

CURRICULUM VITAE Scheffers, Th.M.L.

Name	Scheffers, Theo
Title	Ir.
Year of birth	1953
Nationality	Dutch
Profession	Senior Consultant Industrial Hygiene & Chemicals Management



Profession	Self-employed appraiser of occupational chemical exposure www.TSAC.nl
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Employment Record

<i>2023 – today</i>	Appraiser of Solvent exposure, member of the TSB Expert Panel, RIVM
<i>2018 – today</i>	Partner, Shareholder, employee DOHSBase BV/TGR
<i>1994 – 2018</i>	Partner, employee DOHSBase VOF
<i>2005 – 2012</i>	DOHSBase BV, Royal Haskoning Nederland BV
<i>1994 – 2005</i>	consultant, Scheffers IHPC
<i>1981 – 2005</i>	Industrial hygiene, health surveillance and occupational toxicology DSM Limburg BV
<i>1979 – 1981</i>	Scientific Occupational Health Hazard researcher, TNO Health, Medical Biological Institute

Certifications

<i>1997-2015</i>	Occupational Hygiene manager (SKO #121718)
<i>2004-2014</i>	VCA Basic elements of Safety SCC
<i>1980-</i>	Epidemiologist B

Projects

1992-	Develop ideas on hierarchy and read-across for limit values, measurement methods, physicochemical properties and health-hazard classifications of chemicals at the workplace, which are operationalized in DOHSBase an easily accessible database application for health and safety experts, distributed by the micro-enterprises DOHSBase VOF/BV
2021-	Validation of special techniques in exposure assessment: the EN689 preliminary test, priors in Bayesian exposure modelling, ANOVA and other methods to distinguish subgroups

2021	NVvA symposium presentation on retrospective exposure assessment using different models and international databases
2020	Training 300 appraisers on EN689 exposure assessment strategy and compliance testing in the Netherlands and Belgium
2019	Quantitative analysis and validation of a nationwide safe working procedure for the asbestos containing (<15%) windowsill renovation in residential homes.
2018	Estimating the SEG GM and GSD's of Silica PAS workplace air measurements with 95% below the level of detection using HYGINIST and NDEXPO.
2017 – 2018	Retrospective exposure assessment and CTE dose-response in a liability claim of spray painting.
2014 – 2016 Maastricht, the Netherlands/ Lyon France	Consultancy for Solvay (France/Belgium): validation of the Solvay OEB system in the public domain and development of a methodology to compare and align HB-engines. See publication: http://www.tsac.nl/publicaties/annhyg.mew050.full.pdf
2013-2017	Constructing a chemical substance database health hazard database for a hospital
2013-2017	European project: Update EN 689
2013	Contributing to BW_Stat development. See http://www.tsac.nl/websites.html#Noncompliance_testing
2013	Consultancy for Trespa BV (Weert, the Netherlands): Substance identification, Analysis of exposure measurements
2012-2013	Consultancy for Aluchemie (Rotterdam, the Netherlands), Alcan (France), RioTinto (world-wide): <ul style="list-style-type: none"> • Compliance based engineering & innovation • Risk potential based substance substitution • feasibility studies OELV adjustment • Retrospective cancer cohort study • Company Biological Monitoring limit value for Coal tar Pitch
2012 – to date Maastricht The Netherlands	Chemical agents consultancy: <ul style="list-style-type: none"> • exposure assessment: priority setting, strategy, quantification (modelling & sampling), compliance testing, factor analysis. • workplace air limit setting (OELV, DN/MEL, kick-off),

- regulatory compliance and feasibility studies,
 - risk measurement measures,
 - compliance based engineering & innovation,
- See further: <http://www.tsac.nl/info.html>

2012 – to date
Maastricht The
Netherlands

Specific for the Netherlands:

Ondersteuning van diverse bedrijven bij:

- De zelfinspectie gezond en veilig werken met gevaarlijke stoffen,
- het vaststellen van (bedrijfs)grenswaarden binnen het nieuwe stelsel,
- SER haalbaarheidstoets voor grenswaarden kankerverwekkende stoffen zonder drempeldosis,
- (Kick-off) grenswaarden voor BRZO en andere chemie bedrijven

Zie <http://www.tsac.nl/info.html#specific>

2005 – to date
The Netherlands

Workshops on Exposure assessment and Occupational Exposure Limit setting

See <http://www.dohsbase.nl/en/products/workshops/>

1989 – To date
Maastricht/Eersel, The
Netherlands

Developing and distributing Industrial Hygiene software:
HYGINIST
DOHSBase
BW Stat

Professional Education

1977

Vrije Universiteit , Certified Teacher in Chemistry.

1979

Agricultural University Wageningen, Master of Science in Environmental Health & Hygiene

Professional Memberships

Dutch Occupational Hygiene Society (Chair in 2002)
American Industrial Hygiene Association, former member of Exposure Assessment Strategies Committee and the WEEL Committee

American Conference of Governmental Industrial Hygienists

British Occupational Hygiene Society

Belgian Society of Occupational Hygiene

Dutch Society for Epidemiology (until 2017)

Special Skills

Chemistry, Toxicology, Epidemiology, Industrial Hygiene, Risk management measures, Exposure assessment.

Control regime and process intervention.

Communicator & worldwide networker.

IT applications (Office, web design) and programming in dBase, Excel & Visual Basic

Key Qualifications

More than 35 years practical experience in controlling and managing chemical exposure risks in (bio)chemical industry, with both manufacturers and downstream users.

Main working areas: exposure assessment, dose-response of health and workplace exposure surveillance data, exposure limit value setting, decontamination projects (asbestos, legionella), Occupational Epidemiology, Chemicals Management, company interest (product stewardship), chemical policy and regulatory compliance.

Since 2005 involved in the EU Reach registration with a focus on exposure scenarios and risk management measures.

Practical, risk control experience with organic volatiles, polymers, fuels, lubricants, pharmaceuticals, fragrance materials, tobacco, catalysts, metals and their oxides and salts, minerals, fibres and nano materials

After the MSc Environmental Health at the University of Wageningen in 1979 the professional career as an occupational health researcher within TNO, performing a health hazard survey on painters' solvent exposure. A possible relation between solvent exposure and preliminary dementia was first established in the Netherlands. The awareness of employers, employees and government to reduce exposure was initiated. The professional tools to assess, manage and control solvent exposure and an effective regulation and a control regime on solvent exposure in general were developed.

Joined in 1981 DSM Chemical Company in Geleen (the Netherlands) with the task to establish a cost-effective workers protection regime on chemical exposure, noise and other occupational loads.

The skills obtained on toxicology, industrial hygiene and epidemiology in industry are since 2005 used within Royal Haskoning to help, as a senior consultant, enterprises worldwide with (1) occupational health and hygiene programs and policies (2) compliance with REACH and other regulatory programs (3) general and in-house occupational exposure limits (OEL; product and workplace, large & limited databases) and assessment methods including hazard and risk ranking system for complex mixtures (4) database systems to record work history, exposure assessments, workplace air measurements and medical

surveillance data, (5) statistical analysis of collected series hygiene and health data (6) worker protection control regimes and good work practices, based on the state of the art scientific risk control including the technical and socio-economic feasibility (7) community outrage risk perception tools and controls (8) information and training.

In 30 years a worldwide network is acquired in industry, academia and governmental organisations through participation in international trading associations and working groups, by performing projects, giving presentations and professional development courses at conferences, publishing (scientific) articles, IH freeware (HYGINIST) and the DOHSBase OEL & Compare software, and being an active member of several international Industrial Hygiene societies (BOHS, AIHA, ACGIH). Involved in developing the Dutch Occupational Hygiene Society (NVvA), chair in 2002.

Languages

Dutch
English
French
German

Speaking

Native
Excellent
Good
Basic

Reading

Native
Excellent
Good
Fair

Writing

Native
Excellent
Fair
Basic

Finished projects

2005 – 2013
's-Hertogenbosch,
Maastricht The
Netherlands

See also <http://www.tsac.nl/websites.html#Publication>

Feasibility studies for the revision of Dutch legal OELs (wood dust, BaP in coal tar Pitch)

2005 – 2012
's-Hertogenbosch,
Maastricht The
Netherlands

Substitution of high hazard/SVHC substances in the manufacturing of articles

2008 – 2010
Nijmegen, The
Netherlands

REACH registration CRM and >1000 t/a substances
Project leader/expert
Substance registration, TPR support, OR support, CSR exposure assessment, DNEL derivation.

2008 – 2009
's-Hertogenbosch, The
Netherlands

Knowledge sharing project financed by Dutch Government
Project leader and author
Development of a web based expert dossier on the industrial

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	Hygiene aspects of Volatile Organic Substances.
2008-2009 <i>The Netherlands</i>	REACH exposure assessment workshops Project leader/coach Development and performing in house and public EA workshops
2007 – 2009 <i>The Netherlands</i>	Cancer screening within a working population with PAH exposure Project leader/epidemiologist Performing an epidemiology study and to establish cancer standardized Incidence Ratio's (SIR)
2007 <i>Nijmegen/s- Hertogenbosch, The Netherlands</i>	REACH Annex IV registration Project leader Check if chemicals fulfil requirements for registration as substances causing minimal risk.
2006 – 2008 <i>The Netherlands</i>	Exposure assessments in chemicals manufacturing Project leader/expert Baseline chemical exposure assessment and the inventory of the most effective control measurements necessary to come in compliance with the occupational exposure limits. Occupational health program (medical examination) and group analysis of medical
2007 <i>Utrecht, The Netherlands</i>	Exposure risk assessment of small scale use of chemicals Senior Consultant A detailed, semi-quantitative modelling of chemical exposure risk within a laboratory of a University Medical Centre involving a large number of chemicals used, low frequency and duration of contact, small volumes handled, no measurement results and lacking occupational exposure limits
2007 <i>Netherlands, The Netherlands</i>	An inventory on the use and control of nano materials Project leader/expert A project plan was proposed to make an inventory of the use, to share knowledge on current control measures and to stimulate thinking on how to permit and monitor working with new materials if health risks are suspected but unknown both in nature and magnitude.
2006 – 2007 <i>Den Haag, The Netherlands</i>	SER Guidance for Exposure Limits and Good Practices for small and medium Enterprises Project leader/Expert Project to develop an internet guideline and tool to find and/or develop the most applicable Occupational Exposure Limit(s) and/or Good Practices for Small and medium Enterprises

	handling chemicals at the workplace www.veiligwerkenmetchemischestoffen.nl
1995 – 2006 Rotterdam, Nijmegen The Netherlands	Industrial Hygiene statistics courses Expert/Senior Consultant Providing a course on Industrial Hygiene Statistics for groups of industrial hygienists within a chemical company. Compliance testing, lognormal goodness-of-fit, sample size estimation. (HYGINIST software)
2006 – 2006 different sites in Europe,	industrial hygiene program within paper chemicals company Coach/expert Coaching and auditing the European industrial hygiene program
2005 – 2007 Roermond, The Netherlands	Industrial Hygiene support of a thermo insulation production plant Project leader/Senior Consultant/Expert Construction and analysis of an occupational exposure database Epidemiological analysis of audiometric data collected in the health surveillance noise hearing program. Dose response analysis of lung function and irritating agents
2005 -2012	Coaching junior consultants.
2002 France	Industrial Hygiene/Occupational Health audit/exposure assessment in several aluminium propeller producing plants
1981 – 2005 Geleen, The Netherlands	Product safety and working condition control Industrial Hygiene Uniform company and multi company policy for industrial health and hygiene including assessment methods, occupational limit setting, health surveillance, control regimes and registration for physical and (bio)chemicals occupational loads. Exposure assessments (chemical & noise) in plants, maintenance workshops and laboratories Feasibility study of a prospective cohort study on the reprotoxic properties of Acrylnitril in China on behalf of the world wide manufacturers organisations. CEFIC lower olefins project on validated measurement methods for Ethylene. Defending companies interest in national and international development of regulation chemicals on the workplace through

VNCI (NI), CEFIC (EU) and CMA (USA).

Cancer morbidity and mortality analysis of current and retired employees.

Asbestos policy and removal.

Longitudinal analysis of variance of hearing loss within and between plants and workshops.

Special projects on new occupational loads like Legionella and Nanomaterials

Analysis of lung function data collected by the health department of a fertilizer plant (UK)

Pilot projects "Self assessment health performance" in plants in the Netherlands and Sweden

Assessment of safe working with potent sensitizers (Austria)

Epidemiological evaluation of health surveillance data collected every six months among workers exposed to Vinylchloride monomer

Analysis of hearing loss data among production, maintenance and non-exposed workers

CEFIC/ECETOC project on Polypropylene and colon cancer.

*1979 – 1981
Rijswijk, The Netherlands*

Health Hazard Survey among maintenance painter in the Netherlands.
Scientific researcher
Solvent exposure assessment, health surveillance analysis.
Does solvent exposure increase aging in mental performance?

Public contributions

In English see http://www.tsac.nl/public_en.html
In Dutch see http://www.tsac.nl/public_nl.html

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

Maastricht
Theo Scheffers

A handwritten signature in black ink, appearing to read 'T. Scheffers', written over a horizontal line.