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Oral Presentation

## **S31. THE LABORATORY APPROACH TO WORKERS EXPOSED TO XENOBIOTICS**

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Exposure to toxic substances in the workplace is increasing due to improvements in the industrialization. When compared with the first decades of this century, it has been known that types and numbers of toxic substances in the workplace has increased enormously in recent years. This also has become an environmental problem, besides occupational health problems.

In terms of occupational health and safety, determination of toxic substance is mainly carried out by air monitoring. Exposure to toxic substance can also be determined by analysis in biological samples such as blood and urine. It is important to determine that source of exposure is the workplace. On the other hand, severity of exposure can be evaluated according to different guidelines of various organizations like American Conference of Governmental Industrial Hygienists (ACGIH). But still, there is no consensus about some exposure types, like manganese, yet.

Time of sampling, sample type, selection of method and interpretation of results are major determinants of monitoring the workplace. Samples should be taken at the end of work shift and should be analysed as quickly as possible. Urine samples are mostly ideal for solvents while urine, whole blood and serum can be used as biological samples for metals' analysis. Methods should be selected according to substance variety and detection limits. Results should be interpreted according to types of substances which the workers have been exposed, duration of exposure and biological exposure limits.