

Global Exposure Manager



The newsletter of the International Occupational Hygiene Association

June 2017 | Issue 5

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www.ioha.net

Hazard banding tools draw scrutiny

The world needs better agreement on occupational exposure banding and what constitutes an OEL. Frank Zaworski reports from the AIHce.

The process of occupational exposure banding (OEB) sparked discussion at the recent American Industrial Hygiene Association Conference & Exposition (AIHce), especially in relation to substances that do not have an established occupational exposure limit (OEL).

Specifically, the plethora of OEB tools available has brought into question the ability to agree what the OEL might be and where substances should be positioned in terms of hazard.

The US National Institute of Occupational Safety and Health (Niosh) recently consulted on guidance it has prepared, which aims to bring some clarity to the process.

Speaking at the AIHce meeting in Seattle in early June, Niosh's Captain Lauralynn Taylor McKernan explained how the proposed three-tiered system of hazard banding could be used when a substance lacks an OEL.

Each tier of the process, she observed, has different data requirements, which allows a variety of stakeholders to use the exposure banding process in different situations. Selection of the most appropriate tier for a specific banding situation depends on the quantity and quality of the available data, and the training and expertise of the user.

Tiered approach

Tier 1, according to Niosh, requires the least information and only modestly-specialised user training. Each of the successively higher tiers requires more chemical-specific data to assign an OEB successfully: a primary goal of Tier 1 assessment is to give the user a quick summary of the most important health effects associated with exposure to the chemical of interest, and to quickly identify extremely toxic chemicals that should be considered for substitution or elimination.

The proposed Niosh Tier 1 OEB process is aligned with the Globally Harmonised System (GHS) of classification and labelling of chemicals. The user collects GHS hazard codes and categories from Niosh-recommended sources and then determines the corresponding band for each of the hazard codes and categories using certain criteria. The endpoint band that

represents the lowest range of exposure concentrations is selected as the OEB for the chemical. Users can complete this process to quickly identify highly toxic chemicals for which further banding should be considered.

Tier 2 requires the user to examine a number of publicly-available databases and extract relevant toxicological data to be used in a banding algorithm. Tier 3 employs expert judgment to critically evaluate experimental data and discern toxicological outcomes thorough evaluation of the chemical.

The proposed Tier 2 process requires the user to search the proposed Niosh-recommended sources for information related to nine standard health endpoints. Next, the user should compare the extracted data, which can be either quantitative or qualitative, to the Niosh Tier 2 criteria. Based on these, the user assigns the chemical to a band for each endpoint for which data exist.

As with Tier 1, the band that represents the lowest exposure concentration range is assigned as the OEB for the chemical, provided that the available data meets minimum requirements. This process is more time-intensive than Tier 1 but produces a band that is based on more reliable data. Tier 3 is employed if a data sufficiency requirement for Tier 2 is not met and when expert judgment is available.

The proposed Tier 3 process is designed in recognition of the fact that not all chemicals can be banded in Tier 1 or 2, because of a potential lack of available data from the Niosh-recommended sources. Therefore, Tier 3 requires a detailed survey of the relevant primary literature and an analysis of the resulting experimental data. The Tier 3 process relies on expert judgment and a critical evaluation of the available dose-response data.

Hazard banding tools

With at least twelve hazard banding tools available globally to the industrial hygiene community, problems may arise establishing broadly-accepted OELs because there appears to be a lack of agreement between hazard banding tool results. "One globally used hazard banding engine may decrease the confusion that the dozen different engines are now causing for SMEs and the international occupational hygiene community," said Theo Scheffers of the Netherlands-based TSAC consultancy.

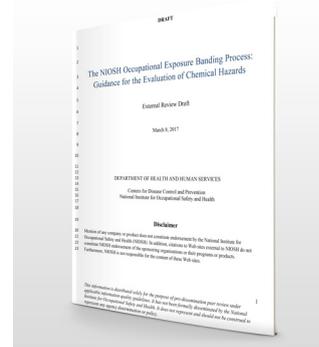
"The consequence of the differences between hazard banding engines may be that stakeholders and parties who are not interested in occupational hygiene, like lawyers and marketing departments, may go shopping for which tool provides the most favourable result for their interest," Mr Scheffers added.

“This is a disgrace for the global industrial hygiene community.” He therefore called for all stakeholders to gather at IOHA’s 2018 meeting in Washington, DC, to hammer out how the alignment of hazard banding engines can be realised.

One of those stakeholders is international chemical company Solvay, based in Belgium. It handles around 8,000 chemicals that do not have an OEL, according to its HSE specialist James Asbury. He told AIHce delegates that there is a strong need for appropriate risk control strategies, and Solvay has developed its own hazard banding tool to establish in-house OELs. He said it works just as well as any of the commercially-available options.

Niosh draft OEB process guidance

www.cdc.gov/niosh/docket/review/docket290/pdfs/clean-cib-niosh-oebprocess-guidancefortheevaluationofchemicalhazards_3.8.17.pdf



News

Plan for European OH platform progresses

Seven national occupational hygiene associations in EU countries have decided to launch a project to establish a common European OH platform.

The associations and project representatives are:

- Belgian Society for Occupational Hygiene (BSOH), Tom Geens;
- Société Française des Hygienistes du Travail (Sofhyt), Antoine Leplay;
- Deutsche Gesellschaft für Arbeitshygiene (DGAH), Christian Schumacher;
- Associazione Italiana Degli Igienisti Industriali (AIDII), Paulo Sacco;
- Nederlandse Vereniging voor Arbeidshygiëne (NVvA), Margreet Sturm;
- Asociación Española de Higiene Industrial (AEHI), Rudolf van der Haar; and
- Schweizerischen Gesellschaft für Arbeitshygiene (SSHT), Catherine Tomicic.

Karen Niven, immediate past president of the IOHA, welcomed the project and said that its existence would strengthen the occupational hygiene community in Europe, particularly in terms of enhancing collaboration.

Lawrence Sloan, CEO of the American Industrial Hygiene Association (AIHA), also encouraged the initiative. He noted that the AIHA board is in the process of adapting a more comprehensive strategy and would consider advocating this approach in other regions aligned with its own geographical priorities.

The intention is for the the European platform to be customer-driven, working on “what the market wants from industrial hygienists, understanding the country and the environment the discipline is operating in,” said Sofhyt’s Antoine Leplay. After the project was described to Dr Thomas Fuller, the AIHA representative at the IOHA, during the Preventica occupational health and safety meeting in Paris in June, he commented: “I think a collaborative European occupation hygiene association would be very beneficial as a means to bring more professionals together and build synergy.”

A project team drawn from each of the seven members has started to list and to prioritise the expectations of each of the corresponding national associations.

Technical topics in the chemical risk domain, such as REACH regulations and occupational exposure level setting, have also been identified in the context of the collaborative process and were prioritised during a planning teleconference meeting in June. These include:

- alignment of hazard banding models;
- improved EU collaboration on EN689, a draft standard on the measurement of exposure to chemicals and occupational exposure limit values
- exposure modelling versus exposure monitoring in chemical risk assessment;



- review and feedback on EU semi-quantitative risk assessment tools for chemicals;
- quantitative efficacy of risk management measures for exposure mitigation from REACH; and
- collecting and enabling the visibility of practical examples of success stories in the implementation of risk management measures, according to the principle of hierarchy of controls.

More associations will be invited to join this year; the platform will be open to associations in EU member countries and the wider European region.

The decision to launch the project was taken in April at the British Occupational Hygiene Society (BOHS) conference in Harrogate. Tracey Boyle, immediate past president of BOHS, said that the British association has not joined yet, due to other priorities, but it is anticipating doing so in the future.

For more information, please contact the coordinator of the initiative, Antoine Leplay at Sofhyt in France:
aleplayconsult@gmail.com

BOHS presentation: www.oh-2018.com/files/2017/05/OH2017-Eu-OSH-Platform-initiative-final-8c-Leplay.pdf

SafeYouth@Work launches media competition

The International Labor Organization (ILO) SafeYouth@Work Project, which seeks to promote occupational health and safety for young workers worldwide, is launching a global media competition for young people in the 15-24 age range. The aim is to help to “put youth vision and voice at the centre of discussion on preventing workplace accidents and diseases”.

The competition is being carried out in conjunction with the International Media Festival for Prevention and the XXI World Congress on Safety & Health at Work, which is taking place in Singapore on 3-6 September. The project is supported by the US Department of Labor’s Office of Child Labor, Forced Labor & Human Trafficking and forms part of the ILO’s Global Action for Prevention on Occupational Safety and Health (OSH GAP) programme.

Winning entries will be featured at the congress and will be presented at a special awards ceremony. Some winners will also be invited to Singapore to share their ideas on safety and health. Submission categories include film, photography, drawing, music and writing. Young people with a creative idea that does not fit into one of these categories can submit their creation through the ‘Surprise Us!’ category.

For more information, go to: www.ilo.org/safeyouth/en/

OSH GAP: www.ilo.org/global/about-the-ilo/how-the-ilo-works/WCMS_495278/lang--en/index.htm

Professional certification for industrial hygienists in Singapore

Some 16 practising industrial hygienists have been registered so far under a scheme introduced by Singapore’s Occupational and Environmental Health Society (OEHS).

The scheme itself was originally launched in 2013, with the aim of giving industrial hygienists recognition, raising standards and improving practices in the profession.

A Registered Industrial Hygienist (RIH) Board was set up in 2015 to administer it. The OEHS is an affiliated member of the IOHA, and is working to secure the national accreditation recognition for the scheme, known as RIH (SG).

OEHS says the scheme, “will further enhance the professionalism of the occupation and provide impetus for individuals to consider IH as a career. With this certification, expectations for industrial hygiene professionals in Singapore will inevitably rise. The RIH (SG) have a duty to show employers, employees and the public the impact and difference they can make to the industrial hygiene landscape in Singapore.”



Seminar publicity and feedback session on the RIH (SG) scheme

The RIH scheme is benchmarked against other established models like the American Certified Industrial Hygienist and the UK’s Chartered Occupational Hygienist schemes. To be certified as a RIH (SG), an individual must meet rigorous standards of education and experience by proving competency in the comprehensive practice of industrial hygiene through oral and/or written examinations.

Professional ethics, peer acceptance and an established reputation are essential qualities for certification.

In addition, the RIH (SG) scheme aims to offer industrial hygiene networking opportunities and build a culture of continual learning to keep abreast of rapid changes in industrial and environmental health science.

It complements the Singapore Ministry of Manpower’s Occupational Hygiene Professional Development Framework, which is part of the national strategy to galvanise stakeholders’ efforts towards continuous improvement in the management of workplace health hazards and exposure risks.

Indonesia: Integrating industrial hygiene into HSE

Just under a year after it was founded, the Indonesian Industrial Hygiene Association (IIHA) has held its first major seminar. Under the banner '2017 IIHA Connect', the 6 May meeting at Depok, south of the capital Jakarta, attracted 200 industrial hygiene and health, safety and environmental (HSE) practitioners from various industries and institutions.



IIHA president Elyse As Safira delivering the opening remarks at IIHA Connect

With the theme "Managing industrial hygiene as an integrated element of HSE", the event provided participants with access to education sessions and a broader network. As such, IIHA said that it kept them updated on standards and technology in the field of industrial hygiene in order to improve their professional competency.

Related to the main theme, two keynote speakers explained strategies in managing industrial hygiene programmes and integrating them into overall HSE programmes based on their own experiences. The speakers were:

- Brian Eva, secretary of the Australian Institute of Occupational Hygienists; and
- Norhazlina Mydin, president of the Malaysian Industrial Hygiene Association.

Other speakers during the plenary session were:

- Sjahrul M. Nasri, on IIHA professional certification;
- Wenny Ipmawan, on industrial hygiene risk management; and
- Soehatman Ramli, on HSE risk management programmes.

A day before the conference, IIHA had conducted four industrial hygiene training sessions on:

- Key principles of industrial hygiene monitoring, by Elyse As Safira, president of IIHA
- Chemical hazard communication according to GHS, by Dr Mila Tejamaya, general secretary of IIHA
- Vibration: OELs and measurement, by Sjahrul M. Nasri, advisory board chairman of IIHA
- Ergonomic study, by Dr Baiduri Widanarko, treasury II of IIHA.

The topics had been selected based on a review process conducted by a commission under the training division of IIHA,

with feedback from members. Attending the training gave participants credits for further professional certification.

In terms of qualifications, speakers at the seminar agreed that the industrial hygiene profession requires specific qualifications that cannot be achieved only through a short course and via exams. It requires gradual competency development programmes that are internationally recognised, and adequate professional experience. Another issue is the importance of conducting risk assessments and using the results to develop risk-based industrial hygiene programmes.



France reforms occupational medicine

France introduced a new labour law relating to occupational medicine on 1 January, according to Luc Decosse, vice-president of Sofhyt, the French Society of Occupational Hygienists. The law is designed to address a shortage of occupational physicians and will have a significant impact on the activity of occupational health services. Key details include:

- ending systematic medical examination;
- increasing the time between visits; and
- developing the role of occupational nurses.

Combined with the 2016-2020 National Health At Work Plan, which emphasises prevention instead of cure, the new law clearly demonstrates the need for experts in the promotion of occupational health in the medium and longer term, Mr Decosse believes. This competence may be fulfilled internally within a company or with support from external occupational health services.

France has had a highly developed programme of medical surveillance in place for the past 50 years. As a result, occupational hygiene has been more or less part of occupational medicine and there have been relatively few occupational hygienists. However, because the number of doctors has been in decline, medical surveillance has been reduced. Sofhyt sees this as an opportunity to develop a prevention-based approach.

More widely, change is in the air as more and more university curricula are offering health and safety diplomas. Meanwhile, Sofhyt is proposing exams leading to the certification of occupational hygienists. Increasingly companies also require a certified level of competencies when they offer jobs. This expertise in health at work is fully in line with the multidisciplinary approach needed to assess the risks and to preserve the physical and mental health of employees.

Twenty-six honoured at 2017 AIHce

The American Industrial Health Association (AIHA) paid tribute to 26 annual award recipients at its 2017 convention and exposition (AIHce) held in Seattle, Washington, 4-7 June. Included among those awarded for their contributions to the industrial hygiene (IH) industry were the following:

Dr John Driscoll, ACSF, received the Edward J Baier Technical Achievement Award for his innovations and far-sighted development of photoionisation detector (PID) technologies that have led to a transformation in real-time detection tools used by the IH profession;

Gayla J. McCluskey, CIH, CSP, ROH, QEP, FAIHA, received a Distinguished Service Award for her career-long advancement of IH, leadership, development of occupational safety and health policy, development of practice guidelines, and more;

Steve M. Hays, PE, CIH, FACEC, QEP, FAIHA, partner and chairman of the board at Gobbell Hays Partners, was presented the Donald E. Cummings Memorial Award for his contributions to the knowledge and practice of industrial hygiene;

Melissa Rupert, CIH, received the Kusnetz Award for her work on AIHA mentoring and professional development programmes. She is the current chair of the AIH Foundation Donor Relations and Fundraising Committee;

Thea D. Dunmire, JD, CIH, CSP, was presented with the Alice Hamilton Award for her definitive, lasting achievement in the field of occupational and environmental hygiene through public and community service, social reform, and more. She has demonstrated commitment to worker health and safety through endless devotion to the consensus standard process in management systems;

Dr W.F.J.P.M. Ten Berge received the William P Yant Award for work on dermal absorption, including collaboration with a dermal exposure team sponsored by the AIHA Exposure Assessment Strategies Committee to refine the SkinPerm model's ease of use and data presentation, resulting in the AIHA product 'IH SkinPerm';

Dr J. Torey Nalbome, CIH, associate professor and chair of the Departments of Civil Engineering and Environmental Engineering and Construction Management, University of Texas, was presented a Meritorious Achievement Award for his long-term contribution to the progress of occupational and environmental hygiene; and

US Senator Sherrod Brown received the William Steiger Memorial Award for his leadership in the fight to support government agencies that promote workplace safety.

BOHS conference takes place in Harrogate

Feedback on the BOHS Annual Conference, which took place at the Harrogate Convention Centre 24–27 April, was unanimously positive, according to conference manager Marie Townshend. All delegates said that the quality of speakers met, exceeded or greatly exceeded their expectations and 80% rated the conference as good, very good or excellent compared to previous years.

Following the opening Warner Lecture on the subject of mental health from Martin Coyd OBE of Mace, the programme included three additional keynote sessions:

- Effectiveness of a multi-dimensional randomised control intervention to reduce quartz exposure among construction workers by Erik van Deursen;
- Your health, your future – a construction industry perspective by Martin Worthington from Morgan Sindall; and
- Understanding barriers to making positive health choices by Chris Woods.

The president's session took the form of a panel discussion led by Bharat Patel and focusing on the future of worker health protection in the UK, particularly post-Brexit.

There were over 45 session speakers over the course of the event, with presentations on topics including:

- respiratory protective equipment;
- product stewardship;
- asbestos;
- legionella; and
- noise control.

Five workshops also took place during the event, with subjects including occupational hygiene strategy, ergonomics and dermal assessment.

Due to the past popularity of the Ignite session, in which speakers have a maximum of five minutes each to make their presentations, the session was run as a plenary this year so that no one had to choose between sessions. Nine presenters took part. The mobile app also proved popular: it was downloaded and used by more than half the delegates, with over 10,000 page views.

Events

26th International Symposium on Epidemiology in Occupational Health (EPICOH)

28-31 August

Edinburgh International Conference Centre, UK

EPICOH is part of the International Commission on Occupational Health (ICOH) and has as its main function the promotion of communication among epidemiologists, industrial hygienists, and other occupational health scientists worldwide. The conference theme of 'Eliminating occupational risk: Translating research into action' aims to focus on drawing together the latest work from its scientists around the world and synthesising the conclusions into a series of implementable actions. www.epicoh2017.org/

XXI World Congress on Safety and Health at Work 2017

3-6 September

Sands Expo & Convention Centre, Singapore

Under the motto of 'A global vision of prevention', this event brings together thought leaders and OSH practitioners for three days of discussions. The three key topics are: Vision zero – from vision to reality; Healthy work – healthy life; and People-centered prevention. There are keynote speakers addressing these issues from the International Social Security Association, the International Labor Organization (ILO) and Singapore's Ministry of Manpower. The congress also features the ILO SafeYouth@ Work Media Competition, an opportunity for young people to show what safety and health at work means to them by showcasing innovative ideas. www.safety2017singapore.com/

6th International Conference and Exhibition on Occupational Health and Safety

13-14 September

Dallas, Texas, US

Organised by Conference Series, this event suits both participants attending specific courses related to their immediate needs and those seeking a comprehensive certificate programme in occupational health and safety management. There are ten tracks, covering: women's occupational health; occupational disease and human health; occupational medicine and therapy; occupational hazards; risk

assessment; occupational health services; current issues in occupational health and safety; human factors; agricultural health and safety; and, chronic health, industrial food safety and management.

www.occupationalhealth.conferenceseries.com/

Inhaled Particles XII

25-27 September

Glasgow Marriott Hotel, UK

The 12th conference in the Inhaled Particle series will discuss new issues, developments, techniques and analyses to see the key issues of the future and how best to address them in the field of inhaled particles. As usual, it will cover all particles and all aspects of science associated with disease caused by the inhalation of particles. In particular there will be papers on new technologies and approaches to exposure assessment; managing and preventing release, biomonitoring and sensors, modelling and assessing hazard, and risk assessment and decision-making, plus regulation and governance, hazard and both indoor and outdoor air pollution. www.inhaledparticles.org.uk/glasgow/

23rd Occupational Health Week: 'The Human Being in the Future of Work', including: 37th Congress on Ergonomics, Hygiene, Medicine and Occupational Security and 16th Colombian Congress on Ergonomics and More Human Work Environments and Daily Life

31 October-3 November 2017

Hotel Intercontinental, Medellín, Colombia

The event seeks to raise awareness and promote: the rules and ethics of occupational health; research, techniques and developments relating to health and safety at work; and, application and experiences. Themes include: age and work; applied ergonomics; education and culture for health and safety at work; environmental management; gender- and work-integrated risk management; implementation of Colombia's General System of Security and Health at Work (SG-SST) legislation and regulations; occupational hygiene and the environment; managing health and safety at work; occupational hygiene; occupational preventative medicine; psychosocial risks; supervision and vigilance trends in health and security at work, such as diversity, chronic health issues and demographic changes; toxicology; and, vibrations. www.semanadelasaludocupacional.com.co

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

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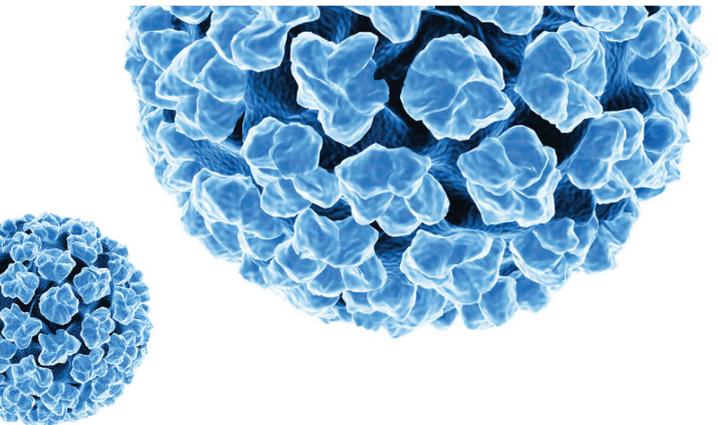
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IPXII

Inhaled Particles XII

25 - 27 September **2017**
Glasgow Marriott Hotel

Bookings open

Bookings are now open for Inhaled Particles XII (IPXII) the latest in a long line of highly successful and prestigious international conferences and meetings organised by the British Occupational Hygiene Society (BOHS). It is the oldest ongoing symposium series on the adverse health effects of inhaled particles.

The first Inhaled Particles conference was held in Oxford in 1960 and over the next 50 or so years the meetings have been successful at attracting leaders and students in all of the scientific disciplines associated with particle-related disease.

Delegate rates

Delegate Rates	Full Conference	Early Bird*
BOHS Member	£450	£400
Non-member	£550	£500
Speaker	£350	
BOHS Student Member	£300	

*Early bird rates end on 31 July 2017

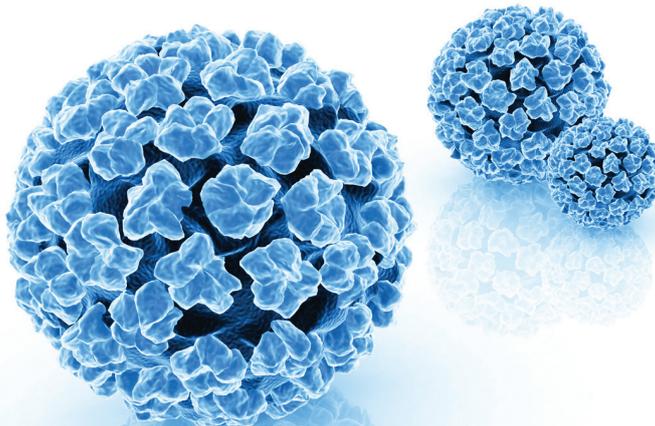
Exhibitor packages

Stand package	£1,000
<ul style="list-style-type: none">• 3 x 2m shell space• One delegate place including entry to all conference sessions and daytime refreshments• Logo and company profile in the conference programme• Logo and link from the IPXII website to your own• Logo on holding slides throughout the conference	

Sponsorship opportunities

• Sponsorship of the conference dinner	£2,000
• Advert in the conference programme	£500
• A5 or A4 single sheet Insert into delegate bags	£500
• Branding of delegate bags	SOLD

All prices are subject to UK VAT currently at 20%.



To view the preliminary programme, for more details about sponsoring and exhibiting or to book your place visit www.inhaledparticles.org

Mainstreaming industrial hygiene in Malaysia

It has been a challenging year for the global economy. Nevertheless, companies and organisations are forced to explore new approaches, new thinking and new collaborations to mitigate health, safety and environmental risks in a more cost-effective manner. The Malaysian Industrial Hygiene Association (MIHA) is seeking to reinforce and redefine the approach to 'mainstreaming industrial hygiene' in Malaysia and the wider region.

This is also being done to support Malaysia's Occupational Safety and Health Master Plan (OSH-MP) 2020, which was introduced by the government authority, the Department of Occupational Safety and Health (DOSH).

Five programmes have been registered under OSH-MP 2020 to support the strategy of mainstreaming industrial hygiene, with the ultimate aims of enjoying a good quality of life, increased productivity and raising the quality of work environments. The programmes are:

1. re-engineering industrial hygiene management: An effective and systematic industrial hygiene management programme at the workplace will help to reduce employees' exposure to occupational health risks, such as exposure to hazardous chemicals and noise, and to improve ergonomics;
2. comprehensive health risk assessment: It is the responsibility of employers to protect employees from adverse health effects arising from the workplace through the implementation of comprehensive health risk assessment to create safe and healthy work environments;
3. occupational health service programme at the workplace: Healthy work environments and workforces are the greatest assets for each individual community and for the country that needs to be sustained;
4. industrial hygiene outreach programme: The requirements of industrial hygiene legislation, standards and guidelines which need to be communicated clearly to industries and relevant stakeholders; and
5. effective enforcement of legislation relating to industrial hygiene: The success of enforcement relating to industrial hygiene legislation relies on its comprehensiveness and effectiveness in mitigating health risk in the workplace.

In order to support OSH-MP 2020, MIHA's efforts concentrate on strengthening its collaborations with governmental bodies,

local occupational safety and health (OSH) associations, international industrial hygiene associations, industries and universities. To this end, MIHA has organised or has been involved with multiple events since early 2017.

On 17 January, MIHA organised its first Industrial Hygiene Academicians and Researchers' Forum at the Everly Hotel in Putrajaya. The forum was designed to discuss further collaborations and networking between MIHA, industries and universities, as well as to strengthen research and teaching on industrial hygiene-related subjects in universities. A total of 22 academics from 15 universities attended. Speakers from DOSH, the National Institute of Occupational Safety and Health (Niosh), Social Security Organisation (Socso), Petronas and Shell Malaysia were invited to share opportunities in R&D collaborations and graduate employment.



MIHA's first industrial hygiene forum for academics and researchers

The Korean Industrial Hygiene Association (KIHA) Conference 2017 took place on 11-12 February in Daegu, South Korea's third largest city. This biannual conference was attended by some 600 delegates, mostly from South Korea. The Asian Network of Occupational Hygiene (ANOH) board member meeting was held during the meeting, on the 10 February. The MIHA honorary secretary, Noormahani Harun, and committee member Megat Azman Bin Megat Mokhtar represented the MIHA president at the meeting.



MIHA participated in the ANOH meeting during KIHA's 2017 conference in February



Nurturing collaboration through sport, MIHA's Futsal team at the Niosh tournament in May.

Finally, MIHA sent a team to participate in the Niosh Futsal Tournament on 6 May at Galaxy Futsal at Bandar Baru Bangi in Selangor province. This was part of the effort to nurture collaboration through informal and fun means with other advocates of OHS. After many struggles, coupled with great team spirit and relentless encouragement from supporters, the MIHA team finished in second place.

In addition, MIHA has contributed speakers to various conferences and seminars as a way of adding value to its stakeholders, as well as promoting the industrial hygiene profession through structured engagement and communication programmes. These are:

FMM Safety & Health Conference 2017

Organiser: Federation of Malaysian Manufacturers (FMM)
Theme: Protecting people, adding value - towards minimising risk and shaping progressive OSH culture
Date: 14-15 March
Venue: E&O Hotel, Penang
Speaker: MIHA honorary vice president, Ng Hon Seng
Title: Critical roles of industrial hygiene

FGV/FELDA World OSH Day 2017

Organiser: Federal Land Development Authority (FELDA) and FELDA Global Ventures (FGV) with support from the Malayan Agricultural Producers Association (MAPA)
Theme: Optimising the collection and use of OSH Data
Date: 26 April
Venue: Menara FELDA, Kuala Lumpur
Speaker: MIHA honorary president, Norhazlina Mydin
Title: Approaches to strengthen industrial hygiene practices

Second IIHA Conference, Exhibition and Training (IIHA Connect) 2017

Organiser: Indonesian Industrial Hygiene Association (IIHA)
Theme: Managing industrial hygiene as integrated element of HSE
Date: 5-6 May
Venue: Margo Hotel, Depok, Jakarta
Speaker: MIHA honorary president, Norhazlina Mydin
Title: Integrating industrial hygiene in HSE programmes

Industrial Hygiene & Safety Seminar 2017

Organiser: Universiti Teknologi MARA, Faculty of Health Science Students' Association & Environmental Health Students' Association
Theme: Cultivating industrial hygiene practices
Date: 22 May
Venue: UITM, Puncak Alam, Selangor
Speaker: MIHA committee, Kim Kek Seong
Title: MIHA activities in promoting industrial hygiene

In addition, MIHA has conducted various training events to enhance industrial hygiene knowledge in the region in line with its mission. This includes promoting the anticipation, identification, evaluation and control of environmental factors and stressors arising in or from the workplace, or its products, in relation to the health or wellbeing of workers and the public.

Among the training events that MIHA has conducted this year are:

Comprehensive industrial hygiene (intermediate)

Date: 20-23 March
Venue: Corus Hotel, Kuala Lumpur
Trainer: Professor Park Doo-Yong

Fundamentals of industrial hygiene

Date: 18-20 April
Venue: Corus Hotel, Kuala Lumpur
Trainer: Zaiton Sharif & Ir. Nimi Ahmad

Asbestos management programme

Date: 24-25 May
Venue: Impiana Hotel, Kuala Lumpur
Trainer: Rajesh N. Jackson, Wan Sabrina Wan Mohamad & Swee Siang Ng

Implementing industry code of practice on indoor air quality (IAQ)

Date: 24-25 May
Venue: Corus Hotel, Kuala Lumpur
Trainer: Yu Mei Huey



Industrial hygiene 'knowledge café' at MIHA's 15th AGM

More training is planned later this year, including on:

- guidelines on the use of personal protective equipment against chemical hazards;
- health hazard classification for chemical health risk assessors;
- ergonomic assessment;
- Industry Code of Practice (ICOP) classification, labelling and safety data sheet (known as CLASS) 2014 for chemical hazard classifiers, and many more.

SME focus

Furthermore, with the increasing trend of occupational incidents and illnesses, such as noise induced hearing loss and various types of musculoskeletal disorders (MSDs), it is essential to enhance OSH management in workplaces, especially among small and medium-sized enterprises (SMEs). The business focus needs to be enhanced and prioritised so that OSH management is considered essential for sustaining business growth in the long run, says MIHA. Another key message is that it will also strengthen businesses in the global market.

As mainstreaming industrial hygiene is one of the pillars in Malaysia's OSH-MP 2020, MIHA is taking a proactive measure to improve industrial hygiene practices in SMEs as part of its work this year. Based on 2015 statistics, SMEs contributed 36.3% of Malaysia's GDP and represented 65% of employment in the country.

The best strategy, MIHA says, is simplifying and adapting existing legislation to make it applicable to SMEs, combined with various forms of implementation support from relevant authorities and bodies. This includes, but is not limited to, sharing of good practices, training of employees, the development of simple risk assessment tools, guidelines, and financial incentives.

As a start, held in conjunction with the 15th AGM, MIHA conducted an industrial hygiene 'knowledge café', with the theme 'Mainstreaming industrial hygiene in SMEs'. The objectives of the session included:

- raising awareness among SMEs in Malaysia on the issues and associated risks of health hazards at workplaces;
- identifying key health risks and proposing practical improvement measures, to manage health risks;
- helping SMEs to comply with relevant industrial hygiene legislation;
- formulating and sustaining industrial hygiene projects in SMEs, to ensure improvements are continually and effectively implemented; and
- reducing the rates and cases of occupational diseases in Malaysia.

Moving forward, MIHA aspires to strengthen industrial hygiene practices in SMEs through collaborations with various stakeholders such as SMECorp, FMM, SOCSO and DOSH.

MIHA welcomes all members who are passionate and want to improve industrial hygiene practices in Malaysia. It looks forward to a greater industrial hygiene success through this year, and going forwards. It says: "Every effort counts, every idea matters, and every one can make a difference in this journey."

Improving textile and shoe industry working conditions in Vietnam *(part 2)*

Tackling the lack of knowledge and poor conditions for workers in the shoe and fabric manufacturing industries in Vietnam is the aim of a groundbreaking project being led by a team of industrial hygienists. Judith Chamberlain, risk management assistant editor of *Chemical Risk Manager*, reports on the second visit in this programme.

In the third edition of *Global Exposure Manager*, published in December 2016, there was a report from Andre Winkes, an industrial hygienist and safety engineer with consultancy Arbo Unie, along with Koen Verbist from Cosanta and Hester Dekker. This covered the first results of their project in Vietnam and their first visit to Vietnam in Ho Chi Minh City in June 2016.

During that visit, the three built a network with relevant stakeholders in Vietnam, including:

- the Vietnamese Industrial Hygiene Association (VIHA);
- the Vietnam Textile and Garment Association (VITAS);
- Better Work Vietnam;
- the Vietnam Chamber of Commerce & Industry (VCCI); and
- the local auditors of the Fair Wear Foundation.

They also visited two production plants and were surprised about the high exposures to solvents used for screen printing and gluing.

A second visit took place in March, organised with the VCCI and Better Work Vietnam, with the main goal of giving two courses about recognising and estimating exposure to chemicals and taking adequate control measures. The content of the training course was determined with input from local partners, and delivered with simultaneous translation into Vietnamese.

“We were happily surprised about the perfect way in which the training was organised by the VCCI,” says Mr Winkes. “The interest in the training was huge and far larger than we could handle. We finally trained 80 people, all of whom





are responsible for EHS within their factory. It was very nice to work with very enthusiastic participants. They were very willing to participate in different kinds of exercises and share information about their own factories.”

Most of the participants work in factories with 1,000-5,000 or more workers. Indirectly, then, Mr Winkes, Mr Verbist and Ms Dekker believe that they reached approximately 50,000 workers and came away with the hope that in time the participants will be able to make a difference. Adds Mr Winkes: “In Vietnam it is always very important that a training course ends with a ceremony where all the participants receive their certificate and have the opportunity to make a selfie with the trainers.”

In addition to conducting the training, the three also participated in an audit for the Fair Wear Foundation of a small screen-printing factory, in which approximately 60 workers screen-print outdoor equipment for a European company. Together with the auditors, they tested an improved questionnaire on chemical exposure.

“The production methods were very basic and everything was printed manually,” Mr Winkes says.

In the workplace there was only general ventilation which was only used every now and then. The workers and the manager had no idea about the possible health risk of the substances they were working with.

Stoffenmanager was used to calculate inhalation exposures, which were three to ten times above European occupational exposure limits. However, Mr Winkes notes, the Fair Wear Foundation does not judge the factory and then abandon it because of poor performance on working conditions.

“[The audit] is seen as a starting point for further improvement, with options for improvements included in the corrective action plan that the company receives after the audit. The basis of the Fair Wear Foundation method is that the producer is committed to help the factory to improve step-by-step until the standards are met.”

Future plans include continuing the voluntary project. The VCCI has asked Mr Winkes, Mr Verbist and Mrs Dekker to continue their training programme and to set up a train-the-trainer programme. They have also been asked by participants of the training course to perform factory visits to help them to improve as well.

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BSOH: An update

The Belgian Society for Occupational Hygiene has revived completely since 2010. Judith Chamberlain reports.

If you are looking for inspiration on how to develop and energise an occupational hygiene society, then a good place to start could be the Belgian Society for Occupational Hygiene (BSOH). With just 40 to 50 members when it started, the society now boasts around 200. The BSOH has very limited resources – membership is only €50 – and its success has been achieved simply through a lot of energy and commitment.

We have just done the best with what we have got.

“We have just done the best with what we have got,” says BSOH chairman Tom Geens, who is currently working as a senior scientist and occupational hygienist at Provikmo, a Belgian national occupational health service. “So we want to send a positive message to others and hope we can be a good example for other associations trying to set themselves up.”

Started in 1991, the BSOH had been successfully running with up to 60-70 members and headed by Professor Hendrik Veulemans. Following a series of personal difficulties for him and other board members, it fell into inactivity in 2006. Then in 2010, a group of students following the occupational hygiene training course at Leuven University – initiated by the same Professor Veulemans – decided it was time to revive the society.



It was their energy and enthusiasm that gave the society the triggering spark it needed.

Mr Geens and other enthusiastic students had a start-up meeting with Professor Veulemans, who was keen to participate and relaunch the association. They decided that finding key people to provide a range of expertise and energy was crucial to getting the society going.

“We started off by getting in contact with the last board members to see if they were still interested in being involved,” says Mr Geens. “Luckily we had lots of support from previous members and we received a lot of information which was great as there was a large gap to fill in.”

Getting Michel Vangeel, global industrial hygiene (IH) lead for Johnson & Johnson Worldwide, on board was a big step forward as he brought in a lot of expertise and a wider perspective than just IH. Another boost was having Maurits De Ridder to take on the role of secretary.

A fantastic mix

Besides working as scientist at Ghent University, Mr De Ridder has also been part of the General Directorates Supervision of Well-Being at Work and Humanisation of Labour for over 30 years. “What we have ended up with is a fantastic mix of people representing scientists, university people, federal government and big companies – this is one of the big strengths of our committee,” he says.

One of the key impetuses was providing a platform to exchange ideas and transfer knowledge to a broader audience. “We found that people wanted to carry on their conversations after meetings but there was no way to do that easily. Now we meet at least three times a year – and can easily stay in contact and pass on knowledge.”

So what has the BSOH achieved in the last seven years?

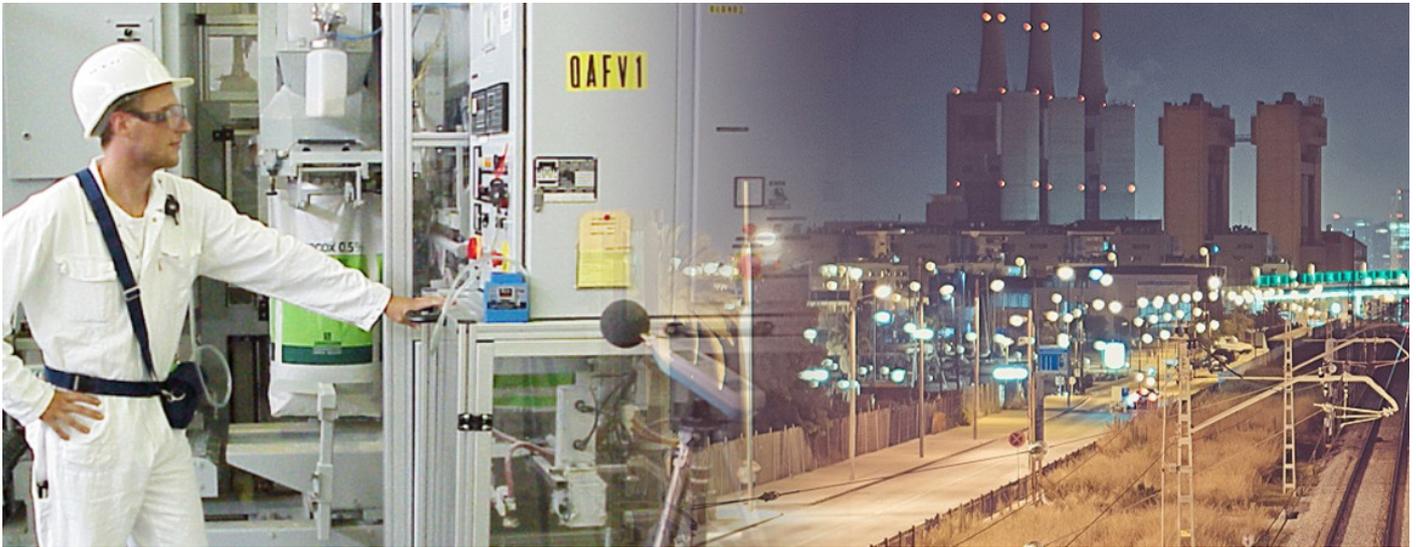
One of its proudest achievements is its involvement with training on IH courses at Leuven University. Many of the board members provide training and input on the courses, as well as having strong involvement with general courses on occupational safety to raise awareness for places dealing with long-term health risks.

Training accreditation

As the liaison with the IOHA, Mr De Ridder says: “BSOH is working towards getting accreditation from the National Accreditation Recognition committee at IOHA for this training work, which will mean that all students could get national certificates from IOHA as well as us. There is a lot of work involved but we are aiming to do this within the next year.”

BSOH has established good connections with a range of industrial hygiene societies in other countries, including the Netherlands (NVvA), France (Sofhyt) and the UK (BOHS), and have supported joint conferences with the French and Dutch societies.

Within Belgium, the society has also built links with other organisations involved in well-being via a Consortium of Belgian Prevention workers known as ‘CoBePrev’, which encompasses the different regional and national associations. As part of CoBePrev, BSOH is also involved in rewriting an occupational safety handbook in order to make it applicable to all prevention generalists so that everyone in Belgium is working according to the same standards and with the same basic knowledge.



@BOSH www.bsoh.be

At government level, BSOH has also established a relationship with the council for prevention and protection at work. The main aim of this dialogue is to set up an expert committee to guide the development of legislation, rather than an advisory board which may or may not comment on already passed occupational health legislation resulting from the social dialogue between employers and employees.

“We have already noticed an impact on legislation,” Mr Geens says. “Our recommendations on ventilation – using carbon dioxide as a proxy – and humidity were adopted in a royal decree on working environments, while recommendations on qualified occupational hygienists and action limits for risk analysis in hot and cold environments were incorporated in a royal decree on thermal environmental factors.”

He adds: “We can say that the things we are discussing are finding their way to legislation – when the social partners try to implement legislation and are looking for sources they often come to us directly – we are triggering important stakeholders coming to learn what we are doing.”

The society is also very proud of its website (www.bsoh.be), which has been awarded a €2,500 prize by the Belgian government. “We have put lots of work into it and it is now available in Dutch, English and French, providing a monthly e-newsletter for all of our members and a range of useful tools,” says Mr De Ridder.

Securing members for the future

There are still some challenges ahead for BSOH. “The number of people we have is brilliant but we need to secure our future and though we are still growing, it has reached a bit of a plateau,” explains Mr Geens.

95% of members are Flemish so BSOH is putting a big effort into increasing the number of members from Wallonia, the French-speaking part of Belgium. There are now four francophone board members, so progress is being made. The society is also busy trying to set up industrial hygiene training in this region. Meetings with Wallonian universities and institutes are currently ongoing.

“It would give us a fantastic boost if we can get 20-30 students involved and we are really looking forward to working on this in the coming months,” adds Mr Geens. Future projects in the pipeline include a plan to support the start-up of a foreign society. “A Dutch colleague has been given a €10,000 award to help set up a society in Turkey and we have organised a joint conference day in June 2017 to help.”

Lessons learnt

So what are some of the key things the society has learnt along the way? According to Mr De Ridder: “When we started out back in the nineties we thought it would be good to have a closed and certified community but then we would only have had around 10-15 members. We decided that it was much better that everyone should have the opportunity to participate in order to get a critical mass of hygiene advocates.”

One of the keys to the society’s success is that it has such dynamic board members with various backgrounds who are eager to share their broad range of knowledge and expertise.

“It shows that members make the society and a range of different backgrounds is a great way to get connections with, and to inspire other people.”

We decided that it was much better that everyone should have the opportunity to participate in order to get a critical mass of hygiene advocates.

Mr Geens adds: “We have also been very careful with the money we have spent – as we are getting more successful, we now have more resources available for things such as public relations, but we aim to keep building on what we have created with our initially limited resources. We are really proud of what we have achieved and we do feel our society is making a big impact on occupational hygiene in Belgium.”

Stoffenmanager version 7

What's new in Stoffenmanager Version 7

In May, the latest edition of the exposure assessment tool, Stoffenmanager, was launched.

Version 7 uses GHS classifications, and the EU CLP and REACH Regulations, as the basis for its control banding calculations. Previously, it used Coshh Essentials, a system developed by the UK Health and Safety Executive (HSE) to help companies to comply with national legislation.

The application now also provides a special warning of non-human risk where applicable, based on hazard classifications for physico-chemical and environmental risks.

Stoffenmanager has been available since October 2003, so Cosanta, which owns the tool says, "it was with a due sense of pride that Stoffenmanager Version 7 was launched at the beginning of May 2017".

Prioritising risk: adjusting the hazard categories

Stoffenmanager was initially developed as an aid to prioritising health risks associated with handling hazardous substances in the workplace and to find effective ways of mitigating these risks. To determine that prioritisation, it combines a product's hazard information with an estimate of the exposure through inhalation or contact with the skin to arrive at a risk score (below).

Exposure category	Hazard category				
	A	B	C	D	E
1					
2					
3					
4					

Stoffenmanager classifies the hazards of a product on the basis of the R-phrases or H-statements as in the Coshh Essentials chart. In 2015, the International Scientific Advisory Board (ISAB) published a [study*](#) on hazard category actualisation in accordance with the UN GHS, EU CLP and REACH Regulation on chemical substances. This has now been implemented in Version 7. The H-statements that lie at the basis of the hazard category are directly visible.

* M. Arnone et al. Hazard banding in compliance with the new Globally Harmonised System (GHS) for use in control banding tools. Regulatory Toxicology and Pharmacology 73 (2015). www.dx.doi.org/10.1016/j.yrtph.2015.07.014

Along with the hazard class, a special warning for non-human health risk is presented, based on the H-statements, for physical-chemical or environmental risks. The keys have also been made clearer and a new 'hazard category eye' is now incorporated in the different summary charts (below).

Indication 

Hazard class: 

Inhalation: C

Skin local: B

Skin uptake: C

Eyes: C

CRM danger: Yes 

Causes hazard class

Name	Inhalation	Skin local	Skin uptake	Eyes
H304	A	-	-	B
H315	B	B	-	C
H336	B	-	-	B
H361f	C	-	C	B
H373	C	-	C	B

In Version 7, new risk assessments will automatically be calculated with the new hazard classification method. Existing risk assessments are still based on the old classification method. For these assessments, users can choose to overwrite the data, or save as a new version, by opening the risk assessment and saving it again.

"From that moment, calculations will be made using the new classification method. This may produce slight differences in the hazard category and the risk category but the modification will have no effect on the quantitative result in mg/m³," the company states.

The new version also means a new approach in developing Stoffenmanager, which has been streamlined to two major releases with new options and functionalities per year, at the

beginning of May and the end of October. Monthly releases will contain only minor modifications from now on.

How do developments take place?

Throughout the year, the company gets feedback about Stoffenmanager from users, via the helpdesk and phone evaluations, during company visits and at business relationship days. In addition ISAB makes sure that Stoffenmanager complies with EU law and legislation, while keeping up with the latest scientific developments.

As well as new functionalities, the development agenda comprises:

- modifications to the structure;
- improvements in user-friendliness;

- adaptations on the basis of law and legislation; and
- scientific developments along with themes like security and import/export.

Users are an important part of the development agenda and some see specific developments as so important that they are keen to co-finance them.

Read about all the developments and the new functionalities in Stoffenmanager Version 7 at: www.stoffenmanager.nl.

↓ Risk assessment

✓ You have completed your risk assessment. You can view an overview of the results below.

Risk assessment inhalation

Hazard class	Exposure class	Risk Priority
C	1	III

Risk assessment eyes

Hazard class	Recommended eye protection	Remark
C	Adequate eye protection must be worn: Wear safety glasses with side protection.	Depending upon the task, the recommended eye protection is not always needed

⚠ Warnings

H225	BEWARE: Your protection is inflammable
H411	Attention: Your product possesses additional environmental hazards

Legend

Hazard class inhalation and eyes (hc)	Exposure class inhalation (ec)	Risk Priority inhalation (risk)
---------------------------------------	--------------------------------	---------------------------------

-	n.a. no hazards on this exposure path	 1 low	III your third priority to improve the exposure situation
A	low	 2 average	II your second priority to improve the exposure situation
B	average	  3 high	I your first priority to improve the exposure situation
C	high	  4 very high	
D	very high	 	
E	extreme	 	

News from:

Chemical Risk Manager

International group delivers recommendations for exposure assessment tools

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21 June 2017

An international group of public and private research organisations has called for changes to tools for Tier 1 exposure assessment under REACH.

The Eteam project delivered a range of recommendations at the American Industrial Hygiene Conference and Exposition (AIHce) in Seattle in June.

The aim of the project was to determine how effective Ecetoc TRA, Mease, EMKG-EXPO-Tool, ART and Stoffenmanager were at predicting exposure through occupational inhalation. Eun Gyung Lee from the US National Institute of Occupational Safety and Health (Niosh) said that none of the tools would be suitable in all situations.

The project included a review of the mechanism for exposures to liquids in version three of Ecetoc TRA, the most frequently used tool.

The Eteam project was funded by the German Federal Institute for Occupational Safety and Health (Baua) and involved a range of European and US organisations, including:

- the Institute of Occupational Medicine (IOM);
- the Fraunhofer Institute for Toxicology and Experimental Medicine;

- the European arm of the Korean Institute of Science and Technology (KIST Europe), which is based in Germany;
- the Swiss Institute for Work and Health (IST); and
- the Swiss State Secretariat for Economic Affairs (SECO).

Further Information

www.chemicalwatch.com/crmhub/57065

Service launched to catch carcinogenic textile substances sooner

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2 June 2017

Intertek has launched a new AP/APEOs Quick Test Service, which is said to identify alkylphenols (AP) and alkylphenol ethoxylates (APEOs) more quickly in the leather goods and textile manufacturing process. The company said that the test is unique for detecting the existence of the substances in water-soluble chemical samples. APs and APEOs are on many retailers' restricted substances lists for being carcinogenic and reprotoxic.



The new test works by examining white or colourless water-soluble samples of chemicals used in the textile and leather manufacturing process, yielding a positive or negative result. Its detection limit is said to be “lower than what is set by NGOs and industry organisations and the turnaround time is faster than with traditional quantitative tests”. The cost will be calculated on a per-sample basis, varying dependent on geography, but the company claimed the cost will be lower than traditional quantitative tests.

Further Information

www.chemicalwatch.com/crmhub/56598

US research links styrene exposure and worker lung disease

2 June 2017

Research published in the American Journal of Industrial Medicine by the US's National Institute for Occupational Safety and Health (Niosh) has linked occupational exposure to styrene with increased lung disease through the analysis of 55 published studies. The study found ten cases of obliterative bronchiolitis, which causes scar tissue and inflammation in the small airways. All were linked with substantial styrene exposure. The analysis also revealed a link with asthma.



The Niosh recommended exposure limit (REL) for styrene is 50 parts per million (ppm) over an eight-hour work day. Styrene is listed as a carcinogen on California's Proposition 65. In May, the Office of Environmental Health Hazard Assessment adopted a 'no significant risk level' of 27µg/day, whereas the Styrene Information and Research Centre had argued for 2,100µg/day for inhalation exposure and 5,600µg/day for oral exposure.

Further Information

www.chemicalwatch.com/crmhub/56603

HazChem@Work project paves the way for permanent database

2 May 2017

The final report of the HazChem@Work project has concluded that an EU database on chemicals in the workplace, based on the database the project itself drew up, “would provide a sound base for political decision making”. Such a database would need at least 50 data providers, resources to keep the database running, and

collaboration to harmonise terms and definitions, plus a ‘responsible host’, ideally an EU organisation.

HazChem@Work secured 1,397 datasets on 204 substances from eight providers; it was estimated that 80-100 more European institutions have relevant sets of data, the European Chemicals Agency (Echa) included, but data protection rules hindered attempts to gain access to them. The project itself ran from September 2014 to October 2016.

Further Information

www.chemicalwatch.com/crmhub/55503

Echa to launch website for workers

20 April 2017

Echa said in April that it will develop a website aimed at consumers and workers to provide information about how relevant authorities are protecting them from hazardous chemicals. The site will enable the groups to make safer choices and exercise their rights, as well as raising demand for more information on chemicals. Information on nanomaterials will also be available.

In related news, following an in-depth customer insight survey in 2015, the agency will make information on chemicals, public consultations and support and information relevant to SMEs and consumers. more visible on its website this year. By 2018, users will be able to create a profile and subscribe to specific news updates.

Further Information

www.chemicalwatch.com/crmhub/55356

South Korea identifies 322 new substances for workplace safety measures

12 April 2017

South Korea's Ministry of Employment & Labour (MoEL) has identified 322 new substances manufactured or imported last year that require specific measures to address their risk to workers. Of these, 81 pose particular risks for acute and/or reproductive toxicity.

The list of substances contains detailed safety concerns and recommended measures for tackling them. For example, to protect workers handling the chemicals, the ministry plans to order manufacturers and importers to take actions such as fitting suitable ventilation, or directing them to provide safety data sheets. These will include information on the dangers that the substances present and how to work with them. MoEL will also carry out inspections on companies to ensure the implementation of these measures.

Further Information

www.chemicalwatch.com/crmhub/55100

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Hazard

Tox, ecotox, environmental fate, physchem resources



Exposure

Resources for modelling, measurement and monitoring



Risk

Resources for assessment and characterisation



Data Submission

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