

Abstract Book

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risks caused by chemicals. Therefore the European Commission initiated a study to determine the "baseline" before REACH comes into force and to develop a methodology to monitor changes after REACH implementation.

Material and methods

The developed tool addresses risks for the environment, workers, consumers and humans via the environment. Two figures are calculated for each substance: the "risk score" and the "quality score". In order to determine the risk score, an exposure assessment and a toxicity assessment are conducted. A subset of high, medium and low production volume chemicals (HPV, MPV and LPV respectively) has been selected.

Results

After a preliminary test on 15 randomly selected substances, the methodology has been applied to 115 substances. Final results focusing on the consumers and/or humans via the environment will be presented. First results indicate so far that the quality of the assessments is considerably better for HPV substances. Low risk is already associated with most of these HPV substances. Even though the MPV and the LPV substances may only be assessed with a low quality, the risk at baseline is not always assumed to be high.

Conclusion

The proposed method appears to be feasible. Knowledge on properties and toxicity of chemicals that will be obtained within REACH regulation will lead to far more accurate assessments and better risk management measures.

Abstract 359

Factors Influencing the Development of Warnings on Regulated and Non-Regulated Consumer Products

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Many health claims arise from historical exposures to various chemicals or consumer products. When assessing whether proper actions had been taken at the time, it is important to consider the contemporaneous regulations and societal expectations for warning against these hazards. A historical assessment for product warnings was conducted to better understand the evolution of the kinds of hazards warned against over the last century. In our work, particular focus was given to different classes of consumer products, such as heavily regulated products known to be inherently dangerous if misused (i.e., prescription and over-the-counter drugs), heavily regulated but not inherently dangerous products (i.e., airbags), and unregulated products (the vast majority of consumer products). It was observed that early guidelines and regulations for product labels and warnings were focused on acutely dangerous products, such as medical drugs, pesticides, and poisons that could be fatal if accidentally or intentionally misused. As the knowledge about chronic toxicity increased, warning labels were applied to a greater number of products and existing warnings became more specific. These warnings, however, over time, continued to focus on products that were either heavily regulated or considered intrinsically dangerous. In response to the increased amount of state and federal regulations during the 1970s and the general trend toward greater sharing of information, a larger fraction of regulated products were required to bear specific warning labels. Beginning in the early 1970s, standards were established for labeling many non-regulated consumer products.

Abstract 28

Characterization of Ultra Fine Devices

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Personal computers, monitor screens and other office equipment are suspected as possible sources of indoor air pollution. This is in contrast to current indoor related research, because of the focus on negative health effects caused by outdoor air pollution and photocopyers during operation. For the first time, the German Federal Government of Germany has created two eco-labels for office equipment. Both labels recommend a gravimetric emission limit for fine particles (TSP), which clearly underestimates the risk of ultrafine particles (equivalent diameter < 0.1 µm (PM_{0.1})). In order to reduce emissions from hardcopy devices the size of the particles is important. Today, it is the received opinion that the human exposure is mainly caused by ultrafine particles. We have also performed a number of studies on toner ingredients in office chambers and real office rooms under realistic conditions. Our findings prompt some measures to reduce emissions from hardcopy devices. Other factors like humidity have influence on the emission behavior. The emission of ultrafine or semi-volatile organic matter (VOCs) is also an important part of the observed particle distributions with

6C: Emerging Sensors for Personal Exposures and Toxic Air Pollution

Historically, human exposure to air pollution is defined by the amount of ambient pollutant concentration in the environment does not necessarily mean the actual exposure by individuals as they proceed through their daily activities at levels at the scale of the individual; the actual exposure to the pollutants to individuals are exposed to. The development of sensor technologies allow these measurements of potentially many analytes simultaneously and in real-time observation of exposures at the individual level.

Recently, it has become apparent that a new approach to understanding the external exposure to pollutants, assessing the biological response to those pollutants, and the Health Initiative (GEI), NIEHS is taking a new approach to understand the complex interplay between environmental exposures and disease process. Since its creation in 1990, NIEHS has focused its research on development of