

Generation of method lists

After selection of substances and substance groups the next step was to compile the lists of available methods for the different substances. For this work several basic requirements were defined, as given below.

Origin of the methods

It was decided that methods would only be considered if published in a compilation of methods for workplace air measurements. Not to be listed are:

- Methods designed for static (area) sampling only

Workplace air methods have to be designed for personal exposure measurement. The sampling system has to be as close as possible to the breathing zone of the worker. Only methods using personal air samplers are listed.

- Methods developed for ambient air

Environmental conditions and substance concentrations in ambient air and workplace air can be very different and not comparable. For this reason, measurement conditions of workplace air measurements and ambient air measurements are different. Ambient air measurements are normally static sampling methods with a high air flow.

- Methods developed by companies without examination by an independent group

Methods given in company information are normally not evaluated according to EN 482 and refer to company related products. Products with similar performance from other companies are not listed.

The accepted sources are listed in the table. For lack of space only the abbreviations of the method publishers are given in the method lists.

Table: Accepted sources of methods for measurement of chemical agents at workplaces

Abbreviation	Language	Bibliography	Internet
EN	English (French/ German)	European Organization for Standardization (CEN), 36 Rue de Stassart, B-1050 Brussels, Belgium European Standards also available from National Standards Bodies, e.g. AFNOR, AENOR, BSI, DIN, SIS etc	http://www.cenorm.be/ with costs
ISO	English (French)	International Organization for Standardization (ISO), 1, Rue de Varembé, Case Postale 56, CH-1211 Geneva 20, Switzerland International Standards also available from National Standards Bodies, e.g. AFNOR, AENOR, BSI, DIN, SIS etc	http://www.iso.org with costs

Abbreviation	Language	Bibliography	Internet
BGI	German	<p>Deutsche Gesetzliche Unfallversicherung (DGUV) (BGI)</p> <p>Von den Berufsgenossenschaften anerkannte Analysenverfahren zur Feststellung der Konzentration krebserzeugender Arbeitsstoffe in der Luft in Arbeitsbereichen, Carl Heymanns, Cologne, Germany</p> <p>Loose-leaf edition, 71 methods since 1983, (some methods are published in DFG (E))</p>	<p>http://www.dguv.de/inhalt/praevention/pub_med/bgvr/index.html</p> <p>free</p>
BGIA	German	<p>BGIA – Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung</p> <p>BGIA-Arbeitsmappe, Messung von Gefahrstoffen, Sankt Augustin.</p> <p>Erich Schmidt Verlag, Berlin,</p> <p>Loose-leaf edition, 34 supplements since 1988</p>	<p>www.bgia-arbeitsmappedigital.de</p> <p>with costs</p>
DFG (D)	German	<p>Deutsche Forschungsgemeinschaft (DFG)</p> <p>Analytische Methoden zur Prüfung gesundheitsschädlicher Arbeitsstoffe – Luftanalysen. Ed.: H. Greim, Wiley-VCH, Weinheim, Germany</p> <p>Loose-leaf edition, 13 supplements since 1976</p>	–
DFG (E)	English	<p>Deutsche Forschungsgemeinschaft (DFG)</p> <p>Analyses of Hazardous Substances in Air. Wiley-VCH, Weinheim, New York</p> <p>Volumes 1 to 9, 1991 to 2005 From Volume 9: The MAK collection, Part III “Air monitoring methods”</p>	–

Abbreviation	Language	Bibliography	Internet
MDHS	English	Health and Safety Laboratory (HSL), Harpur Hill, Buxton, Derbyshire SK17 9JN, UK Methods for the Determination of Hazardous Substances (MDHS) 100 methods since 1979	http://www.hse.gov.uk/pubns/mdhs/
Metropol	French (English)	Institut National de Recherche et de Sécurité (INRS) MétroPol – Métrologie des polluants (Recueil des méthodes de prélèvement et d'analyse de l'air pour l'évaluation de l'exposition professionnelle aux agents chimiques). INRS, Paris CD edition with cost (new edition every 1 or 2 years) and website (free downloadable PDF files) updated as needed, at least twice a year. Methods developed since 1970	http://www.inrs.fr/metropol free
MTA	Spanish (English)	Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT), Torrelaguna 73, 28027 Madrid, España Métodos de Toma de muestra y Análisis (MTA) Methods of Sampling and Analysis 70 methods since 1987	http://www.mtas.es/insht/information/otros/mtm.htm http://www.mtas.es/insht/en/information/mtm_en.htm Paper edition with cost (Spanish) Free downloadable PDF files from the website (Spanish and English)
NIOSH	English	National Institute for Occupational Safety and Health (NIOSH), 4676 Columbia Parkway, Cincinnati, OH 45226-1998, USA NIOSH Manual of Analytical Methods (NMAM), DHHS (NIOSH) Publication 94-113 (August, 1994), 1 st Supplement Publication 96-135, 2 nd Supplement Publication 98-119, 3 rd Supplement 2003-154 NMAM on CD-ROM can be ordered from the website	http://www.cdc.gov/niosh/nmam/ free

Abbreviation	Language	Bibliography	Internet
OSHA	English	<p data-bbox="512 271 1029 405">Occupational Safety and Health Administration (OSHA), Salt Lake Technical Center, 8660 South Sandy Parkway, Sandy, UT 84070, USA</p> <p data-bbox="512 439 927 499">OSHA Sampling and Analytical Methods</p>	<p data-bbox="1054 271 1434 338">http://www.osha.gov/dts/sltc/methods/</p> <p data-bbox="1054 439 1110 465">free</p>