

Chapter

1. Asbestos Exposure Assessment, Risk Identification, and Substitutes

Section

B. Asbestos Exposure Assessment and Control in Occupational Settings

No./Title

a-4. Fibres in air: sampling and evaluation of by phase contrast microscopy (PCM). Asbestos: the analysts' guide for sampling, analysis and clearance procedures

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Bibliographic ID

HSE. 2005. p. 45-63. Appendix 1

Introduction

Asian context

This method can be used not only for measuring airborne asbestos concentration in the workplace but also for clearance testing of asbestos abatement sites in the UK. This method shows an example for Asian countries that the PCM-based method can be used for the site assessment for reoccupation of asbestos abatement sites, although the US, EPA adopts the TEM-based method for same purpose in AHERA.

Critical appraisal

Detailed uncertainty budget of the method is exemplified in this method. Other fibers which are not asbestos may be included in the count unless differential counting is performed. HSE recommends that discrimination against non-asbestos fibers should be applied after the initial total count. Several differential counting techniques of airborne asbestos fibers are well discussed in MDHS 100 by HSE.

Unique keywords

Abstract

Background: This sampling and analytical method was described for the measurement of airborne fiber concentrations and recommended by the HSE in the UK. This method replaced the previously recommended guidance in MDHS39/4.

Objective: This method measures the airborne concentration of countable fibers using PCM. Countable fibers are defined as particles with length >5 µm, width <3 µm and aspect ratio (length: width ratio) >3:1. The collection of airborne asbestos fibers using calibrated sampling pumps with mixed-cellulose ester (MCE) filters and the analysis by PCM are described.



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Annotation

Fact 1

- Annotation is not provided for this factsheet.

Fact 2



Fact 3



Fact 4



Fact 5



References

www.hse.gov.uk/pubns/books/hsg248.htm