

Focus on IFA's work

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Establishing reference values for indoor workplaces

Problem

For the assessment of air quality in interiors, the German ad-hoc Working Group for Indoor Air Guide Values of the Indoor Air Hygiene Commission of the Federal Environmental Office and the Highest State Health Authorities establishes toxicologically founded guide values. The application of these guide values is currently limited as such values only exist for a very small number of individual substances.

Activities

For substances for which guide values do not exist yet, statistically derived reference values can be used for assessment.

In 2004, IFA first published reference values for the assessment of air quality at indoor work places (Indoor Workplace Reference Values, IRWs) on the basis of measured data from the accident insurance institutions. In the years since, the list of substances has been extended from the original 25 to 40 individual substances. This has been due to the inclusion of individual substances repeatedly detected in samples during the programme of indoor measurements at office workplaces. Furthermore substances like naphthalene and dearomatised hydrocarbon mixtures were also included in the programme for which guide values of the ad-hoc Working Group for Indoor Air Guide Values had meanwhile been established.



Report on indoor workplaces

In 2010, the measured data so far documented in the IFA MEGA exposure database were again statistically evaluated in order to obtain current indoor workplace reference values.

Results and Application

The data were obtained with the aid of a uniform measurement strategy belonging to the Measurement System for Exposure Assessment of the German Social Accident Insurance Institutions. The body of data yields a representative picture of room air concentrations at indoor workplaces in Germany today. From the statistical evaluation of the measurement, current indoor workplace reference values were proposed that can be used for the assessment of indoor air quality.

It should be borne in mind here that, unlike guide values, reference values do not permit any assessment of health risks. Consequently, compliance with the reference values does not necessarily exclude health risks. Conversely, risks cannot be automatically assumed in case the values are exceeded. However, if the values are significantly exceeded, this may well suggest that the room contains emission sources that may cause health problems.

Area of Application

Companies in all sectors, accident insurance institutions, public authorities, and employees at office workplaces and their superiors

Additional Information

- von Hahn, N.; Van Gelder, R.; Breuer, D.; Hahn, J.-U.; Gabriel, S.; Kleine, H.: Ableitung von Innenraumarbeitsplatz-Referenzwerten. Gefahrstoffe – Reinhalt. Luft 71 (2011) No. 7/8, pp. 314-322
- Indoor workplaces
www.dguv.de/webcode/d6274 (in German)

Expert Assistance

IFA, Division 3: Hazardous substances: handling – protective measures

Literature Requests

IFA, Central division