



Specific Accreditation Criteria

ISO/IEC 17025 Application Document Life Sciences - Annex

Asbestos fibre counting

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Asbestos fibre counting

This document provides additional interpretative criteria and recommendations for the application of ISO/IEC 17025 for both applicant and accredited facilities conducting the counting of asbestos in bulk samples.

Applicant and accredited facilities must comply with all relevant documents in the NATA Accreditation Criteria (NAC) package for Environment (refer to *NATA Procedures for Accreditation*).

The clause numbers in this document follow those of ISO/IEC 17025 but since not all clauses require interpretation the numbering may not be consecutive.

5 Structural requirements

5.4 NATA must be notified in writing of any field site that operates for longer than two months. NATA reserves the right to assess any long term field laboratory, either as part of the assessment of the base facility or as a separate exercise.

To qualify as a field site, an operation must:

- be established to service one specific project with a finite period of no more than 18 months, not several non-specific ones;
- be on the site of (or in very close proximity to) the project it is servicing; and
- be staffed by asbestos counters who work out of the base facility.

If the operation does not meet all of these criteria, a separate accreditation must be obtained.

Each facility must have documented procedures to be applied when setting up a field laboratory.

6 Resource requirements

6.2 Personnel

6.2.5 Facilities must document the approval of appropriate staff authorised to perform asbestos fibre counting. NATA will take a sampling approach to review the competency of asbestos counters at assessments.

Evidence of staff competency can include but is not limited to:

- an evaluation of the knowledge of the asbestos counting undertaken and the theory upon which this testing is based;
- results of participation in the facility's quality control program;
- participation in proficiency testing programs.

The system for evaluation and monitoring of staff approved to count asbestos must include activities for refresher training to be undertaken by staff who have been absent for extended periods, for example 3 months or greater. Such activities may include participation in an internal quality assurance (QA) program and external proficiency testing.

These evaluations must be undertaken by another competent person.

The field site must be visited at least once per week by a staff member who is experienced in the total asbestos testing process from sample collection to issue of results, if they are not located at the field site for the duration of its operation. Records sufficiently detailed to identify what activities were undertaken must be kept of these visits.

6.2.6 A person approved to release results must be an asbestos counter or where they hold a more senior position at the facility they must be able to demonstrate extensive experience as an asbestos counter and be familiar with the day to day operations of the facility.

A list of staff authorised as asbestos counters must be maintained.

6.3 Facilities and environmental conditions

6.3.4 Special precautions may need to be taken at field sites to define and control access.

6.4 Equipment

6.4.1 Sampling pumps must have a mechanism (e.g. fault light or automatic facility to stop the pump) to indicate flow interruption during the sampling period.

6.4.3 The facility's procedures for microscope set-up and other associated test activities must be documented, and available in the facility and at any field site.

6.4.7 Facilities are responsible for establishing their own equipment assurance program to ensure consistent results are produced. Guidance on equipment assurance and calibration is available in Technical Papers published by the Australian Institute for Occupational Hygiene.

6.4.13 Records must be kept of the location of each microscope used outside the base facility and the dates on which they were at each site.

All microscopes used at field sites must be available for inspection during NATA assessments of the base facility.

6.6 Externally provided products and services

6.6.1

External providers conducting volume measurement

Such providers can conduct the sample collection for asbestos fibres in air and the facility issue a report, including a concentration, as long as the following are satisfied:

- a formal training (and retraining) program for each external provider staff member is conducted, including practical and theoretical exams;
- the name of the provider (person and his/her company) is included on test reports;
- a note is included on test reports stating that the volume measurement was conducted by an external provider and that the facility is responsible for the data.

7 Process Requirements

7.2 Selection, verification and validation of methods

7.2.1 Selection and verification of methods

7.2.1.1 The method to be used as the basis of the facility's procedures is that set out in the National Occupational Health and Safety Commission Guidance Note.

7.2.1.2 A copy of the National Occupational Health and Safety Commission Guidance Note on the membrane filter method for estimating airborne asbestos and a copy of all associated facility documentation must be kept at the base facility and at each field site.

7.5 Technical records

7.5.1 Records must include the individual count for each field examined. When fields are blank it is acceptable to keep a mental tally of up to ten 'blank' fields before an entry is made on the count sheet (e.g. by drawing a line through the ten fields). This does not apply where a verified mechanical counter is used.

7.6 Measurement Uncertainty

7.6.3 Guidance for determining measurement uncertainty is provided in the National Occupational Health and Safety Commission Guidance Note.

7.7 Assuring the validity of results

7.7.1 The internal quality control (QC) program must cover all staff, including those involved in any field sites.

QC activities should include the use of a program for blind-counting a set of reference slides and recounts of routine slides. The reference slides must contain greater than approximately 10 fibres per 100 graticule fields (i.e. be statistically countable).

The facility must establish limits on the number of slides to be counted by a counter in a specified period. These limits will be influenced by the number of difficult slides being counted.

Note: It is considered that 12 'average' slides per day is reasonable, but this limit can be in the range of 10 to 20 per day).

Field blanks, as described in section 8.2 of the National Occupational Health and Safety Commission Guidance Note, must be used. It is suggested that analytical blanks, as described in section 8.2 of the National Occupational Health and Safety Commission Guidance Note, also be used.

7.7.2 Facilities must participate in a proficiency testing (PT) program for asbestos fibre counting. A program for participation of asbestos counters must be established to ensure that all counters participate in the proficiency program over a defined period.

7.8 Reporting of results

7.8.2 Common requirements for reports (test, calibration or sampling)

7.8.2.1 Reports, including preliminary reports, must include the name of the counter and the name of the person authorised to release results.

7.8.3 Specific requirements for test reports

7.8.3.1 Test documents for asbestos fibre counting must include the results reported as 'x' fibres per 'y' fields.

Only when a facility is accredited for volume measurement and has been fully responsible for the collection of the sample, and has applied all volume measurement requirements to the sample collection, can results be reported as 'z' fibres per mL of air.

If the facility has not taken responsibility for the sample collection, then a disclaimer must be included in the report if concentration is reported.

Laboratories must have prepared the slides used to obtain the results included in the report.

7.8.3.1 Reports on asbestos counting work performed for regulatory purposes, must include reference to the NOHSC Membrane Filter Method (MFM) and any supplementary facility work instruction used to ensure consistent application of the MFM.

References

This section lists publications referenced in this document. The year of publication is not included as it is expected that only current versions of the references shall be used.

Standards

ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories

NOHSC: Guidance note on the membrane filter method for estimating airborne asbestos fibres 2nd Edition.

NATA Publications

NATA Accreditation Criteria (NAC) package for Environment

Other Publications

Australian Institute for Occupational Hygiene, Technical Papers
(<https://www.aioh.org.au/resources/technical-papers>)

Amendment Table

The table below provides a summary of changes made to the document with this issue.

Section or Clause	Amendment
Whole document	<p>Clauses have been aligned with ISO/IEC 17025:2017.</p> <p>Any criteria included in the previous issue that are now covered by ISO/IEC 17025:2017 have been removed.</p> <p>No new interpretative criteria or recommendations have been included other than editorial changes.</p> <p>Equipment assurance tables and information deleted. This information is now available from the AIOH (Australian Institute of Occupational Hygienists)</p>