

P401 Identification of Asbestos in Bulk Samples by PLM

Written Examination Guidance

It is important that candidates prepare thoroughly for all exams, as poor exam technique can result in lost Marks.

The following advice is applicable to all candidates and should be contained in the examination briefing:

- ✓ Read questions carefully before answering, and only then answer the question.
- ✓ Look for key words in the exam question, such as 'How...', 'Why...' etc.
- ✓ Look for indicators of how many answers to write (for example, 'List TWO options that...' tells you to write two answers only).
- ✓ This is a short-answer examination – candidates may write short sentences or list points in their answers.
- ✓ The number of Marks available for each answer is shown. This will help to assist in determining how much to write. For example, a question worth one or two Marks will require just one or two sentences or bullet points, however one worth 10 Marks will require a more comprehensive answer.
- ✓ Avoid getting bogged down unnecessarily in earlier questions. Give priority to questions that can be readily answered before tackling more challenging ones.
- ✓ Exam papers are structured to follow the sections of the syllabus, so candidates can easily find all questions relating to each sub-section.
- ✓ It is recommended that candidates take a couple of minutes to skim through the exam paper before they start answering the questions. They can then answer the questions they find easiest first, which will help them to accumulate Marks and hopefully give them confidence to tackle more challenging questions.
- ✓ Many questions are short answer questions based on diagrams, real-life scenarios, or photographs. They test whether the candidate can apply what they've learnt during the course and the practical sessions.

Sample Examination Questions:

All questions are worth a variety of Marks, from 1 Mark up to 10 Marks. Questions are based on real-life scenarios and include the use of photographs, diagrams and tables. Each question is based on a specific syllabus item, examples of which are shown below:

Question 1 A bundle of fibres with a blue colour is observed under the stereo microscope. What would be the RI of the liquid used to mount the sample for analysis by polarised microscopy? **(2 Marks)**

ANSWER: 1.700

Question 2 The need to have appropriate storage and labelling for reagents used during bulk analysis is covered by which piece of legislation? **(4 Marks)**

ANSWERS (Max 4 Marks):

- Control of Substances Hazardous to Health Regulations 2002 **(4 Marks)**
- COSHH 2002 **(2 Marks)**
- COSHH **(1 Mark)**

Question 3 Why is Regulation 2 - Interpretation within CAR 2012 important for bulk analysis? **(4 Marks)**

ANSWERS (Max 4 Marks):

- It defines the 6 regulated asbestos types **(1 Mark)**
- It provides ACM definitions **(1 Mark)**
- Specifically, it defines the difference between AIB and AC (30% water) **(1 Mark)**

Bonus **(1 Mark)** if all 3 correct

Question 4 Describe the process for cleaning a fume cabinet at the end of a shift prior to it being switched off. **(8 Marks)**

ANSWER (Max 8 Marks):

- Ensure all samples / asbestos are removed **(1 Mark)**
- Using a H Class vacuum clean the interior of the cabinet **(1 Mark)**
- Seal vac end after use **(1 Mark)**
- Use wet wipes to wipe down the interior of the cabinet **(1 Mark)**
And any tools used and petri dishes etc. **(1 Mark)**
- Dispose of all wipes used within waste bag **(1 Mark)**
- Seal waste bag and remove from cabinet **(1 Mark)**
- Leave cabinet running for sufficient time to ensure sufficient air changes **(1 Mark)** then switch cabinet off

Question 5

Assuming that the fibres have been mounted in the correct refractive liquid, which asbestos type would display dispersion staining colours as shown below? **(2 Marks)**



ANSWER: Chrysotile