safe Products Act. Similar chemical safety laws have since been enacted in California, Oregon, Vermont, and Washington, are pending [*sic*] in several other states.

Under Maine's law, manufacturers must disclose their use of high-priority chemicals of concern in consumer products sold in the state. They can be required to search for safer substitutes. The Kid Safe Products Act further authorizes the state to phase out chemical uses if safer alternatives are available, effective, and affordable.

In 2014, a grassroots campaign led by concerned Maine moms and health professionals petitioned the state to add four phthalates (THAL-eights) to its list of Priority Chemicals. Maine agreed, and some product manufacturers were required to report phthalate use by December 2015.

This report unveils those results, including some first-ever public data on the use of phthalates.

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## Math May Be a Better Way to Help Researchers Test Consumer Products

[Source: University of Cincinnati, May 10, 2016](#)

CINCINNATI -- Researchers at the University of Cincinnati (UC) James L. Winkle College of Pharmacy are presenting collaborative research on the use of mathematical methods for understanding the transportation of chemical compounds in biological tissues, like the skin.

This could lead to better ways of testing cosmetic or consumer products without harming humans or animals.

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Also see articles from the *Journal of Pharmaceutical Sciences*, "[An Evaluation of Mathematical Models for Predicting Skin Permeability](#)", and the journal *Expert Opinion on Drug Metabolism & Toxicology*, "[Mathematical models for skin toxicology](#)".

## Bisphenol A and food safety: Lessons from developed to developing countries

[Source: Food and Chemical Toxicology, June 2016](#)

[Authors: Sylvia Angubua Baluka and Wilson K. Rumbelha](#)

Modern lifestyles and changes in the socio-economic characteristics of households have stimulated current developments in food technology, processing and packaging. Chemicals such as bisphenol A (BPA) are known to migrate from food packaging into the food, resulting in human exposure to these chemicals. Similarly, BPA can migrate from baby feeding bottles into milk. BPA has been associated with adverse effects attributed to its estrogenic properties in various animal models. This review analyzed peer-reviewed publications in the English literature on human BPA exposure and regulations in developing countries compared to developed countries. BPA has been reduced or eliminated from food packaging and contact materials such as baby bottles in developed countries either voluntarily or by legislation. The meager data from developing countries shows that human BPA exposure in developing countries is similar to that in developed countries. With minor exceptions, BPA restriction, voluntary or legal, is virtually absent in developing countries of Africa, SE Asia, and South and Central America.

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See article based on this research, "[Widespread ingestion of packaging chemical revealed](#)".

Also see from the National Institute of Environmental Health Sciences, "[NTP star trainee receives three awards for her work](#)".

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