

Proficiency Testing Scheme

Airborne asbestos determined by SEM/EDX

1 PURPOSE OF THE PROFICIENCY TESTING

This scheme allows laboratories to demonstrate their competence to determine the airborne asbestos fibers through the SEM/EDX technique .

Microanalitica organizes Proficiency Testing in accordance with the International Standard ISO/IEC 17043.

2 DESCRIPTION OF THE PROFICIENCY TESTING

The scheme "Airborne asbestos determined by SEM/EDX" is offered annually to laboratories.

The polycarbonate filters with particle deposition were prepared for the proficiency testing by Microanalitica Srl which carried a simultaneous air sampling.

The test sample set consists of 25 mm diameter polycarbonate filters with a porosity of 0.8 μm .

In order to check the homogeneity of the test sample set, at least 10% of the filters are analyzed by a single laboratory that operates in accordance with ISO/IEC 17025 and the results are statistically processed by Microanalitica Srl according to ISO 13528: 2015.

Each laboratory receives one filter from the test sample set and to be allowed to participate to the Proficiency Testing it is requested to use the analytical method that uses normally in the laboratory with SEM/EDX technique.

The result must be expressed in asbestos fibers/ mm^2 .

Moreover it is necessary to indicate, in case of asbestos presence, what kind of asbestos has been found.

3 FINAL REPORT OF THE PROFICIENCY TESTING EVALUATION

To assign the value of airborne asbestos, expressed in asbestos fibers/ mm^2 , Micoanalitica Srl follows the instructions contained in section 5.3.1.2 of ISO 13528:2015 which takes into account the results of the participants to calculate the robust average x_{pt} and the robust standard deviation of the test s^* .

In absence in the ISO 13528:2015 of a method for results with asymmetric pattern distribution, Microanalitica Srl adopts an own assessment of the performance of laboratories adapted to the Poisson distribution.

This assessment of the performance has been defined under the symbol z_p .

The number of z_p score can be either positive or negative, a negative z_p indicates that the participant's result is lower than the assigned value; on the contrary, a positive z_p indicates that the result is greater than the assigned value.

Interpretation of the score z_p

$ z_p \leq 2,0$	satisfactory result (no signal)
$2,0 < z_p \leq 3,0$	questionable result (warning signal - W)
$ z_p > 3,0$	unsatisfactory result (alarm signal - A)

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3 CONFIDENTIALITY

In order to ensure the confidentiality of the results, the laboratory that participates in Proficiency Testing will be assigned of a number that uniquely identifies it in the PT Final Report.

The identification number is communicated to the email address indicated on Proficiency Testing application form.

Microanalitica Srl guarantees the confidentiality of all the informations acquired by the participants.