

**Michael A. Kamrin, Ph.D**  
**Consultant in Toxicology and Risk Analysis**

Professor Emeritus  
Center for Integrative Toxicology  
Michigan State University  
Phone: 517/281-2717

167 Granite Road  
Williamston, MI 48895  
Email: kamrin@msu.edu

Michael A. Babich, Ph.D.  
Project Manager for Phthalates  
Directorate for Health Sciences  
U.S. Consumer Product Safety Commission  
4330 East-West Highway, Suite 600  
Bethesda, MD 20814  
301-504-7253

September 28, 2011

Dear Dr. Babich,

I am writing this letter to provide input to the Chronic Hazard Advisory Panel during its review of phthalates. My name is Michael Kamrin and I am a Professor Emeritus of the Center for Integrative Toxicology at Michigan State University. I am a fellow of the American Association for the Advancement of Science, and member of the Society of Toxicology, the Society for Risk Analysis, and the American Chemical Society. The majority of my career has been devoted to addressing toxicological issues associated with risk assessment and risk communication, especially with respect to human health effects of environmental contaminants.

In the years since the last CHAP on DINP and the NTP review of seven phthalates, there have been a large number of new studies on possible adverse effects of phthalates. Recently, I published a review of the latest phthalates research, including biomonitoring studies, epidemiological research, and laboratory animal evidence. Analysis of all of the available data leads to the conclusion that risks from phthalate exposure are low, even lower than originally thought, and that there is no convincing evidence of adverse effects on humans.

The most recent expert review of phthalates was conducted by the European Commission Scientific Committee on Emerging and Newly-Identified Health Risks as part of a study of DEHP in medical devices. The panel reviewed animal data as well as epidemiological studies with respect to possible adverse reproductive effects in males and females, and concluded that the evidence for such effects is either inconclusive or contradictory or both and so such effects have not been established in humans.

This panel report, based on an extensive review of research on one of the most potent phthalates, DEHP, provides strong support that there is little or no cause for concern for adverse effects from exposure of the general population to DEHP. Further, there is no firm evidence that any effects have

occurred or are likely to occur in adults and infants most heavily exposed to DEHP as a result of intensive medical procedures. If this phthalate does not pose a significant risk, this strongly suggests that the less potent phthalates are even less likely to be of concern to humans.

Since the scientific evidence strongly suggests that risks to humans are low, phthalate bans or restrictions are unlikely to lead to any marked improvement in public health. Furthermore, in addition to the lack of public health benefit, there is a possibility that restricting current phthalates from consumer use will result in negative impacts on public health. This possibility arises since there is less known about the toxicity of phthalate alternatives and the lack of such data leaves open the potential that they may cause adverse health effects.

Enclosed is a copy of my paper which I respectfully submit for your review. Please feel free to contact me with any questions.

Regards,

Michael A. Kamrin, Ph.D.