

Use of Direct Reading Instruments

Monitoring for hazardous substances requires the use of defined and tested methodology, e.g. MDHS methods, to determine accurate assessment of personal exposure levels. However, real-time monitoring, using portable direct reading equipment, can be extremely helpful at determining the 'where and when' of peak exposures which may occur throughout a work period, in order to assess whether existing control measures are adequate. This is particularly relevant where the acute effects of a substance could be immediately dangerous to life or health, e.g. when it is foreseeable that asphyxiants and/or explosive gases or vapours may be present, so that immediate action can be taken to prevent or mitigate risk of exposure.

The information from direct reading instruments, when combined with exposure assessments, can enhance details of an exposure profile and lead to a more detailed determination of where exposure controls are needed.

Many direct reading instruments are able to measure a range of hazardous substances, whether this is gases/vapours or dusts/aerosols. Direct reading instruments may either be calibrated for the hazardous substance to be measured (i.e. the reading relates directly to the hazardous substance of interest) or require a calibration factor to be applied (i.e. the reading is adjusted using the calibration factor in order to correlate to the hazardous substance of interest).

Direct reading instruments can also be useful for leak detection, LEV commissioning and for training operators.

As with all monitoring equipment, direct reading equipment needs to be calibrated and maintained by a competent person according to the manufacturer's instructions.