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## Proceedings of the International Conference on Occupational & Environmental Exposures of Skin to Chemicals: Science & Policy

Hilton Crystal City September 8-11, 2002

### An Evaluation of Dermal Exposures from an Engineering Perspecti

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Researchers from the National Institute for Occupational Safety and Health (NIOSH) evaluated dermal exposure issues from an engineering controls perspective. The hierarchy of controls are: Chemical substitution, process modification, isolation of the process or workers, administrative controls, and use of personal protective devices. However, the primary solution to dermal exposures has often been selected from the bottom of the hierarchy: the recommendation to use chemical protective clothing (CPC). At best the recommendation to use CPC is accompanied with a recommended polymer type for construction of the CPC based on chemical compatibility with the hazardous chemical. There are often further recommendations to evaluate the possibility of chemical substitution, process change, or engineering controls, however, these recommendations are seldom carried out.

The latter recommendations require an in-depth knowledge of the chemical and industrial processes but also provide a superior long-term solution. It is the responsibility of the occupational health community to team with the technical knowledge base within the industry to promote a long-term solution using intervention methods that are higher in the hierarchy of controls.

In a new NIOSH project, occupational health engineers, along with partners, will study the industrial processes and work practices in detail for each industrial site selected. Raw materials, intermediates, final products, unit operations, process equipment, worker interaction with the processes, plant drawings, and process flow diagrams will be reviewed and evaluated. Literature on chemical substitution, process changes, and engineering controls will be evaluated. Recommendations will be given. Interventions will be implemented. An engineering evaluation will be conducted to measure success including an economic impact.

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The International  
Conference  
on  
Occupational & Environmental  
Exposures of Skin  
to Chemicals:  
Science & Policy

September 8, 2002 - September 11, 2002

This website may be updated occasionally for several months following the conference. For a short time, the website that was constructed before the conference may also be available: [Pre-conference Website](#).

**Disclaimer:** Co-sponsorship of the conference and workshop and posting abstracts on a website by NIOSH does not constitute endorsement of the views expressed or recommendation for the use of any commercial product, commodity or service mentioned. The opinions and conclusions expressed are those of the authors and presenters and not necessarily those of NIOSH. Recommendations are not considered as final statements of NIOSH policy of any agency or individual who was involved. These presentations are intended to be used in advancing knowledge needed to protect workers and the general public.



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The National Institute for Occupational Safety and Health (NIOSH) co-sponsored this inaugural conference to bring together dermatologists, occupational hygienists, laboratory researchers, policy makers and other to focus on the science, knowledge gaps and policy opportunities related occupational and environmental exposures of the skin to chemicals.

The site was the Hilton Crystal City at Ronald Reagan National Airport hotel. The main conference was followed by a one-day workshop focusin on specific research and public health opportunities for decreasing the burden of skin exposures to chemicals in both workplaces and the gener. environment.

Approximately 135 individuals attended. A second conference is expecte in 2004.

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