An examination of the collection of contextual data with exposure measurements for occupational exposure modelling

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ABSTRACT

More than 140,000 substances were pre-registered under the REACH legislation. It is estimated that for a large proportion of these substances there is very little actual human exposure data available. Therefore, an exposure model will have to be used (the Advanced REACH Tool (ART)) to estimate inhalation exposure. For ART to be relevant for industry and Member States it needs to give realistic predictions of exposure for specific tasks carried out in the workplace. For the model to do this it’s important to populate the empirical part of the model with relevant contextual data.

The aim of this project was to examine the types of contextual information currently reported to consider whether the data was sufficient to populate ART. This was carried out by evaluating the contextual information contained in reports within the UK’s National Exposure Database and surveying occupational hygienists.

The examination of the NEDB studies and the information provided by occupational hygienists in the snap shot survey indicated that there is wide variation in the types of contextual information reported. When comparing the NEDB reports and the survey results with the ART determinants the number of reports that contain the relevant contextual information was low.

When carrying out air sampling surveys individuals have primary (produce a report for the client) and secondary (comply with relevant legislation) objectives. In order for data to be used to populate ART, occupational hygienists will need to give consideration to tertiary objectives (e.g. future uses of reports). The development of a standard of contextual information would aid those producing reports to understand what information should be included to meet these tertiary objectives. However, even if a standard was available individuals would still need to be ‘persuaded’ of the benefits of reporting more contextual information.