

**CHLORINE DIOXIDE:
A REVIEW OF WORKPLACE MONITORING TECHNIQUES**

SUMMARY

- ° Current methods for measuring workplace concentrations of chlorine dioxide are modifications of procedures and equipment for measurement of chlorine.
- ° Two manufacturers - Interscan and Nova - are actively working on instruments to measure chlorine dioxide in the presence of chlorine.
- ° The principle of operation involves a liquid scrubber system to remove chlorine from the sample gas and allow separate measurement of chlorine and chlorine dioxide.
- ° These instruments will probably require a high degree of maintenance and attention to calibration. Their reliability under field conditions is not yet established.
- ° Chlorine monitors can be used for chlorine dioxide detection if the characteristic response to chlorine dioxide is known. The monitor must be sensitive enough to detect low levels of chlorine dioxide, and would only provide a true reading in the absence of chlorine.
- ° The impinger sampling method remains the most reliable means of selectively determining workplace concentrations of chlorine dioxide.
- ° Detector tubes provide a quick spot check for chlorine dioxide. Interference from chlorine and operation near their detection limit restricts their usefulness.