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# **Approaches and Considerations for Setting Occupational Exposure Limits for Sensory Irritants: Report of Recent Symposia**

Over the past 50 years significant strides have been made in reducing occupational exposure to airborne chemicals. To a large extent, the impetus behind the reductions has been the identification of presumably safe levels of exposure, or occupational exposure limits (OELs). Most of the reduction in exposure has been to chemicals such as hepatotoxins, neurotoxins, nephrotoxins, and carcinogens that cause frank toxic effects. Recently, however, a number of industrial hygiene and occupational medicine initiatives have sought to identify acceptable levels of exposure to sensory irritants and reduce exposure to this class of chemicals. This article presents an overview of the field with emphasis on the work presented at two symposia sponsored by the Chemical Manufacturers Association: "How Do We Set an Occupational Exposure Limit (OEL) for Irritation?" (1998) at the American Industrial Hygiene Conference and Exposition and "Respiratory Tract Irritation and Olfaction Conference" (1997). The two symposia reviewed clinical and experimental methods used to assess odor and sensory irritation, to increase understanding of the research needed to establish OELs for sensory irritants, and to discuss how to use this information to identify appropriate values. The symposia illustrated that research in this area is evolving quickly and that there is already sufficient understanding to permit scientists to identify chemicals likely to be sensory irritants. Further, there appears to be an ample number of research methods for identification of airborne concentrations that should protect most workers. This article summarizes some of the key points raised at these symposia and suggests areas deserving of future study.

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