

V. EXPOSURE LEVELS IN THE AMBIENT ENVIRONMENT

Due to the low absolute quantity and - from a analytical point of view even worse - the extremely low relative quantity of asbestos compared with other inorganic solid substances generally found in samples, it is of little wonder that there is still insufficient knowledge about the general occurrence of asbestos in the ambient environment.

In the following paragraphs a summary is given of pertinent work on this subject. It has to be kept in mind that results of different investigators even if reported in the same units, are often difficult to compare (see Chapter IV).

1. Air

1.1. In buildings

In the U.K. a survey has been made in buildings of different age where the principle types of asbestos-based buildings materials have been used (Byrom et al, 1969). More than 60 buildings of various types were included in the survey. Sampling and assessment were carried out along guidelines which were described by Holmes (see Chapter IV). The basic method is air filtration using membrane filters of suitable pore size ($8 \mu\text{m}$ or lower). The filters are examined using phase-contrast light microscopy enlargement 500 x. Fibres with a diameter $<3 \mu\text{m}$ are taken into consideration only. (see Chapter V).

The results of the survey are summarized in the Tables 1 and 2.

From Table 1 we can deduce - though with reservations - that asbestos is emitted in decreasing quantities in the series: insulation board, sprayed asbestos, asbestos cement sheeting, other asbestos containing products.

Summarizing the results of numerous measurements carried out in subway stations and public buildings with exposed sprayed insulations containing asbestos, concentrations of 10 fibres per 1000 m^3 were found using the light microscope techniques which are used in occupational hygiene. They represent a weight concentration of the order of magnitude of 10^{-6} g/m^3 which is low, but considerably higher than the asbestos concentrations found in the open air

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