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1. Program Overview

1.1. Purpose

Asbestos fiber can easily be inhaled and cause a variety of respiratory system pathologies. The risks of exposure to asbestos fibers are documented in epidemiological studies and the findings suggest carcinogenicity. Exposure to asbestos and artificial mineral fibers occurs mainly in mines, the construction industry and processing industries. Exposure to airborne fibers is measured using a phase contrast light microscopy (PCLM) method.

The importance of quality control in obtaining reliable airborne fiber counting results through phase contrast light microscopy is internationally recognized. Fiber counting involves a subjective fraction of error that can be limited through strict quality control.

With this in mind, the IRSST introduced the CQ-Fibres Proficiency Testing Program in 1992.

This program uses representative workplace samples. The sample counting results allow for classification against values established by a group of reference counters and development of a participating counter performance recognition policy based on defined criteria.

1.2. Confidentiality

The IRSST, through its CQ-Fibres program processes, procedures and documentation, ensures the confidentiality of information:

- submitted by participants when they register in the program;
- submitted by participants for each round as well as information reviewed and processed by the IRSST's program management staff for purposes of assessing the participants' performance;
- kept for purposes of maintaining and improving the proficiency testing program.

Any information on participants, including personal information (e.g., first and last name, contact information, years of experience as counters), program data (slide counting results, counter performance) is protected and kept confidential.

Participants are informed of any request by an interested party to obtain the proficiency testing results directly from the IRSST.

Participants are informed of any request by a regulatory body to obtain the proficiency testing results directly from the IRSST.





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1.3. Responsibilities

The CQ-Fibres proficiency testing program is overseen by the Director of the Laboratory Division reporting to the IRSST's Executive Office, which is responsible for managing the Institute and developing and implementing policies on leadership roles, activities, development and coordination of occupational health and safety research in Québec.

The IRSST's organizational structure is available on the website under the topic *Institute / About*.

The Director of the Laboratory Division has delegated management of the CQ-Fibres proficiency testing program to the scientific professional in charge of fiber analyses, who has the necessary authority and resources to ensure the quality of the proficiency testing program.

1.4. Contact information for the proficiency testing program

Requests for information on the quality control program may be sent by email:

cqfibres@irsst.qc.ca

or by mail:

IRSST
Laboratory Division
CQ-Fibres Proficiency Testing Program
505 de Maisonneuve Blvd West
Montreal, Quebec, H3A 3C2
Telephone: 514 288-1551

Fax: 514 288-9632

Email: cqfibres@irsst.qc.ca

Information on the CQ-Fibres proficiency testing team is available on our CQ Fibres webpage through *Laboratory Services / Recognition Programs*.



2. Program Condition and Requirements

2.1 Registration and fees

Companies or counters wishing to register for the proficiency testing program must fill out a registration form. However, they must contact the IRSST <u>before</u> filling in and sending it to ensure that a place is available.

The registration forms is available on the IRSST's website under *Laboratory Services / Recognition Programs*.

Different forms must be completed depending on whether a company, a branch or a counter desires to register.

The new participant receives an email providing access to the *CQ-Fibres* management system through an Internet portal. The following information must be provided through this system:

- a detailed description of training received, along with the instructor's name, title and experience a certificate or attestation issued by a recognized organization can satisfy this criterion;
- the counting results for at least three slides of different known densities counted at least 10 times each to determine intra-counter relative standard deviation (a difference of 50 f/mm² in density is required amongst the slides);
- information on equipment used to count the three slides, such as the microscope and the certificate or photo of the HSE/NPL MARK III slide used.

After analysis of this record, acceptance into the program will be sent by email.

Program participation fees:

- Companies Initial registration = 260\$
- Branches Initial registration = 260\$ per branch
- Counters Initial registration = 67\$
- Participation fees
 - Annual company fee = 260\$
 - Annual branch fee (if applicable) = 260\$
 - Counter fees = 133\$ per counter per round or 67\$ per counter per round (50% discount) if the company and its branches have 13 or more counters in total.



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An invoice will be generated upon receipt of an application for registration, for the annual fees or for a new counter addition. A credit note is issued upon a change to remove an analyst's participation. These are available via the CQ-Fibres portal for the company's billing contact. No invoice or credit note will be sent by mail. It is the billing contact's responsibility to retrieve the invoice from CQ-Fibres web system, to process it on time and if it's the case to apply credit notes on payment of invoices. If the company does not use the credit notes within two (2) years of the issue date, they will be cancelled.

The amount is payable by check addressed to IRSST or by wire transfer. For more information about invoicing, contact the Receivable Accounts Department at compte.recevable@irsst.qc.ca.

2.2 Samples (Slides)

Each shipment for a round will contain four slides with densities generally ranging from 100 to 1,300 fibers/mm², which are optimal densities based on the official counting method. However, since these samples come from different workplaces, some may have a density of less than 100 fibers/mm². Each year, four rounds are shipped to registrant counters for performance assessment or recognition purposes.

In order to replace the lost, broken or unstable slides, and to ensure the durability of the *CQ Fibres* Counting Quality Control Program, the IRSST is continuously renewing its reference slides bank. During this process, parameters such as the homogeneity and stability of each sample need to be evaluated before allowing the use of these slides as a reference sample. This evaluation requires a certain amount of counting data. In order to generate this data, all the counters registered in the program periodically receive four (4) additional slides per round. The performance of the counters is not evaluated on the results of these so-called «candidate» slides, but continues to be so for the four (4) other slides provided. Thus, the count results of the «candidate» slides are not displayed on the report for the round. However, the treatment of these «candidate» slides is mandatory and follows the same requirements and conditions of participation as the slides used for the performance evaluation.

2.3 Program Schedule

Program participants are divided into two groups randomly created to obtain a similar number of counters in each group. The groups are divided up as follows:

Group A – January, April, July and October of each year;



• Group B – February, May, August and November of each year.

The schedule is available on the IRSST's website under *Laboratory Services / Recognition Programs*.

2.4 Slide Counting and Confidentiality

The samples must be counted based on the *IRSST 243* method ("Fiber Count") which can be downloaded free of charge from the IRSST's website page *Laboratory Services / Analysis and Testing Services / Laboratory Methods*.

Note that the English version is now available.

To maintain confidence in the program's competence, impartiality and operational integrity, participants must refrain from collaborating in any activity that could diminish it. Such activities include but are not limited to:

- Submitting, in their name, the results of slides analyzed by another participant;
- Discussing or sharing information on slides to be counted with other participants before the end of the round;
- Knowingly reporting fraudulent data;
- Conveying inaccurate information on the program or their participation in the program.

Participants known to have falsified the results or conspired with others in submitting their results must be reported to a member of the program team. The IRSST's Laboratory Division will conduct an investigation and take appropriate corrective action, including assigning a score of zero for the applicable round and eliminating the participant from the next round. Repeat offenders will be reviewed by the program's team and the Director of the Laboratory Division. Such cases may result in the company or counter being permanently expelled from the program.

2.5 Sending results to the IRSST

Participants are responsible for sending the slide counting results on time. Participants must submit their results through the CQ-Fibres management system accessible via the IRSST website.

The data must be entered in this system before the deadline indicated in the schedule (see 2.3). The deadline is 11:59:59 p.m., Eastern Standard Time (EST), on the date indicated.



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A participant who has trouble entering results in the CQ-Fibres system must contact the CQ-Fibres program team before the deadline. If this happens outside regular business hours, e.g. before 8:00 a.m. or after 4:00 p.m., Eastern Standard Time (EST), and before the scheduled date of receipt of results by the IRSST, the participant must send an email in order to avoid missing the deadline (see 1.4). Results sent after the scheduled deadline will not be accepted unless a prior agreement has been reached between the participant and the IRSST.

Once the results have been entered via the CQ-Fibres management system, participants are advised to print the on-screen confirmation page confirming that the IRSST has received the results and that they have been entered correctly. Note that requests for appeal regarding the transmission of results will not be considered unless the participant encloses the confirmation page with the request.

2.6 Preserving and Returning slides

While the slides are in your possession, they must be kept out of direct sunlight.

The slides must be returned to the IRSST after the results of participation in a round have been sent. The following recommendations should be kept in mind:

Make sure to secure the box containing the slides properly with an elastic band, place it in the padded shipping box or envelope (packaging originally received) before inserting it in the shipper's packaging.

Slides must be sent to the address indicated in paragraph 1.4.

2.7 Analysis of results

2.7.1 Statistical analysis

The CQ-Fibres proficiency testing program uses basic statistical techniques to determine the assigned value and evaluate participants' results.

The assigned value is established based on the results of 12 experienced analysts called "reference counters" who have demonstrated their performance following established criteria over multiple consecutive rounds.

2.7.2 Determining a participant's performance

In order to be recognized, a counter must successfully participate in three consecutive proficiency analytical exchanges and achieve results ranging from 0.55



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to 2.20, inclusive, of the reference value for at least three out of four samples for each round. The participant's status is maintained as long as these requirements are met.

If two or more out of four samples are unacceptable, the counter has failed a first exchange. That counter is thereby under surveillance, but maintains a recognized counter status. Participants who fail two consecutive exchanges immediately lose their recognized counter status and are considered in transition. They must successfully complete two more consecutive proficiency analytical exchanges to regain their recognized counter status.

Companies with counters recognized by the proficiency testing program appear on the IRSST website. The counter list, updated after each round, allows anyone to be informed of fiber counting analysts' status.

2.7.3 Review and issuance of results

The data resulting from the statistical analysis and the results of all participants are reviewed by the program team before being communicated to participants.

2.8 Reports for participants

The performance results are made available to participating counters and contact persons at each company or branch registered in the proficiency testing program through the CQ-Fibres management system. To ensure the confidentiality of the results, they are not made available to any other organization except upon written request of the counter or the company.

Each report contains the following:

- results obtained by the participating counter,
- sample reference values with lower and upper limits for acceptable performance;
- participating counter's performance and his/her status in the program.

2.9 Retest

There is no retesting possible for a round in the CQ-Fibres proficiency testing program.

2.10 Temporary non-participation

A participant may temporarily cease their participation in the proficiency testing program for reasons such as:

company's facilities are being renovated;



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- equipment required for the analysis is being repaired or new equipment has been ordered;
- company is having short-term staffing problems and cannot complete the required analyses.

A participant wishing to be exempted from participating in a round must inform the *CQ Fibres*' team by email before the scheduled date of closing (see 1.4). An email reply authorizing the exemption will be sent. An exemption is only valid for one round at a time, meaning that a participant cannot be exempted from two consecutive rounds. Without prior authorization, failure to send the results on the indicated date will affect a participant's status as a counter.

2.11 Change of information for a participant

Any changes related to a company, branch or counter registration must be made as soon as possible. Change requests must be sent by email (see 1.4) by the contact person. A confirmation email will be sent after the changes have been completed.

2.12 Appeals, complaints and feedback

2.12.1 Appeals

Participants, clients or other parties that are or may be adversely affected by any part of our proficiency testing program may appeal. The participant, client or representative of another party must send a letter or email describing the reason for the appeal (see 1.4).

An appeal in relation to the results of a round and a counter's performance must be made within 20 business days following issuance of the report. Other requests may be made at any time.

All appeals are analyzed by the program team. The participant, client or representative of another party will be informed of the decision in writing. The decision is final.

2.12.2 Complaints and feedback

Participants, clients or other parties may file a complaint or send feedback to the IRSST's Laboratory Division. A comment section is available on our website under the "Contact Us" item of the Laboratory Services' section. The Director of the Laboratory Division is responsible for resolving any complaints and responding to any feedback as quickly as possible.



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2.13 Advertising Policy for participants

Registered Organizations and Registered Counters are encouraged to advertise their participation to the IRSST's *CQ-Fibres* program by using the prescribed language as defined below.

Organizations:

An organization may not advertise that it is listed in the *CQ-Fibres's* program until it has actually received official notification that it is registered.

It may use one or the other of the following terms in advertising:

- "(ABC Organization) is registered as a participant of the IRSST's Quality Control of Fibers Counts *CQ-Fibres* Program."
- "(ABC Organization) participant CQ-Fibres Program IRSST"

Counters:

➤ A registered counter may not advertise that it is listed in the CQ-Fibres's program until it has actually received official notification that it is registered.

It may use one or the other of the following terms in advertising:

- "(Counter's Name) is registered as a participant of the IRSST's Quality Control CQ-Fibres Program."
- "(Counter's Name) participant CQ-Fibres Program IRSST"
- A counter may not advertise that it is <u>recognized</u> by the *CQ-Fibres's* program until it has actually participated successfully to 3 consecutive of the *CQ-Fibres* Program.

A counter whose name is listed on the recognized counters' list on the IRSST's web page may use one or the other of the following terms in advertising:

- "(Counter's Name) is a recognized counter for fibers by the IRSST's Quality Control *CQ-Fibres* Program."
- "(Counter's Name) recognition IRSST CQ-Fibres Program"

IMPORTANT VARIATION IN ADVERTISING

Any other use of these terms or any variation in terminology requires prior IRSST *CQ-Fibres* Program approval. IRSST *CQ-Fibres* Program is not an accreditation program or a certification program. When advertising organization approval or counter registration, the words "accreditation" or "certification", or variations thereof, shall not be used.



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2.14 Deactivation or transfer of a participant

At any time, the company's contact person can request via the related account in the CQ-Fibres management system, the deactivation of a participating counter. However, it is important to realize that this deactivation may have a direct impact on the counter's recognized status.

It is also possible at any time for a counter to request transfer to another company via his CQ-Fibres management system account. To avoid a change in the counter's status, it is recommended if possible to request the transfer <u>before</u> deactivation from the previous company (employer).

2.15 Suspension and removal of a participant

Suspension is the temporary removal of a participant from the proficiency testing program for failure to meet the program's specific requirements. Suspension or removal may occur at any time. The conditions leading to a participant's suspension or removal include, but are not limited to:

- Submitting, in its name, the results of slides analyzed by another participant or verified by a third party;
- Discussing or sharing information on the slides to be counted with other participants before the end of the round;
- Knowingly reporting fraudulent data;
- Conveying inaccurate information on the program or their participation in the program;
- Failing to submit results for two consecutive rounds without the prior approval of the program manager;
- Not paying the program participation fees;
- Advertising the program in a misleading manner.