

# METHOD STATEMENT



## Determinand:

Asbestos as defined in the *Control of Asbestos Regulations 2012 (CAR)*.

Here asbestos is defined as any of the minerals chrysotile, crocidolite, amosite, fibrous anthophyllite, fibrous actinolite or fibrous tremolite, or any mixture of them.

## Matrix:

Soil and Bulk materials

## Principle of Method:

A preliminary visual examination of the whole of the bulk sample (or in the case of soils, a representative sub-sample) is made to assess the sample type and the requirement for any treatment to release or isolate fibres present. A detailed and thorough search under a stereo microscope is made to classify the fibre types present. Representative fibres are mounted in appropriate Refractive Index (RI) liquids on slides and the different fibrous components are identified using PLM. If no asbestos is found then additional searches for small asbestos fibres on random sub-samples are undertaken using PLM.

## Sampling and Sample Preparation:

The test is usually carried out on the sample as received, however soil samples maybe sub-sampled prior to analysis.

## Interferences:

There are some fibres with morphological and/or optical properties similar to asbestos. These fibres occur infrequently but the analyst needs to be aware of their existence and distinguishing characteristics in PLM. Five types of fibre, which can resemble chrysotile and some mineral fibres, which superficially resemble amphiboles are discussed in detail in Analysts Guide paragraphs A2.41-A2.53.

## Performance of Method:

Uncertainty of Measurement is calculated from the correct identification of internal AQC's, AISS and AIMS samples over a two year period by all trained analysts. It does not include duplicate samples.

No. of AQC's analysed	No. of AQC's correct ID	No. of AIMS and AISS samples analysed	No. of AIMS and AISS samples correct ID	Accuracy	Uncertainty
137	133	96	95	97.85%	2.15%

## References:

Control of Asbestos at Regulations 2012, ISBN 9780 111 521083.

Asbestos: The Analysts Guide for Sampling, Analysis and Clearance Procedures 2005 (HSG248): HSE Books ISBN 9780717628759.

Asbestos in Materials (AIMS) scheme, Administered by: Health & Safety Laboratory, Broad Lane, Sheffield, S3 7HQ.

BS EN 14175-2:2003 Fume cupboards. Safety and performance requirements ISBN 978 0 580 84308 2

Hughes D A Literature Survey and Design Study of Fume Cupboards and Fume Disposal Systems Science Reviews 1980 (Occupational Hygiene Monographs No 4) ISBN 0905 927 508.

LAB 30 – Application of ISO/IEC 17025 for asbestos sampling and testing.

Asbestos: The survey guide 2012 (HSG264), ISBN 9780717665020.

