

# NEWSLETTER

Newsletter from the Chrysotile Institute

For safe and responsible  
use of chrysotile

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## Up in the air (by Sophie Stone)

The asbestos controversy has become the latest in a long line of health scares. Subject to worldwide discussion, asbestos has come to be seen as a significant danger to health. As the United Kingdom continues to rid its properties of asbestos containing material (ACM), are laboratory science and government legislation really on the same wavelength?

The Health and Safety Executive (HSE) teamed up with United Kingdom Accreditation Service (UKAS) to produce a set of guidelines on how to identify the presence and type of asbestos in ACMs or air samples.

Unfortunately, the lack of an asbestos expert amongst the HSE/UKAS protocol makers has left current methodology flawed. In addition to general problems associated with any procedure lacking a fixed point (under-analysis leaving fibres misclassified or over-analysis causing skewed representation of fibre frequency), there is a more fundamental error.

The procedure demonstrates an ignorance of matching suitable levels of laboratory science to legislation requirements and limitations. Control At Work (CAW-2002) regulations state that the threshold limit of chrysotile fibre exposure in air samples is 0.3 fibre/ml of air, averaged over a period of 4 hours. For the more toxic amphibole fibres, it is 0.2 fibre/ml air averaged over 4 hours.

To support this legislation, laboratory protocol suggest the use of Polarized Light Microscopy (PLM) on the air samples (if not Electron Microscopy or Phase Contrast Microscopy) to compare and contrast sampled fibres and identify the specific type of asbestos.

Unfortunately, the concentrations outlined in the regulations are immeasurable.

Legislation cannot be enforced even if fibre types are identified. Consequently, the procedure to identify these specific types becomes obsolete.

A similar situation occurs with ACMs samples. Legislation specifies that, irrespective of serpentine or amphibole content, all low density ACMs require a licence to handle and all hard encapsulated ACMs do not.

When ACM samples are admitted for laboratory analysis, PLM is used to identify not only if asbestos is present, but also which type it is. In light of regulation limitations, this additional analysis is superfluous.

### More appropriate procedures

A well-trained and experienced surveyor conducting a simple Type I\* survey supplemented by a Type II\*\* survey should be able to determine an ACM's nature and ability to release fibres. If samples are sent to a laboratory, most asbestos can be recognized by an experienced technician without the need for expensive equipment.

In uncertain cases, a simple test with the Type II samples would be sufficient to confirm the presence of asbestos. Igniting sampled fibres at approximately 400 Celsius degrees eliminates organic fibres; any fibres demonstrating such heat resistant properties to be remaining at the end would, by definition, be "asbestos."

### But there is this one organisation...

The reason behind the inadequacies in current HSE/UKAS protocol is a lack of knowledge about the different types of asbestos fibres and applications, and how it all relates to legislation. Although there is no easy solution to this lack of contextual knowledge, one organisation has started to coordinate information in this confusing area: Asbestos Watchdog.

Asbestos Watchdog UK has been operating since November 2003. With thousands of inquiries to date, Asbestos Watchdog provides comprehensive advice on all asbestos related matters, ranging from sample collection and laboratory testing, to understanding the latest legislation and the duty to manage.

As a conclusion, let us remind you that if different sectors start to pool their knowledge, unnecessary expense can be avoided and responsible management of asbestos and ACMs might just be possible.

\* Type I survey is a presumptive survey. It assumes that any suspect material contains asbestos and, accordingly, determines its likelihood of emitting fibres.

\*\* Type II survey involves the collection of representative ACM samples for laboratory identification. Type III survey is an extensive sampling program for when demolition is likely to take place.

Source : Up in the air by Sophie Stone – Asbestos Watchdog ([www.labnews.co.uk/features](http://www.labnews.co.uk/features) (11/24/2004))