dent of the Optical Storage Technology Association. "End users need reliable media for secure, removable, portable storage of their important documents. Industry wide implementation of this standard will greatly assist them in their purchase decisions."

"Ecma is very pleased to have facilitated this standard development designed to assist the market in clarifying differences in optical media quality," said Istvan Sebestyen, Ecma secretary general. "The TC31 committee was formed in 1983 having its charter as the development of 'Optical Disk and Disk Cartridge' standards and has since been the preferred venue for this activity. Virtually all of the CD and DVD read-only and recordable/rewritable standards have been developed in TC31. Its members are the primary players in optical technology development and therefore it was an ideal place for the development of this media archival life test."

Manufacturers sponsoring and participating in the development of this standard included Fujifilm, Hewlett-Packard, Imation, MAM-A, Panasonic, Philips, Pioneer, Ricoh, Sony, Toshiba, and Verbatim. The committee received strong support from related industry organizations, including Japan's CDs21 Solutions and the Digital Content Association (DCAj). Significant expert technical contributions were made by the editing team that included Drs. Mitsuru Irie (Osaka Sangyo U) and Kunimaro Tanaka (Teikyo Heisei U) under programs sponsored by CDs21 and DCAj, respectively.

Victor McCrary, member of the National Digital Strategy Advisory Board (NDSAB) for the Library of Congress and Business Executive for Science & Technology at the Johns Hopkins University Applied Physics Laboratory states, "This effort is an excellent example of government, industry, and academia working together to address the need for archival standards for optical media. Preservation of 'born digital' media is of the utmost concern for many of the parties involved in the development of this standard. I commend all involved for taking this important step in taking seriously the emerging global issue of digital preservation as its affects end-users at every level."

Since its formation in Sept. 2005, OSTA's Optical Disc Archival Testing (ODAT) Committee has consisted of a multi-national group of industry experts sharing this common goal. The ODAT Committee includes members of global manufacturers and representatives of optical storage products, university and government.

Reprinted in part from a ConsDist List posting, and as a press release from www.ecma-international.org.

New Hazards of Arts and Crafts Materials Webpage

A new webpage that addresses the hazards of arts and crafts materials has been added to the National Library of Medicine (NLM) Enviro-Health Links. Learn more about the hazards and how to protect yourself from unnecessary exposures at http://sis.nlm.nih.gov/enviro/arthazards.html.

NLM also offers other Enviro-Health Links on topics such as: Children's Environmental Health, Indoor Air Pollution, Outdoor Air Pollution, Lead, Arsenic, NLM Enviro-Health Links.

Health & Safety

Spray Paint Study: Major Exposure By Skin Absorption

A study in the *Journal of Occupational and Environmental Medicine* of shipyard spray painters found that dermal exposure was a greater source of total exposure to solvents than inhalation exposure. While vapor inhalation is recognized as a primary occupational exposure and can be prevented by wearing respirators, the route of skin contact is usually ignored, the study said.

For the study, researchers collected personal exposure data from 15 male Taiwanese spray painters during a three day work period in August 2005. Samples were collected from outside and inside the worker's respirator masks for a minimum of six hours per day. Each worker had two samplers clipped to his collar. The participants wore the samplers a minimum of six hours a day. Dermal exposure samplers were taped directly onto workers' skin. Nine samplers–each three centimeters square–were placed on the back, upper arms, forearms, and upper legs. The dermal sampling was limited to two hours. Researchers also collected the workers' urine before and after each work shift.

Air samples showed that the primary occupational exposure was to ethylbenzene and xylene solvents in the paints. Seven of the 40 air samples outside the respirators had ethylbenzene concentrations above 100 parts per million which is the threshold limit value (TLV) set by the American Conference of Governmental Industrial Hygienists. Eleven of the 40 samples implied some level of overexposure to ethylbenzene and xylene, the study said.

The highest dermal exposure concentrations were found on the workers' upper legs. All of the dermal doses of ethylbenzene across the different body regions were higher when workers were spraying inside the assemblies than when they were spraying outside the assemblies. "Significant correlations were found between ambient concentrations of xylene and dermal exposure mass of xylene for all investigated body regions," the study said. Similar results were found for ethylbenzene.

Analyses of the worker's urine revealed a significant relationship between dermal exposure and levels of chemical exposure markers in the workers' urine. The study estimated that the dermal absorption contribution to total exposure dose of xylene and ethylbenzene was approximately 62 percent and 84 percent, respectively. "Our results showed that the contribution of dermal exposure to the total dose was important," the study said.

Comment: Respiratory protection alone is not enough protection if air monitoring shows solvent concentrations from spray painting to be above the TLV for the solvents. When mists or high vapor concentrations are present, chemically protective clothing also should be recommended. This study shows that ordinary shirts and pants are not protective during spray painting.

Source: BNA-OSHR, 37 (17), 4/26/07, p. 369, and www.joem.org/pt/re/joem/abstract.00043764-200704000-00012l.htm

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