

SCANNING ELECTRON MICROSCOPY SCHEME FOR PROFICIENCY TESTING:

- Operated by the Health and Safety Executive (HSE);
- Suitable for all laboratories involved in the counting and identification of inorganic fibres by scanning electron microscopy (SEM);
- Comprehensive range of inorganic fibre types across a range of fibre densities; including asbestos and non-asbestos fibres;
- Independent assessment of measurement quality



Purpose of SEMS

- Promote quality and comparability in the measurement of airborne inorganic fibres by SEM;
- Help laboratories monitor and improve the quality of their analytical measurements;
- Enable laboratories to demonstrate competence with respect to measurement and regulatory standards;
- Provide information to participants on technical issues and methodologies related to the measurement of airborne inorganic fibres

Benefits of SEMS participation

- Provides laboratories with a mechanism to compare their measurements with others in the industry worldwide;
- Enables laboratories to demonstrate the quality of their results to third parties, e.g. customers, regulators and accreditation bodies;
- Facilitates the monitoring of trends, over time, in the quality of measurements;
- Helps and educates laboratory staff and their customers

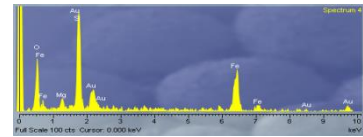
SEMS Operation

The scheme circulates one round per year of four samples, normally in September. The distribution date is detailed on the SEMS schedule

All test materials are produced in the laboratory using specialist equipment and reflect typical airborne inorganic fibre samples.

When asbestos is present there is usually only one type.

Occasionally, unusual artificial fibres and naturally occurring fibrous minerals will be included.



Test materials may contain up to three different asbestos types or no asbestos at all. Over the course of several rounds, all six asbestos types will be included. A range of non-asbestos fibres may also be included.

A representative sub-set of all test materials is fully validated against detailed criteria before introduction into the scheme. Where appropriate, the validation laboratories are accredited to ISO 17025 for the measurement of airborne inorganic fibres by SEM.

The recommended methods for the scheme are ISO 14966; 2002 and VDI 3492; 2013. However, any equivalent or comparable method can be used. Participants obtain a "sample" score for each round. Guidance is given on whether the laboratory score achieved indicates satisfactory or unsatisfactory performance.

For a comprehensive overview of the scheme please refer to the SEMS Information Book for Participants, available on our website: www.hsl.gov.uk/proficiency-testing-schemes

Reporting

Participant results for the SEMS are submitted through the Proficiency Testing Online Data Entry System. A unique user name, password and web link will be provided on registration.

Participants' individual results are available online approximately 10 working days after the reporting deadline. A group report for each round is posted on the website.

The scheme is fully confidential as participants only have access to their own results via the Proficiency Testing Online Data Entry System.

For further information contact:

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