

Screening for Biological Activities of Concern in Consumer Products

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Background Materials

- See footnotes
- [Nomination from State of Connecticut Department of Public Health](#)

Overview

Consumer products, including 'functional' products used in and around the home, products used for personal care and hygiene, toys, and clothing can be a significant source of exposure to potentially hazardous chemicals. This has led to increasing concern for adverse human health impacts, consumer backlash against specific products and entire product categories, and market shifts in the absence of regulatory action. In recent years, several states have passed legislation focused on gaining a better understanding or limiting exposures to hazardous ingredients in consumer products, particularly those intended for use by children¹. Current regulatory and non-regulatory efforts are focused primarily on known hazards, i.e. chemicals of concern (CoC) and/or products with the highest potential for exposure. Our current, poor understanding of the qualitative and quantitative relationship between level of a chemical in a product and human exposure/dose creates significant uncertainty regarding the potential health risk posed by consumer products. Conversely, the absence of CoC, or replacement of individual CoC, in a product does not necessarily ensure its safety.

NTP recently received a nomination from the State of Connecticut Department of Public Health² to apply Tox21 techniques to consumer products designed for use by young children. The nomination suggests the use of targeted screening assays to evaluate the bioactivity of physiologically relevant extracts of selected consumer products. NTP seeks comment and advice from the NTP Board of Scientific Counselors on possible approaches and key questions identified as part of the Initial scoping for this nomination.

¹ Browse State Lists at Interstate Chemicals Clearinghouse (IC2): <http://www.theic2.org/states-list>

² Nomination Summary for Application of Tox21 techniques to consumer products designed for use by young children: <https://ntp.niehs.nih.gov/testing/noms/search/summary/nm-n21702.html>