

Formative Practical Assessment — Guidance for Tutors and Candidates

P403 – Asbestos Fibre Counting (PCM) (including Sampling Strategies)

1 Overview

Candidates taking the P403 – Asbestos Fibre Counting (PCM) (including Sampling Strategies) module are required to have the requisite skills to take air samples of atmospheres potentially containing airborne asbestos fibres, and to carry out fibre counts using phase contrast microscopy (PCM).

The formative practical assessment is designed to enable candidates to demonstrate that they have achieved the relevant skills by carrying out a number of practical tasks. All candidates must undertake the tasks at an appropriate time during the course under the supervision of the course tutor. The tutor may be assisted by other appropriately qualified and experienced people if necessary.

The assessment is open-book and candidates are permitted to access written reference materials and written procedures during the tasks but not electronic databases.

The course tutor is permitted to support candidates who are experiencing difficulties in carrying out one or more of the tasks, for example by providing verbal feedback or by demonstrating correct techniques. However, to complete the assessment, candidates must demonstrate a satisfactory level of proficiency in all tasks independently and without support.

Candidates who do not complete the tasks are permitted to take the written and practical examinations but will not be awarded the module. Candidates are permitted to re-sit the assessment with a training provider.

2 The Practical Requirements

Candidates must demonstrate proficiency in all of the following areas:

- setting up the equipment for air sampling, (i.e. a clean filter correctly mounted in a sampling head and the setting and measurement of a suitable flow of air),
- mounting filters, preparing slides, setting up the microscope and demonstrating an understanding of the counting rules,
- appreciation of different air sampling strategies, e.g. requirements and locations for leak testing, background testing, reassurance sampling and personal monitoring,
- carrying out all relevant calculations.

3 Equipment

Equipment required for the assessment includes:

- microscopes,
- air sampling equipment (e.g. sampling pumps, heads and filter),
- filter clearing equipment (acetone vaporiser),
- filters,
- acetone,
- glycerol triacetin,
- flat-headed tweezers,
- coverslips,
- slides.

4 Marking and Reporting

The course tutor who assesses the candidates must complete a Formative Practical Assessment Report Form for each candidate, attached at the end of this document. The Report must clearly show if each candidate has achieved a satisfactory or unsatisfactory level of proficiency for each assessment element.

Candidates are required to achieve a satisfactory level of proficiency for each element to complete the assessment.

A copy of the relevant Report may be given to the candidate.

5 Results

The results for each candidate must be sent to BOHS within five working days of the end of the course.

6 Quality Assurance

The assessment is a mandatory part of the assessment and examination process for P403 and is subject to BOHS external quality assurance arrangements, to ensure compliance with requirements and to promote consistency and continuing improvement.

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Assessment Elements

The following five elements must be included in the formative practical assessment.

1 Set up and collection of air samples

- filter handling and mounting in filter head,
- pump preparation and assembly of sampling train,
- flow calibration,
- sampling time and flow-rate recording,
- post-sampling transportation of filters,
- understanding of sampling strategies for personal exposure monitoring, background/reassurance monitoring and leak testing.

2 Filter clearance procedure

- use of acetone hot block method to clear filters,
- preparation of microscope slides using glycerol triacetin as mounting medium.

3 Microscope set up

- adjustment to obtain Köhler illumination,
- use of Walton-Beckett graticule,
- use of stage micrometer,
- evaluation of HSE NPL test slides.

4 Counting fibres

- knowledge and application of fibre counting rules.

5 Calculation of results

- use of formula to convert fibre counts into airborne fibre concentrations,
- knowledge and application of limits of quantification.

Formative Practical Assessment Report

P403 – Asbestos Fibre Counting (PCM) (including Sampling Strategies)

Training Provider			
Course Start Date		Course End Date	
Location of Course			
Name of Candidate		Date of Birth	
Date of Assessment			

Assessment Element		Tutor Comment on Level of Proficiency¹
1	Set up and collection of air samples	
2	Filter clearance procedure	
3	Microscope set up	
4	Counting fibres	
5	Calculation of results	

I certify that the above candidate has been assessed in accordance with BOHS requirements and has achieved the level of proficiency for each element as shown.

Name of tutor		Signature of tutor	
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¹Tutor must enter 'Satisfactory' or 'Unsatisfactory' for each element, with additional comments if necessary relating to the candidate's ability and expertise in that element.