IFA
Institut für Arbeitsschutz der
Deutschen Gesetzlichen Unfallversicherung

Focus on IFA's work
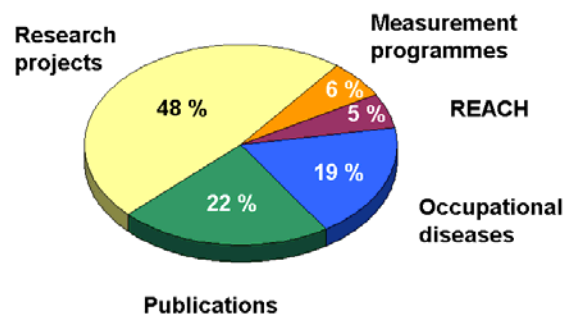
The IFA's MEGA exposure database

Problem

In accordance with Social Code VII, the German social accident insurance institutions of the private and public sector investigate the existence and concentrations of hazardous substances at the workplace. The accident insurance institutions thus identify and assess possible hazards and recommend or demand health hazard control measures. Over and above the individual case, there is also a need for interdisciplinary evaluations of the measurement results.

Activities

The IFA documents the results of industrial hazardous substance measurements by the accident insurance institutions in the MEGA exposure database (German acronym for "measurement data on exposure to hazardous substances at the workplace").

The MEGA exposure database contains over 2,100,000 measured values gathered since 1961. In the recent past, these have been joined by about 100,000 analysis findings on chemical hazardous substances and biological agents each year. Also recorded along with measured values is information on the industrial working area, the work and production processes, feedstock, protective measures, exposure situation and on the conditions during sampling and analysis.

The IFA provides the accident insurers with software enabling them to evaluate their own data.

MEGA evaluations in 2009

Users in the technical measuring services and occupational disease departments are trained how to use the software and given support on special issues.

Results and Application

The data collected by the measuring system for exposure assessment (MGU) and stored in the MEGA database are evaluated statistically by the IFA in a comprehensive approach and by the accident insurers specificly for

- retrospective analysis in the course of investigations in connection with reported substance-related occupational diseases,

- prevention, e.g. for recommendations for the monitoring of working areas,

- epidemiology,

- ascertaining the substance-specific exposure level with state-of-the-art techniques in certain work areas.

The data are selected with the aid of codes for industrial sector, field of activity, occupation (job title) and substances. Mean values, standard deviations and cumulative frequency distributions are calculated for selected data.

Area of Application

Accident insurance institutions so that they can support firms, and particularly small and medium-size enterprises

Additional Information

- Exposure database MEGA
  www.dguv.de/ifa, Webcode e20620

- Measurement system for hazardous substances (MGU). Focus on IFA's work, No. 0021

- Gabriel, S.; Koppisch, D.; Range, D.: The MGU – a monitoring system for the collection and documentation of valid workplace exposure data. Gefahrstoffe – Reinhalt. Luft 70 (2010) Nr. 1/2, S. 43-49

- Exposure to quartz at the workplace. BGIA-Report 8/2006e. Ed.: Hauptverband der gewerblichen Berufsgenossenschaften (HVBG), Sankt Augustin 2008
  www.dguv.de/ifa, Webcode e40513

- Kolk, A.; Van Gelder, R.; Schneider, G.; Gabriel, S.: Mikrobiologische Hintergrundwerte in der Außenluft – Auswertung der BGIA-Expositionsdatenbank MEGA. Gefahrstoffe – Reinhalt. Luft 69 (2009), No. 4, pp. 130-136

Expert Assistance

IFA, Division 1: Information technology – Risk management

Literature Requests

IFA, Zentralbereich