

Development of International Guidelines for Measuring Dermal Exposure

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4th International Occupational and Environmental

Exposure of Skin to Chemicals

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Outline

- CEN, AIHA, and dermal exposure
- Formation of a new ISO working group
- Overarching goal
- Initial task/resolutions
- Progress
- Opportunities and challenges
- Future plans

CEN

- European Committee for Standardization (CEN)
 - ◆ Technical Committee 137 (TC137), Assessment of Workplace Exposure to Chemical & Biological Agents
 - ◆ Working Group 6 (WG6), Dermal Exposure
 - ◆ Inaugural meeting Oct 2001 (officially in 2003)
- Selected publications:
 - ◆ CEN/TR 15278:2006 Workplace exposure - Strategy for the evaluation of dermal exposure
 - ◆ CEN/TS 15279:2006 Workplace exposure - Measurement of dermal exposure - Principles and methods

AIHA

- American Industrial Hygiene Association (AIHA)
 - ◆ Exposure Assessment Strategies Committee (EASC)
 - ◆ Dermal Project Team (DPT)
 - ◆ Inaugural meeting Oct 2001

- Selected publications:
 - ◆ A Strategy for Assessing & Managing Occupational Exposures, 3rd Ed. (2006)
 - ◆ Mathematical Models for Estimating Occupational Exposure to Chemicals, 2nd Edition, (In Press)
 - ◆ The Occupational Environment: Its Evaluation, Control, and Management, 3rd Edition, (In Preparation)

CEN, AIHA, and ISO

- Informal working relationship
 - ◆ CEN/ TC137/ WG6 and AIHA/ EASC/ DPT
- June 2005: 2nd OEESC in Stockholm
 - ◆ Idea to form a working group within ISO
- Sept 2005: ISO/ TC146/ SC2, Air Quality
 - ◆ Justification for a new WG on dermal exposure

ISO/ TC146/ SC2

- April 2006: ISO/ TC146/ SC2 Resolutions
 - ◆ Proposed formation of New Working Group (WG8)
“Assessment of Contamination of Skin and Surfaces
from Airborne Chemicals”
 - ◆ Proposed Appointment of Working Group Convener
Dr. Greg Day (NIOSH)
- Oct 2006: inaugural meeting ISO/ TC146/ SC2/ WG8

Committee Leadership Roles

- 2005 – present Co-Chair, AIHA/ EASC/ DPT
- 2006 – present Convener, ISO/ TC146/ SC2/ WG8
- 2008 – present Member, AIHA PS&G Committee
Practice Standards & Guidelines
Standards Development Project Team

ISO/ TC146/ SC2/ WG8

- Overarching goal:
 - ◆ To develop harmonized guidance for protecting worker health through recognition, evaluation, and control of skin exposures to hazardous chemicals
- Initial task:
 - ◆ Document review

Document Review

- CEN/ TC137/ WG6 documents to form the framework of an ISO Technical Report (TR)
- ISO/ TC146/ SC2/ WG8 and AIHA/ EASC/ DPT reviewed the following:
 - ◆ TR15278 – Workplace exposure - Strategy for the evaluation of dermal exposure
 - ◆ TS15279 – Workplace exposure - Measurement of dermal exposure - Principles and methods
- Review completed Jan 2007

Develop Framework Document

- 3rd OEESC in Golden, Colorado (June 2007), WG8 delegates agreed to further compile and refine information from initial review
 - ◆ Framework document completed (Sept 2007)
 - ◆ Distributed prior to:
 - CEN/ TC137 meeting (Brussels, Oct 2007)
 - ISO/ TC146/ SC2/ WG8 meeting (Tampa, Nov 2007)

Meeting Resolutions

- CEN/ TC137: “...invites ISO/ TC146/ SC2 to use the deliverables elaborated by CEN/ TC137/ WG6 as a basis for further standardization activities of their WG8”
- ISO/ TC146/ SC2/ WG8: “...agrees on a tentative time schedule and procedure for drafting the ISO TR”
 - ◆ Initial drafting by 1 March, 2008;
 - ◆ Internal working group review by 15 April, 2008;
 - ◆ External review period from 1 May – 30 June, 2008, followed by compilation of comments

Drafting the Technical Report

- Jan-April 2008, initial draft completed with focus on main body of the TR
- May 2008, review by internal ISO/ TC146/ SC2/ WG8; subsequent review by AIHA/ EASC/ DPT
- June 2008, annual meeting of AIHA/ EASC/ DPT
- July 2008, two-day joint ISO/ TC146/ SC2/ WG 8 and AIHA/ EASC/ DPT meeting in Morgantown, WV
- Oct 2008 ISO/ TC146/ SC2 meeting in Berlin

ISO Process

- Following ISO/ TC146/ SC2 meeting (Oct 2008)
 - ◆ Directive to request the SC2 Secretary to initiate a New Work Item Proposal
 - ◆ Make additional revisions
 - ◆ Review technical procedures
 - ◆ Download to ISO template
- First complete TR forwarded May 2009
- Distributed by SC2 Secretary to Member Bodies

Draft ISO TR

- Workplace exposure — Measurement of dermal exposure — Principles and methods
 - ◆ Introduction and scope
 - ◆ Terms and definitions
 - ◆ Assessment of dermal exposure
 - ◆ Principles and methods
 - ◆ Annexes
 - ★ Conceptual model
 - ★ Method-specific
 - Interception, Hand Wash, Wipe, Tape Strip, In Situ*

Opportunities

- Expertise from many disciplines including occupational hygiene, health sciences, chemistry, and toxicology
- Representation from industry trade associations, government and academic research organizations, and consulting
- Several organizations including AIHA, ISO, and CEN
- Harmonized guidance that will make a difference

Challenges

- Participation – a commitment of time and resources
- Other professional responsibilities
- Differences in expectation – scope, goals, objectives
- Differences in personality
- Organizational structure
- Communication

Future Plans

- Serve as leader in national and international committee work
- Maximize diverse opportunities
- Work through diverse challenges
- Move forward with current work
- Keep an eye on overarching goal
- Begin discussions on isocyanate-specific skin sampling methods (joint meeting of WG4 and WG8 planned for SC2 meeting in Oct 2009 – Stockholm)

Summary

- CEN & AIHA – historical independent development of guidance for assessment of dermal exposures
- ISO/ TC146/ SC2/ WG8 – formal mechanism for collaboration
- 2006-2009
 - ◆ CEN documents reviewed
 - ◆ Framework document developed
 - ◆ ISO Technical Report drafted and submitted

The findings and conclusions in this report are those of the author and do not necessarily represent the views of the National Institute for Occupational Safety and Health.