

Global Exposure Manager



The newsletter of the International Occupational Hygiene Association

June 2018 | Issue 9

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www.ioha.net



IOHA joins ICOH to halt TB



Andrea Hiddinga, president of IOHA, explains why the association is joining ICOH in fighting one of the deadliest of diseases

IOHA held its first board meeting of the current year on 29-30 April in Dublin. The meeting was held here, just before the International Commission on Occupational Health (ICOH) congress, in order to improve our contacts with our sister organisation, ICOH.

ICOH is an international, non-governmental, professional society, whose aims are to foster the scientific progress, knowledge and development of occupational safety and health (OSH) in all its aspects. It is the world's leading international scientific society in the field of occupational health, with a membership of 2,000 professionals from 93 countries.

IOHA has had a memorandum of understanding with ICOH since 2002, so from that perspective it seemed like a good idea to bring the board to this meeting and to see if contacts and collaboration can be developed and elaborated at a more practical level.

As well as the normal agenda, we discussed items on education and tuberculosis (TB). Perry Gottesfeld and Sophia Kisting of ICOH were present for the latter. The reason for their visit was that the United Nations General Assembly is to hold its first ever meeting on TB in New York on 26 September.

The meeting will be convened under the theme 'United to end tuberculosis: an urgent global response to a global epidemic', with the aims of accelerating efforts to end TB and reaching all

affected people with prevention and care. It should result in an ambitious political statement on TB approved by heads of state, which will form the basis for the future response to TB, involving governments in a coordinated global response. The result should be a significant increase in funding for the fight against TB and millions of lives being saved.

I hear people thinking: why should we get involved? Perry and Sophia informed us that, despite decades of global efforts to end TB, it is still the ninth most important cause of death globally, with 10.4 million new cases occurring in 2016. And there are some other important facts about this disease that show what a huge threat it is to human health and wellbeing (*see box on page 2*).

ICOH has called for a concerted global effort to promote OSH strategies to prevent TB in high-risk occupations, including vulnerable groups like silica dust-exposed workers in mining, construction and other industries, as well as health professionals affected by an increased risk of TB due to occupational exposure to TB bacilli in their working environment and in the communities where they work and live.

The people most exposed are often the most vulnerable, disadvantaged and medically underserved in countries with the highest burden of TB. ICOH therefore encourages governments, businesses and global health funders to invest in control measures to prevent TB among silica-exposed workers and health workers consistent with last November's [Moscow Declaration to End TB](#).

ICOH has drawn up two statements for this purpose. By supporting these two statements, we want to encourage governments, companies and health financiers worldwide to

invest in better control measures to prevent TB from workers exposed to silica and health workers.

The literature shows that workers exposed to silica have a factor of four higher chance of contracting TB. Silica exposure in combination with HIV increases this probability to a factor of 15. For health professionals in countries with a high TB burden, there is reported to be a two to three times higher incidence of active TB compared to the general population. Moreover, the risk of hospital admission for multidrug-resistant TB among the group of health professionals is five times higher than that of non-health workers.

Occupational hygienists worldwide are engaged in mapping exposure to silica in the mining and construction sectors, and working on prevention in hospitals, to subsequently advise on the control measures to reduce exposure to silica and risks of contamination. Although labour conditions vary in different parts of the world, bringing this knowledge together can offer a wide range of intervention options to be applied in various situations.

For this to succeed, we will have to join forces. As Dr Tedros A. Ghebreyesus, the World Health Organisation (WHO) director general said: “We need a dynamic, global, multi-sectoral approach”. That is where the occupational hygienist comes into the picture. If we manage to focus the attention of the UN meeting on workplace-based prevention and implementation of control measures to reduce the risk of these vulnerable groups, we can show them the importance of our expertise in this field.

IOHA has also engaged in other activities related to this subject in the months of May and June. During the 71st World Health Assembly on 21-26 May, ICOH, the International Ergonomics Association (IEA) and IOHA delivered a joint statement focused on three topics, one of which was TB.

On 4 June 2018, at the UN in New York, an interactive civil society hearing was held as part of the preparatory process for the UN high-level meeting on TB in September. IOHA and ICOH were both also present here. This was followed by a lobby day on 6 June, at which IOHA and ICOH sought to arrange



meetings with delegates from important countries and governments, in order to convince them of the importance of workplace-based prevention.

The hearing aimed for the active participation of “appropriate senior-level representatives of member states, observers of the General Assembly, parliamentarians, representatives of local government, relevant United Nations entities, non-governmental organisations in consultative status with the Economic and Social Council, invited civil society organisations, academia, medical associations and the private sector, as well as people affected by tuberculosis and broader communities, ensuring the participation and voices of women, girls and indigenous leadership as part of the preparatory process for the high-level meeting”.

If you are interested in TB, ICOH's [statement](#) on it can be downloaded from its website. Here you can also see the list of organisations that support the statement.

In closing, I would like to know who are the experts worldwide on the subject of exposure to silica in mining and construction and who are the experts in the field of protection of health workers. If you are interested in this topic and you work as an occupational or industrial hygienist every day in hospitals, in mines or in construction please let us know, so that if there is a need for action in the coming period we are able to reach out to you.

TB - the silent assassin

In 2016, 10.4 million people were taken ill with TB and 1.7 million died from it, including 400,000 who were already suffering with HIV. These figures included about 1 million children, of whom some 250,000 died. TB is also the largest single killer among HIV-infected people.

Over 95% of TB deaths occur in low- and middle-income countries. Seven of these countries account for 64% of the total, with India leading the count ahead of Indonesia, China, the Philippines, Pakistan, Nigeria and South Africa.

Multidrug-resistant TB (MDR-TB) remains a public health crisis and a health security threat. The WHO estimates that there were 600,000 new cases in 2016 with resistance to rifampicin, the most effective first-line drug against TB. Of these, 490,000 had MDR-TB.

An estimated 53 million lives were saved by TB diagnosis and treatment between 2000 and 2016 and the incidence of TB is falling worldwide by 2%/year, but this needs to accelerate to 4-5%/year to reach the 2020 milestones of the End TB strategy. Ending the TB epidemic by 2030 is among the health targets of the UN's Sustainable Development Goals.

WWW.IOHA2018.ORG

★ IOHA 2018 ★

The 11th International Occupational Hygiene Association (IOHA) International Scientific Conference

September 24-26, 2018 | Washington, DC, USA | #IOHA2018USA

What is IOHA 2018 and Why should you attend?

The 11th IOHA International Scientific Conference (IOHA 2018) is a special event, whose mission is to create a global appeal to an international audience of multi-disciplined professionals with a focus on worker health protection and exposure control. The conference will provide a unique integrated platform of workplace health and well-being in a professional and scientific arena ideal for hearing the latest science and viewpoints, as well as networking and professional development opportunities.

ANNOUNCING

Keynote Speaker

Nancy Leppink - Branch Chief
International Labour Organization,
(LABADMIN/OSH)
Genève, Switzerland



Ms. Leppink will present worker health issues in a global economy dominated by large multinational corporations with access to labor in lesser developed countries, the impacts of such dependencies on worker well-being and rights, and the occupational health infrastructure needs in developing countries to address these new challenges.

Where will IOHA 2018 be located?

The IOHA conference will be held in Washington, DC, USA at the Marriott Marquis Hotel, 901 Massachusetts Avenue, NW.

Important Dates

- Professional Development Course (PDC) Presentations - September 22-23 & 27, 2018
- Conference - September 24-26, 2018



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For more information, visit www.ioha2018.org.

Osha to harmonise HazCom standard with GHS

As part of the US Department of Labour's spring 2018 regulatory agenda, the Occupational Safety and Health Administration (Osha) is in the process of conducting rulemaking to harmonise its hazard communication standard with the latest edition of the Globally Harmonised System (GHS) of Classification and Labeling of Chemicals.

This is due to be published in February 2019 and will also codify a number of enforcement policies that have been issued since 2012. Osha has updated its standard several times since first aligning it with the GHS in 2012. The new regulatory agenda also indicates that the agency's rulemaking on occupational exposure to beryllium remains in the proposed rule stage.

In addition, Osha is preparing to consider whether revisions to Table 1 of its construction standard for occupational exposure to crystalline silica may be appropriate. In November, it intends to publish a request for information on the effectiveness of certain types of control measures. Finally, it will explore possible areas of its lead standards for revision to improve worker protection where preventable exposure to lead occurs.

For more information:

www.osha.gov

Healthy Workplaces campaign launched

The Healthy Workplaces Manage Dangerous Substances campaign was officially launched in Brussels on 24 April. This aims to raise awareness of the need to eliminate exposure to substances that pose risks to the safety and health of Europe's workers, or to manage them where elimination is not possible.

Campaign materials are available in several languages and EU Occupational Health and Safety Administration (EU-Osha) has collected tools, guidance and good practice examples from across Europe. All of these can be found on the campaign website, alongside details on EU-Osha's focal points, official campaign partners and media partners.

Among other resources for the campaign, EU-Osha is highlighting its interactive e-tool on dangerous substances and chemical products. This aims to provide enterprises, particularly SMEs and companies without specific knowledge of dangerous substances, with information and advice on how to assess and manage the related safety and health hazards.

In addition, an animated video has been produced to illustrate the common presence of dangerous substances in many workplaces and sectors across Europe, such as agriculture, manufacturing and

construction. This highlights the importance of establishing a culture of risk prevention at the workplace, starting with promoting risk assessment to manage dangerous substances effectively.

For more information:

www.healthyworkplaces.eu

Safe-in-Sound award extended

In the US, the Council for Accreditation in Occupational Hearing Conservation (CAOHC) has joined the National Institute for Occupational Safety and Health (Niosh) and the National Hearing Conservation Association (NHCA) in organising the Safe-in-Sound Excellence in Hearing Loss Prevention Award.

The award dates back to 2008 and honours contributions to the prevention of noise-induced hearing loss and tinnitus through effective practices or innovations directed to people exposed to noise at work. For this year, the deadline for nominations is 13 July. Representatives of the winners will be invited to the NHCA annual conference in Dallas on 8 February 2019 to present their stories.

Many of the interventions described by previous winners of Safe-in-Sound have removed the need for hearing conservation programmes or led to reductions in the number of workers enrolled in them. In addition, it has facilitated the extension of successful hearing loss prevention activities and strategies to workers not traditionally considered in typical workplace hearing loss prevention programmes, such as musicians, military personnel and construction workers.

For more information:

www.cdc.gov/niosh

PSS releases new publication

The Product Stewardship Society (PSS) has just released *Professional Practices of Product Stewardship*. This, the PSS says, provides deep insight into the core areas of product stewardship, including the fundamentals of the concept, product risk and life cycle management, management of product compliance and liability, and product stewardship strategy and programme management.

Product stewardship is an evolving and expanding area of concern and opportunity for companies and society. There is an ever-increasing number of individuals with the term in their title and responsibilities within the organisations they support. However, there is a lack of a concise reference of professional practices for this highly important responsibility in maintaining an organisation's 'licence to operate' with the public, the PSS noted.

For more information:

www.online.productstewards.org

News

BOHS names new president

Neil Grace has taken over as president of the British Occupational Health Society (BOHS) for 2018-9 during its annual conference, OH2018, at Stratford-upon-Avon in April. He succeeds Karen Bufton. Mr Grace, an occupational hygienist for some 20 years, has successively served as a council member, then honorary treasurer and president-elect since April 2017.

He said that his core aim will be the continued focus on raising awareness of occupational hygiene. "Additionally, I am very keen to support improvements in continuing professional development for members ... and I am specifically championing the take-up of science, technology, engineering and maths (STEM) promotion in schools and colleges – not only by occupational hygienists but by the entire health and safety profession."

The BOHS has also named Steve Hails as its latest honorary fellow. Mr Hails is director of health, safety and wellbeing at Tideway, the organisation responsible for delivering the Thames tideway tunnel, and a 20-year veteran of the engineering and construction sectors. He has been a prominent supporter of the organisation's Breathe Freely in Construction campaign.

For more information:

www.bohs.org

New AIHA webinar

Many organisations are turning to contractors to help with everyday labour and special projects. However, managing these contracts and contractors has unique challenges, according to the American Industrial Hygiene Association (AIHA).

For these reasons, the association hosted a webinar entitled *Evaluating effectiveness of a contractor management programme: a case study* on 21 June. This explored how a large oil and gas company has revamped its management system to more effectively track contractor safety and cumulative exposures.

For more information:

www.aiha.org

Niosh looks at baggage handling

Niosh and researchers at Ohio State University have published an article in *Applied Ergonomics* on the effectiveness of a vacuum lifting system in reducing spinal strain or loading during airline baggage handling.

They found that, on average, the use of this device reduced compression and shear forces on the lower back by 39% and 25% respectively, below the damage threshold for musculoskeletal injury. It also results in better posture for lifting by keeping the back straighter.

The overall annual incidence rate of work-related injuries resulting in days away from work, job transfer or restricted work for the airport passenger transportation industry was 5.1% in 2015, over three times the rate for private industry as a whole, and the third highest in all job classifications used by the Bureau of Labor Statistics (BLS). Baggage handlers routinely have to deal with bags weighing up to 70 kg.

For more information:

www.cdc.gov/niosh

Two in one from ACGIH

The American Conference of Governmental Industrial Hygienists (ACGIH) is offering two of its most popular reference resources in one product.

The 2018 TLVs and BEIs with 7th Edition Documentation CD-Rom offers access to everything contained in the book of the same name, plus a link between each chemical and/or determinant with a searchable PDF file of its corresponding documentation from the *Documentation of the Threshold Limit Values and Biological Exposure Indices*.

In addition, the ACGIH will present its *Occupational Aspects of New Lighting Technologies* webinar on 11 July. This follows its publication of its Notice of Intended Changes, a statement on the occupational health aspects of new lighting technologies. This statement describes the circadian, neuroendocrine and neurobehavioral effects of light, with particular reference to new forms of lighting like compact fluorescent lamps and solid-state, light-emitting-diode lamps.

For more information:

www.acgih.org



IOHA moves further forward at board meeting



The latest IOHA board meeting in Dublin reviewed progress with its strategic goals for the years to 2020 and its collaboration with ICOH

IOHA held its board meeting over two days in Dublin on 29-30 April. Present were association president Andrea Hiddinga, representatives of 13 national associations and executive secretary Roz Phillips from the British Occupational Hygiene Society (BOHS). In addition, 13 others were in attendance.

The meeting began with an overview of the Occupational Hygiene Society of Ireland (OHSI) by its president, Dr Eoin Collins. The OHSI, he said, is a small organisation whose main challenges lie in membership engagement and communication, retention of members and its reliance on volunteers.

Members from other small associations provided insights into how they recruited and engaged members. Suggestions included:

- making it mandatory for students to become members of the association, as well as to attend the association conference and present their theses at a separate conference;
- collaboration with larger allied organisations, such as those in the field of safety, who might be able to provide administrative support and increase exposure;

- holding a technical conference every year to attract different disciplines, in addition to the biennial joint conference with BOHS;
- promoting the BOHS certification system to the Health and Safety Executive in Ireland;
- regulating the system so that most students are required to become certified;
- using employment statistics as a promotional tool; and
- producing a newsletter or using *Global Exposure Manager* (GEM) as a means of connecting with members instead.

The rest of the meeting was occupied with evaluating IOHA's progress in its strategic goals for the years 2016-20. These are to:

- promote occupational hygiene (OH);
- improve OH capabilities and practice; and
- achieve effective networking and knowledge management

Promote OH

On behalf of IOHA, Ms Hiddinga has been in discussions with Dr Jukka Takala, president of the International Commission on Occupational Health (ICOH), about making the three-way memorandum of understanding (MoU) between IOHA, ICOH and the International Ergonomics Association (IEA) work more

effectively. A similar MoU with Workplace Health Without Borders (WHWB) is planned to be signed at the IOHA 2018 conference in Washington DC in September.

In addition, good progress has been made with the World Health Organisation (WHO) and the International Labour Organisation (ILO). Dr Dave Zalk attended the 11th Global Network Meeting of the WHO Collaborating Centres for Occupational Health on 28 April, while Dr Thomas Fuller had attended the meeting of experts to adopt a code of practice on safety and health in shipbuilding and ship repair in Geneva.

The board agreed that IOHA should be more proactive in identifying and attending relevant meetings from ILO's schedule in order to engage more with the ILO. Further ties could be established through such means as research support, training support, articles in ILO's new newsletter and links between the two organisations' websites. The board sees it as critical that ILO recognise OH as an official profession in order to secure more government recognition of it.

IOHA is supporting ICOH in its call for strong global effort to promote occupational safety and health (OSH) strategies to prevent tuberculosis in high-risk worker populations (*see also pages 1-2*). The board unanimously supported ICOH's two statements on the subject. It will also seek support from the International Society for Respiratory Protection (ISRP).

Improve OH capabilities and practice

An application to join IOHA from the American Board of Industrial Hygiene (ABIH), which is a member of the National Accreditation Recognition (NAR) Committee, has raised uncertainties about multiple associations from the same country belonging to IOHA and other issues about the relationship between the board and the committee. The Governance Committee will take this forward.

There was also broad agreement about reciprocity between the NAR scheme and the certified occupational hygienist (COH) programme of the Australian Institute of Occupational Hygienists (AIOH). Representatives from South Africa, Australia and Belgium were appointed to draft a standard operating procedure for ratification in Washington in September.

An overview was given of the European Network Education and Training in Occupational Safety and Health (Enetosh). There was general support for collaboration with Enetosh, not least because of the need to attract younger people into the profession and the benefits of being able to reach out through schools. The Education and Training Committee will bring suggestions to the next board meeting.

Next, the activities of the Scientific Committee on Education and Training in Occupational Health to raise the level of knowledge and skills on all aspects of OSH were presented. The Training Committee will investigate how OH learning can link with an e-library that has become available through collaboration with an organisation offering e-learning programmes.

Effective networking and knowledge management

Plans for the IOHA conference are progressing well. The Scientific Committee has accepted 134 of 188 submissions for the education programme, plus 24 student posters from seven different countries. The event will also have a stand promoting IOHA 2020 and a call for proposals for IOHA 2023 will be circulated shortly.

The board welcomed IOHA's newest member association, the Central Industrial Hygiene Association (CIHA) from India, and there was a report on progress with establishing a new association in Turkey (*see pages 13-14*). The Southern African Institute for Occupational Hygiene (SAIOH) is encouraging the establishment of new organisations in other African countries and for them to join IOHA.

A call for proposals about a new website had been issued in April but the response had been poor due to the short timescale. Following extensive discussion, a consensus was agreed to go ahead with a second call for web proposals but to keep the request realistic and simple.



IOHA plans multiple collaborations with other industry associations

The call will be sent to member association representatives, asking them to pass the website specification to web developers who should respond directly back to IOHA. The top three proposals were to be chosen by mid-June and decision to be made by the end of the month.

Further discussion took place about GEM and possible collaboration with ISRP in its content. A media pack will be produced for circulation to suitable companies and all board members were asked to consider suitable contacts who may wish to advertise.

The next board meeting will take place at IOHA 2018 on 23 September. The next NAR Committee meeting and the AGM will also take place during the conference.

Dermal exposure: a need for quantitative analysis



Professor Jeroen Vanoirbeek of the Centre for Environment and Health at the University of Leuven's Department of Public Health and Primary Care, shares some results from a new technique to measure dermal exposure*

This article has been submitted in part because the IOHA board supports innovative research in the occupational hygiene (OH) domain. The board also discussed, at its recent meeting in Dublin, including more scientific articles in *Global Exposure Manager*.

For many years, airborne exposure has been viewed as the main type of work-related exposure and efforts have been made both on air monitoring and on reducing respiratory exposure. Nevertheless, recent studies have shown that preventive strategies with an exclusive focus on airborne exposures may falsely indicate a 'safe' environment.

Skin exposure to chemicals can lead to local (irritant) responses and/or systemic effects after crossing the skin barrier. Due to the increased use of, and applications for, chemicals in our modern world, there is an emerging risk of developing diseases related to skin exposure that can have a critical impact on the health and economy for both working people and the general population.

Recently, the World Health Organisation (WHO) highlighted the importance of dermal exposure and its potential impact on

human health. Moreover, it stipulated that the current technical and knowledge gaps related to the assessment of skin exposure have major lacunae.

The WHO [stated](#) in 2014, in its paper *Environmental health criteria 242 - dermal exposure*: "Currently, study designs used to estimate dermal exposure are mainly oriented to practical issues. There is no method applicable for all circumstances, nor can a guide be provided to aid in the selection of a proper method for specific circumstances.

"To overcome the current gaps in knowledge, comparative studies are needed. These should help to compare the usefulness of the methods, to derive harmonised protocols and, finally, to improve our understanding of the underlying processes and determinants of dermal exposure."

Thus, there is an increased demand for standardised methods and tools for measuring and assessing skin exposure to hazardous agents. Different methods have been developed to assess skin exposure, generally as a function of the physical-chemical properties of the targeted compounds. They are classified into three distinct groups, according to the latest [ISO guidelines](#):

- removal techniques, using wipes or tape strip to assess exposure loading over the duration of exposure;
- *in situ* techniques, using fluorescent or other light-active substrates to measure exposure loading over the duration of exposure; and

- interception (formerly known as surrogate skin) techniques, using mainly patches or sometimes clothing, provide a measure of the exposure over a specific exposure duration. This is the most accurate reflection of the actual exposure.

Even if these guidelines are a step forward, several aspects have not been clearly elucidated, like which sampling material should be used for different classes of chemicals. Moreover, the latest technical specifications are limited to some pesticides, beryllium and carbon nanotubes.

Scientific reports have tried to answer to these limitations but the developed analytical methods are limited to specific compounds, such as [benzene](#) and [toluene](#) in two recent examples. In other cases, dermal monitoring methods have been reported, for example on [aliphatic diisocyanates](#), focusing on the removal technique using wipes, to assess the exposure loading at one particular point in time.

The Laboratory of Occupational and Environmental Hygiene at KU Leuven's Centre for Environment and Health in Belgium, has developed and validated analytical methods to identify and quantify 187 volatile organic compounds (VOCs) simultaneously. These include aromatic and halogenated hydrocarbons, esters, ketones, alcohols and glycol ethers.

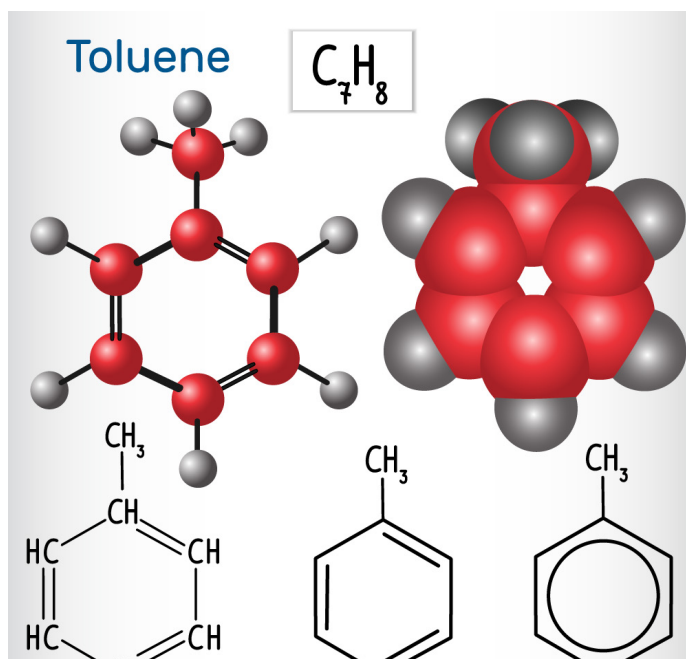
Based on our method of assessing multiple VOCs on activated charcoal from tubes, we developed a novel method using dermal patches with activated charcoal cloth (ACC) on top as a suitable interception method. This method comprises optimisation of the extraction and preparation methods, optimisation of the sampling conditioning and storage, and validation of a newly developed quantitative analytical method.¹

We believe that assessing dermal exposure to VOCs using ACC patches can substantially improve occupational health programmes for specific or selected VOC exposure. However, some limitations need to be addressed.

Our method only aims at estimating the amounts of VOCs coming into contact with the skin. Moreover, as indicated by ourselves and Professor John Cherrie in a letter to *Annals of Work Exposures and Health*, saturation of ACC needs to be taken into account when ACC is used to assess skin exposure to VOCs in extreme exposure scenarios, such as spraying, pouring or immersion in a solution.²

In fact, the ACC cannot be used without personal protective equipment (PPE) for extreme exposure conditions, such as pouring or immersing in high volume of solvents.

Likewise, ACC patches cannot distinguish between vapours and liquid exposure. However, this limitation can be overcome by placing patches on different body parts that would be more susceptible to being exposed to vapours, like the neck, or to liquid, such as the hands.



Several field studies in different industrial settings have been finalised recently and the results will be published soon. In these studies, we have simultaneously assessed dermal exposure using ACC patches on the hand, arm and neck, together with assessment of respiratory exposure and the actual internal dose via urinary biomonitoring.

This has been done for different compounds in several industries, such as: toluene, acetone and styrene in a thermoplastic panel factory; styrene in a composites body parts manufacturer; limonene and 1-methoxy-2-propanol in a company that produces and prints plastic cartridges; and acetone and toluene in a pharmaceutical company.

At the suggestion of Professor Cherrie, the results obtained from the quantitative ACC patches have been compared to the data obtained using Riskofderm for skin exposure. Penetration through the skin was estimated using the IH SkinPerm model and correlated with biomonitoring results.

Conclusion

Based on the analytical development and the results of the different field studies, we can conclude that ACC patches represent a suitable technique to evaluate the deposition of VOCs on the skin, even if some limitations need to be taken into account.

Notes:

1. M. Creta *et al.*, *Ann Work Expo Health*. 2017;1; 61(8):975-985.
2. J.W. Cherrie, *Ann Work Expo Health*, 2018;13:62(2):253-254; J.A. Vanoirbeek *et al.*, *Ann Work Expo Health*, 2018;62(2):255-256)

* Also contributing to this article were Michel Vangel, senior principal - industrial hygiene and process safety management at Janssen Pharmaceutical; and, Matteo Creta, doctoral student, Dr Katrien Poels, Professor Lode Godderis and Dr Radu Corneliu Duca, all of KU Leuven

Upcoming meetings

VII Pan-American Congress of Occupational Hygiene and II Argentine Congress of Occupational Hygiene

5-7 September, Buenos Aires, Argentina

This joint congress event will take place simultaneously and is organised by the Association of Hygienists of the Argentine Republic (AHRA). The themes include the implementation of data quality in occupational hygiene, professional sustainability and advances in interdisciplinary research work.

www.ahra.com.ar

5th International Scientific Conference On Occupational and Environmental Health

10-12 September, Hanoi, Vietnam

Hosted by the Vietnam National Institute of Occupational and Environmental Health (NIOEH), this conference offers an opportunity for scientists to exchange information and experiences at a global platform on a variety of environmental and occupational health topics, such as occupational health and safety, environmental health, school hygiene and health and policy. All oral sessions will have simultaneous translation between English and Vietnamese.

www.nioeh.org.vn

11th IOHA International Scientific Conference

24-26 September, Washington, DC, USA



The 11th IOHA International Scientific Conference (IOHA 2018) is a special event, whose mission is to create a global appeal to an international audience of multi-disciplined professionals with a focus on worker health protection and exposure control. The conference provides a unique platform of workplace health and well-being in a professional and scientific arena, ideal for hearing the latest science and viewpoints, as well as networking and professional development opportunities. Delegates can still register early and save. Advance rate registration closes on 22 July. Attendees can save \$100 on standard registration or take advantage of the 'stay and save' discount to save even more money

www.ioha2018.org

X2018 – 9th International Conference on the Science of Exposure Assessment

24-26 September, Manchester, UK

Hosted by the British Occupational Hygiene Society (BOHS), X2018 provides a platform for international experts to exchange knowledge in exposure assessment sciences for human health studies. The event contributes to the development of state-of-the-art methodologies and practices, thereby improving knowledge to effectively assess and control exposure to hazardous agents in the work environment, at home and elsewhere in the general environment.

www.x2018.org

ECCIII-Exposure Control and Containment

17-18 October, Dublin, Ireland

BOHS and the Occupational Hygiene Society of Ireland are collaborating to organise a third two-day conference on exposure control and containment. ECCIII centres on the specification, design, installation, testing, maintenance and operation of engineering control measures to minimise health risks in the workplace. It is aimed at people involved in these aspects of exposure control in multiple industry sectors, small and large.

www.bohs.org/conferences-events

MIHA International Conference & Exhibition

23-25 October, Kuala Lumpur, Malaysia

Hosted by the Malaysian Industrial Hygiene Association (MIHA), the theme of this biennial event is 'Mainstreaming industrial hygiene', which reflects the need to elevate and sustain industrial hygiene awareness and practices at the workplace amidst current economic and business challenges. Registration is now open. Early bird delegates until 15 July 2018. Become an early bird to enjoy discounted prices.

www.mihaice.miha2u.org

Visit our website for an up to date list of events:

www.ioha.net/ioha-events

Global Exposure Manager has been compiled for IOHA by the on-line information service, Chemical Risk Manager.

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MIHA holds AGM and knowledge café

The Malaysian Industrial Hygiene Association has continued to educate members on regulatory and other matters

The Malaysian Industrial Hygiene Association (MIHA) organised an industrial hygiene (IH) 'knowledge café' on 14 March at the G-Tower Hotel in Kuala Lumpur. Two speakers from the Department of Occupational Safety and Health (DOSH), were invited to share an overview of the latest DOSH guidelines that are essential for IH practitioners in the country, to ensure that effective health risk assessments carried out at workplaces align with regulatory requirements and expectations.



Representatives from DOSH shared papers during the IH knowledge café

The first speaker, Fauziah Kamaruddin from DOSH's IH and ergonomics division, shared the latest guidelines on ergonomics risk assessment (ERA) in the workplace. The purpose of the guidelines is to provide a systematic plan and an objective approach in identifying, assessing and controlling ergonomic risk factors associated with activities in the workplace.

With the rise of musculoskeletal disorders cases reported in Malaysia, she highlighted the fact that the guidelines are expected to help the industry resolve issues arising from the workplace.



Speakers and participants at MIHA's IH knowledge café

Doing this could reduce cases of occupational diseases, as well as increase workers' productivity.

The second speaker, Mohd Hafizullah Harun from the DOSH chemical management division, shared the latest edition of the agency's chemical health risk assessment (CHRA) manual, in which representatives from MIHA participated and contributed significantly to its development. The scope of the manual covers a full assessment of risk where chemicals hazardous to health are used in the workplace.

The aim in conducting CHRA is to enable decisions to be made on appropriate controls that may be required to protect the health of workers who might be exposed to chemicals hazardous to health at work. Mr Harun highlighted that the requirement to revise the CHRA manual was mainly driven by the changes of classification system of hazardous chemicals with the implementation of Classification, Labelling and Safety Datasheet (CLASS) Regulations of 2013 aligned to the Globally Harmonised System (GHS), as well as feedback and input received from industry and competent individuals.

With the release of the new DOSH ERA guidelines and latest edition of the CHRA manual, MIHA is expected to play important roles in providing avenues for IH practitioners in the country to upskill their knowledge and align practices in carrying out assessment of health-related risk.

After the knowledge café, MIHA's 16th annual general meeting (AGM) took place on the same day. Discussions there included past activities during the year 2017-18 and the association's current financial status. Tokens of appreciation were given to the past committee members for their relentless effort to steer MIHA for the past year. The new committee members have been elected and will continue to serve and bring MIHA to a greater height for the next term.



New committee members for 2018-19 elected during the 16th MIHA AGM

The future of industrial and occupational hygiene



Dr David M. Zalk, CIH, asks what the long-term outlook is for a profession at the crossroads

There is no single accurate view on the current state of the industrial hygiene (IH) and occupational hygiene (OH) profession internationally. If you are a practising industrial or occupational hygienist and looking for work, certainly in the US and most developed countries, the outlook is excellent. Well-paid opportunities abound and you can select by location, sector and a range of expertise to fit your next step in the profession.

In fact, a practising industrial or occupational hygienist can find numerous opportunities working in - or in support of - economically transitioning and even economically developing countries if you are OK working with certain multinational companies and your requirements for salary and location are a bit more flexible.

Looking at the profession in the global context, the future is more problematic. In fact, it begins with the realisation that there were two names used to identify this profession above. Not having a single title for the profession complicates things on many levels.

For starters, the International Standard Classification of Occupations 2008 (ISCO-08) draft structure compiled by the International Labour Organisation (ILO) for the United Nations [identifies](#) this split. ISCO-08 Unit Group 2263 has the title 'Environmental and occupational health and hygiene professionals' with the World Health Organisation (WHO) proposing this in its [final draft](#) as a group that needs to be split as it includes:

- occupational hygienist;
- health and safety professional; and
- environment health professional.

If the profession does not have a single, defined title, it is very difficult to include it within national regulations. There is a good reason why the vast majority of national occupational health and safety regulation-implemented programmes include the roles of occupational physicians and industrial safety engineers, but not industrial or occupational hygienist.

If our profession is not mentioned in national regulations, it is extremely difficult to build national support and funding for the training, development and practice of IH and OH in the countries in the parts of the world where the workers are desperately in need of our expertise.

Around the world there are 2.8 billion workers. Due to occupational risk, there are 2.3 million deaths, 270 million non-fatal injuries, and 160 million work-related diseases for the global workforce [each year](#). These [cost](#) more than 5% of global GDP.

It was estimated in 2003 at the 13th Session of the Joint ILO/WHO Committee on Occupational Health in Geneva that, at best, 10–15% of these workers have access to a basic standard of services from occupational safety, health, and hygiene (OSHH) professionals and their ability to address and reduce occupational risks.

The multidisciplinary risks that workers face, as well as the adverse outcomes that often result, are well understood in the OSHH

scientific literature. What is desperately needed is a strategy for delivering solutions to the approximately 2.5 billion workers facing unnecessary occupational risks on a daily basis.

The IH and OH profession is an outstanding resource to assist in addressing this extensive gap. One developed strategy, known as control banding, has been extremely successful in developing and communicating this necessary and simplified approach for reducing work-related risks.

The objective of control banding is to develop a qualitative risk assessment that stratifies a given workplace hazard across - usually - four levels or 'bands' of risk that are placed in a risk matrix, using four risk levels of severity on one axis and the probability of outcome on the other axis, with the outcome (intersecting point from the two axes) leading directly to control solutions. This means that there is an opportunity to deliver preventative methods to reduce occupational risks for workers lacking access to OSHH experts.

Success with control banding and its solutions-based focus has also presented a quandary in the world of the IH and OH sciences, where quantification is historically king. Control banding uses a less rigid, qualitative approach, since even some of the long considered state-of-the-art, literature-based scientific findings OSHH professionals rely on change regularly.

In this respect, the EU is learning cutting-edge control banding lessons from India, while the US is being educated by developments in Chile. Control banding's simplification in reducing work-related exposures, and changing the science of quantitative risk assessment to the art and science of qualitative risk assessment, is redefining occupational risk management in a manner that can be extremely useful for workers in economically developing countries.

The WHO and the ILO played essential roles in the historical development, communication, dissemination, and implementation of control banding strategies and techniques around the world. However, the very basis of how they played this role began diminishing over a decade ago and now is at risk of disappearing.

My work internationally began over 20 years ago and my good fortune to be associated with the IOHA started in 1999. At my very first IOHA board meeting I learned of the importance of the WHO and the ILO to our profession as their official NGO status was just being finalised.

Both had IH and OH staff as part of their occupational health departments and these individuals quickly became essential partners in extending the reach of our profession. This was an important cog in the machine of growth that the IH and OH profession so desperately needed to reach the 2.5 billion workers, who would otherwise never see anyone like us to reduce their work-related risks.

Not five years later, due in part to mandatory retirement requirements, there were no longer IH and OH individuals

working at the WHO or the ILO. There was certainly continuity of effort and expertise, however, primarily through the global network of WHO Collaborating Centres for Occupational Health (WHOCC). Working since 2000 as an NGO through the WHOCC, the IOHA actively participated in many IH- and OH-related activities and product development.

The utility and practicality of control banding was quickly understood, communicated, promoted and adapted through the WHOCC over the following years to initiate the processes that has made it the internationally available tool to assist in protecting workers that it is today. Control banding has even played a significant role in the development and initial growth of the IH and OH profession and its related expertise in economically developing countries.

Over the last decade, however, IH- and OH-related efforts in partnership with the ILO have dissipated and the same situation is beginning to emerge with the WHO as well. Even though IH and OH staff have long disappeared, there were individuals in both organisations who understood the essential skill sets of this profession and worked closely with IOHA and, the true powerhouse of the occupational health professions, the International Commission on Occupational Health (ICOH).

These individuals are now also retiring without being replaced, or moving to other positions, as occupational-related departments continue to get smaller. Professionals dedicated to the protection of workers and the reduction of work-related risk on the global scale are now at a crossroads.

Joint activities with the ILO remain out of reach and the [provisional agenda](#) of the 71st World Health Assembly on 21-26 May did not include the word 'occupational' and had very little to no potential content addressing issues relevant to the OSHH professions.

My biases are important to help frame this discussion in a proper light. I am a certified industrial hygienist and am currently an environment, health, and safety manager at a national laboratory. However, I remain an active IH and OH field practitioner who also performs research. My very poor business plan is known to many; anything that I develop, or expertise that I can offer to assist others to reduce work-related risk globally, is made available at no cost to others.

Although there is also a hefty dose of realism in my *weltanschauung*, I am first and foremost an optimist. There is no doubt that the IH and OH profession is at a crossroads and may very well be in a detrimental position for the longer term, internationally as well as wherever in the world you might be reading this.

However, there are numerous plans in place that include efforts and activities performed by many intensely dedicated individuals and organisations that are working to overcome these growing obstacles. We do it not only for the growth and sustainability of the profession, but for the 2.5 billion workers who will never meet anyone like us.

Development of occupational hygiene in Turkey

Professor Yücel Demiral of the Department of Public Health & Occupational Medicine at Dokuz Eylul University in Izmir details how the profession has been developed in Turkey and a new association established

The development of occupational hygiene (OH) is vitally important for the implementation of holistic occupational health services and the establishment of infrastructure for the prevention of diseases and accidents.

There is substantial knowledge and expertise in the field of OH in the most developed countries, but it deserves more attention than it now receives in many developing countries, including Turkey. Many challenges in developing policies and programmes in developing countries exist, notably:

- the scarcity of sound and comprehensive education and training opportunities;
- low government support and interest in OH;
- the lack of a professional approach among OH service providers;
- a low level of awareness among other occupational health professionals - that is, safety experts, occupational physicians, labour inspectors and others; and
- the lack of capacity and human resources in the universities and other higher education institutions.

Therefore, it is wise to establish a step-by-step plan to overcome these challenges and to achieve better OH services. We would like to share some of the achievements in OH development in Turkey during the last few years.

In 2010, an EU-funded project, entitled 'Osh-Eastnet', was launched by the Italian Industrial Hygiene Association (AIDII) in Turkey, Serbia, Macedonia, Albania and Bosnia-Herzegovina, to assess the status of OH in these countries. It showed that OH is not established as a professional position at local or national level in them, especially Turkey, Macedonia and Albania.

The report on Turkey noted that occupational safety experts were expected to provide OH services. However, they have no standard

training programme on OH, even though enforcement of laws has required them to serve as occupational hygienists in practice.

Knowledge is a prerequisite to competent practice in the field of OH. This can be gained through a formal education approach and life-long learning courses or practical experience at work. According to the IOHA, a combination of both approaches is necessary to assure a minimal level of competent professional practice for OH services.

In this respect, it has been thought that there is a need for an OH education and training programme to raise awareness and build the capacity to fulfill the required competencies of OH services in Turkey. Since the project was completed, training courses on OH have been established under the name 'Oshnet School' and with the participation of AIDII and Dokuz Eylul University's Occupational Health Centre.

The Oshnet School has been providing courses on OH since 2011. The aims are to raise standards in the field of OH, capacity building, the development of a network in OH and raising awareness among occupational health professionals.

One of the important features of the Oshnet School was to harmonise existing national capacity, especially in the government agencies and international (especially European-level) support.



The training framework of the courses covers the complete scheme of OH skills, as defined at international level like the [OH learning scheme](#). The school organises short courses, for instance on specific risks like noise or chemical risks, and fundamental courses which cover most of the essential aspects of OH (Table 1).

Table 1 - Oshnet School course scheme

Course 1 – Physical agents and risks (16 hours each)
Module 1.1 - Noise risk
Module 1.2 - Non-ionising radiation risk
Module 1.3 - Radiation risks
Module 1.4 - Thermal environment
Module 1.5 - Vibration risk
Course 2 – Chemical agents and risks (16 hours each)
Module 2.1 - Chemical risks
Module 2.2 - Dust risks
Module 2.3 - Biological risks
Module 2.4 - Microclimate
Module 2.5 - Occupational toxicology
Course 3 – Ergonomics and manual handling (16 hours each)
Module 3.1 - Ergonomics
Module 3.2 - Manual handling loads
Course 4 – Psychosocial risks
Module 4.1 - Job stress (16 hours)
Module 4.2 - Mobbing (8 hours)
Course 5 – General courses
5.1 - Fundamentals of occupational hygiene (40 hours)
5.2 - Fundamentals of occupational and environmental assessment (60 hours)

The Institute of Certification of Professional Figures (ICFP), as an accredited body for international certification of industrial hygienists in Italy, is the partner of the Oshnet School, certifying the professionals who participate in Oshnet School courses. The requirements needed to be certified are 120 educational credits, obtained from Oshnet School courses, in addition to proven experience in the field, according to an agreement between the ICFP and the Oshnet School.

The ICFP has also selected a number of Turkish examiners to be members of sessions of certification exams, which will be

held in Turkey. Around two regular sessions of courses have been organised every year in spring and autumn since 2011 in Turkey and some 300 professionals from different professional backgrounds have participated in them.

In addition to courses, workshops and symposiums have been organised to raise awareness and share knowledge and expertise to contribute to the development of OH in Turkey. Three workshops were organised between 2014 and 2018. The Turkish Ministries of Labour and Social Security and of Health, as well as other national and international institutions, including IOHA, AIDII and the Dutch Occupational Hygiene Association (NVvA) have participated in these, in order to develop policies on OH in Turkey.

In 2016 Oshnet School collaboration was expanded with the involvement of NVvA, who supported a 12-month project entitled 'Development and capacity building in OH in Turkey and Balkan countries'. A symposium on OH was organised with the collaboration of NVvA, AIDII and Turkish stakeholders, including government agencies, in October 2016, in Antalya.

In the framework of this project, meetings with NVvA and the Belgian Society for Occupational Hygiene (BSOH) have been organised for Turkish representatives in order to move forward in setting up an OH association in Turkey. Approximately one year later, in January 2018, the Turkish Occupational Hygiene Association (TROHA) was established in Izmir.

One of the most important achievements has been a growing awareness and interest among government agencies in Turkey during the last few years, within the framework of the Oshnet School's activities. One good example was the official invitation of TROHA to the international conference on occupational health organised by the Ministry of Labour and Social Security in May 2018.

The Oshnet School community is growing continually in numbers and quality of teaching, with lectures and practical lessons given by Turkish and international experts of the highest level, representing a successful example of international collaboration. In the friendly atmosphere of residential courses, the exchange of experience and proposals for further collaboration among students and OH professionals are encouraged to develop an OH approach in Turkey.

There is still a lot to do. The need for specialists working in the field of OH in Turkey is growing. While assessing the hazards and risks in the working environment is becoming a legal obligation, due to the lack of human power to do this work and insufficient support by standard training, the enforcement of these laws remains restricted.

For this reason, the definition of OH as the professional field, which has been ignored so far, and the development of standards, followed by certified training programmes similar to international ones, will lead to a significant contribution to occupational health in Turkey. The Turkish scenario for institutionalising OH in collaboration with national and international institutions is a promising example for developing countries, as well as for the internationalisation of OH standards.

News from:

Chemical Risk Manager

Revised EN 689 helps OELVs compliance

12 June 2018

The European Standards Organisation (CEN) has published an updated version of standard EN 689 on measuring exposure to chemical agents in the workplace, having earlier approved it in March. This will enable employers to test whether they are complying with occupational exposure limit values (OELVs), by measuring workers' exposure to chemical agents by inhalation.

The updated standard will use a three-step process of basic characterisation, initial assessment and periodic reassessment on a sample of workers in a 'similarly exposed group', thus getting round the problem of variability of exposure and finding a sufficiently large and representative sample to study. EN 689 dates back to 1995, but a working group of the CEN had agreed to revise it to help employers and other stakeholders to measure compliance.

For more information:

www.chemicalwatch.com/crmhub/67590

Asbestos deaths 'underestimated'

11 June 2018

Dr Jukka Takala, president of the International Commission of Occupational Health (ICOH), has stated that the figure of 107,000-112,000 asbestos related deaths/year worldwide that has been cited by many organisations is too low. Based on the latest research, he said that a more accurate figure would be 255,000 globally every year, of which 233,000 are due to work-related exposures.

These figures were given in a paper presented to April's Annual Asbestos Disease Awareness Conference (ADAO) in Washington, DC, and subsequently published in the *International Journal of Environmental Research and Public Health*. The conference also saw renewed calls for a complete ban in the US, where asbestos is still imported and used, despite being a known carcinogen, accounting for nearly 40,000 deaths/year.

For more information

www.chemicalwatch.com/crmhub/67218/

UK OSH calls for more asbestos protection

29 May 2018

More needs to be done to protect workers from the dangers of asbestos, according to the UK's Institution of Occupational Safety and Health (IOSH). This followed a survey of 500 construction workers as part of IOSH's ongoing No Time to Lose campaign, which aims to tackle asbestos exposure in the world's workplaces.

Of those surveyed, 59% had been informed of asbestos risks and participated in regular training. Most were familiar with the risks posed, but a third had never checked the asbestos register before starting work on a new site and nearly half of those did not know there was a register. Almost 20% did not know what to do if they discovered asbestos.

"Uncertainty and ignorance surrounding how to prevent workers from breathing in the fibres is deeply worrying," said Lesley Rushton, chair of the UK's Industrial Injuries Advisory Council. "This is particularly the case among small companies, sole traders and older workers."

For more information:

www.chemicalwatch.com/crmhub/67217

Osha changes beryllium standard

23 May 2018

The US Occupational Safety and Health Administration (Osha) has issued a direct final rule to clarify some aspects of the beryllium standard in processes, operations or areas, where workers may be exposed to materials containing trace amounts. This is due to become effective on 4 July. It includes definitions of a beryllium work area, an emergency, and the terms dermal contact and beryllium contamination, plus provisions for disposal and recycling.

The ruling follows the original direct final rule published in January 2017, which introduced a new permissible exposure limit (Pel) of 0.2µg/m³ and lowered both the eight-hour Pel and the short-term (15-minute) exposure limit (Stel). Osha had since issued separate standards for shipyards and construction, which are not affected by the new rule.

However, the agency has also subsequently issued a further delay of enforcement notice on some of the provisions contained in the standard. Since May, it has only been enforcing some of the requirements from sections 1910.1024 and 1926.1124. It also plans to issue a proposal to extend this date to 12 December, to meet agreements with those who challenged the rule. Consultation has now begun.

For more information:

www.chemicalwatch.com/crmhub/66947

EU Ecolabel criteria published for indoor cleaning services

15 May 2018

The European Commission has published the criteria that indoor cleaning services - defined as routine professional cleaning services, performed indoors in commercial, institutional and other publicly accessible buildings and private residences - need to meet in order to take part in its EU Ecolabel scheme.

At least 50% by volume of cleaning products used per year must have the EU Ecolabel award for hard surface cleaning products. Products without the award cannot contain substances listed in the standard, regardless of concentration, or in amounts higher than those authorised. They also cannot be classified and labelled as acutely toxic; a specific target organ toxicant; a respiratory or skin sensitiser; carcinogenic, mutagenic or toxic for reproduction; or hazardous to the environment, in accordance with EU Regulations.

In addition, staff carrying out cleaning tasks must have access to appropriate dosage and dilution apparatus for products, and the corresponding instructions and be informed on health, safety and environmental issues, including safety data sheets, handling of chemicals and applicable national occupational health and safety (OSH) legislation.

For more information:

www.chemicalwatch.com/crmhub/66883

Australia adds to hazardous chemicals database

15 May 2018

Australia has added 750 chemicals to its Hazardous Chemical Information System (HCIS), which provides classification information on hazardous chemicals for manufacturers, importers, suppliers and end users in accordance with the Globally Harmonised System (GHS). A further 672 substances have had their classifications amended.

The update incorporates information published in 13 new tranches of Australia's inventory multi-tiered assessment and prioritisation (Imap) framework, which is run by the National Industrial Chemicals Notification and Assessment Scheme (Nicas). It is the first significant revision since Safe Work Australia launched the database in 2016.

For more information:

www.chemicalwatch.com/crmhub/66876

ISO launches international OSH standard

11 May 2018

The International Organisation for Standardisation (ISO) has launched ISO 45001:2018, the first international standard on OSH and a replacement for OHSAS 18001. It has been developed to help organisations reduce the burden of workplace accidents and work-related ill health and disease. This aims to:

- reduce workplace injuries and ill health;
- reduce workplace risks; and
- create better, safer and healthier working conditions for employees.

The standard uses a simple plan-do-check-act model, enabling organisations to plan what they need to put in place to minimise the risk of harm. It also takes into account other international standards such as OHSAS 18001 and ILO guidelines and conventions. Organisations already certified to OHSAS 18001 will have three years to comply with ISO 45001, although certification of conformity to it is not mandatory.

For more information:

www.chemicalwatch.com/crmhub/66746

Echa board discusses increasing committee OSH risk assessment expertise

25 April 2018

Echa's management board has discussed a suggestion that it should look into increasing the number of Risk Assessment Committee (Rac) members with specific expertise in OSH. It was also proposed that Echa should explore additional ways of involving a wider group of scientific experts in Rac's work.

A staff working document, accompanying the recently released second REACH Review, said the European Commission is planning to reassign the responsibilities of DG Employment's Scientific Committee on Occupational Exposure Limits (Scoel) to Rac. Meanwhile, a joint Scoel-Rac taskforce has issued a report that led to the Commission questioning the need for two different committees dealing with the evaluation of the same chemicals

The Commission has also been looking into the interplay of REACH with EU OSH legislation. A particular issue is the overlap between OSH occupational exposure levels (OELs), which are used in the workplace to limit exposure, and REACH's derived no-effect levels (Dnels), which are mainly used to assess whether there is adequate control of risk.

For more information:

www.chemicalwatch.com/crmhub/66113

European project issues factsheets on ten workplace carcinogens

25 April 2018

The Roadmap on Carcinogens, a multi-stakeholder European project that seeks to raise awareness about the risks arising from exposure to carcinogens in the workplace and exchange good practice, has produced 'ready-to-use' factsheets on ten carcinogens. These give details on the substance, symptoms that can arise from exposure, associated risks and how to minimise these. They cover:

- asbestos;
- polycyclic aromatic hydrocarbons (PAHs);
- vinyl chloride;
- formaldehyde;
- chromium VI;
- hardwood dust;
- welding fumes, including chromium VI;
- silica dust;
- diesel engine exhaust; and
- benzene.

Further factsheets are planned on:

- acrylamide;
- ethylene oxide;
- trichloroethylene;
- cytostatics
- cadmium;
- lead;
- nickel;
- beryllium and
- hydrazine.

There will also be a factsheet with general information on STOP rules, basic rules that apply whenever carcinogenic substances are used in the workplace.

For more information:

www.chemicalwatch.com/crmhub/66195

Osha warns of chemical-induced hearing loss risk

16 April 2018

Osha has published a safety and health information bulletin specifically on 'ototoxic' substances, that is, chemicals that can cause hearing loss. It says that workers using solvents, asphyxiants, nitriles, heavy metals or heavy metal compounds could be at risk. These adversely affect hearing and balance by damaging either key nerves or the cells that produce the tiny hairs inside the ear.

The agency said that there is growing concern among specialists about hearing loss caused by occupational exposure to such substances. Studies were cited, showing evidence that workers exposed to high levels of noise and these substances, such as Sicilian oil refinery workers studied by the University of Messina in Italy, have increased risk of hearing loss compared to workers exposed only to the noise.

The bulletin describes audiometric tests as powerful tools for detecting hearing impairments, but it also notes that these do not differentiate between noise and chemicals as causes. It goes on to guide employers on how to identify ototoxic substances in the workplace and reduce or eliminate exposure via substance replacement, safety engineering or effective use of personal protective equipment (PPE).

For more information:

www.chemicalwatch.com/crmhub/65995

EU proposes limits for five carcinogens

13 April 2018

The European Commission has proposed limiting worker exposure to five more carcinogens on top of the existing 21 for which binding OELs apply. The five and their respective OELs in mg/m³ for eight-hour time weighted average exposure are:

- cadmium and its inorganic compounds – 0.001mg/m³;
- beryllium and its inorganic compounds – 0.0002mg/m³;
- arsenic acid, its salts and inorganic arsenic compounds – 0.01mg/m³;
- formaldehyde – 0.37mg/m³ (and 0.738mg/m³ Stel); and
- 4,4'-methylene-bis(2-chloroaniline) (Moca) – 0.01mg/m³.

This is part of a third revision of the carcinogens and mutagens Directive (CMD), which sets out steps to eliminate or limit exposure to carcinogenic and mutagenic chemical in order to prevent occupational cancers and related diseases. A second revision had been adopted by the European Parliament's Employment Committee in April with binding OELs and, in some cases, skin notations for six substances.

For more information:

www.chemicalwatch.com/crmhub/65967

South Korea classifies 94 new workplace hazards

11 April 2018

South Korea's Ministry of Employment and Labour (MOEL) has classified 94 of the 316 new substances manufactured or imported last year as either hazardous or risky. Companies must display and provide material safety data sheets (MSDSs) for these substances and take appropriate safety measures.

The classifications come out of the ministry's review of the hazard assessment reports it has received. Manufacturers or importers of new substances must produce these under the Occupational Safety and Health Act and submit them to the MOEL, except when they are for consumers only, imported at levels below 100 kg or used for research purposes.

For more information:

www.chemicalwatch.com/crmhub/65925

EU issues PPE communications

28 March 2018

The European Commission issued two communications on the use of PPE, in advance of the repeal of Directive 89/686/EEC on 21 April and its replacement by Regulation (EU) 2016/425. The new Regulation aims to achieve common standards for PPE in all member states in terms of protection of health and the safety of users, plus freedom of movement.

The first communication list references of harmonised standards for PPE types, covering:

- protective gloves against dangerous chemicals and microorganisms;
- protective clothing against dangerous solid, liquid and gaseous chemicals, including liquid and solid aerosols;
- protective clothing against liquid chemicals;
- footwear protecting against chemicals; and
- protective clothing for use against solid particulates.

The second communication lists items of PPE that, under transitional arrangements, will be allowed on the market until 20 April 2019.

For more information:

www.chemicalwatch.com/crmhub/65423

Niosh worker safety and nanomaterials guides

19 March 2018

The National Institute for Occupational Safety and Health (Niosh) has published four guides to help companies control possible exposure of their workers to nanomaterials. These contain tips on the design, use and maintenance of exposure controls for nanomaterial production, post processing and use. They cover:

- handling and weighing of nanomaterials when scooping, pouring and dumping;
- harvesting nanomaterials and cleaning out reactors after materials are produced;
- processing of nanomaterials after production; and
- working with nanomaterials of different forms, including dry powders or liquids.

According to Niosh, workers in industries that use or make engineered nanomaterials may inhale nanoparticles on a daily basis, posing a potential respiratory hazard. Last December, the World Health Organisation (WHO) issued guidelines to help policy makers and professionals protect workers from potential risks from manufactured nanomaterials.

For more information:

www.chemicalwatch.com/crmhub/64978



Taiwan overhauls emergency equipment standards

14 March 2018

Taiwan's Environmental Protection Agency (EPA) has overhauled regulations on toxic chemical substance response, detection and alarm equipment, including more stringent data monitoring and reporting requirements. They are aimed at improving worker safety and hazard prevention. This is the first comprehensive revamp of the regulations since they were promulgated in December 2007.

An official with the EPA's Toxic and Chemical Substances Bureau (TCSB) said that the changes reflect technical progress made in the past decade and draw on advice from operators and lessons from EPA inspections. The agency is likely to propose further revisions after the Legislative Yuan, Taiwan's parliament, enacts draft revisions to the Toxic Chemical Substances Control Act.

Many of the major changes (in Articles 3-7, 12 and 13) will take effect from 8 March 2019 to give companies time to adapt to the new rules. In other articles, they were enacted on promulgation.

For more information:

www.chemicalwatch.com/crmhub/64905

Product safety news and resources

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