

DECISION

CRITERIA FOR ACCEPTABLE PERFORMANCE OF LABORATORIES IN PROFICIENCY TESTING

The Conference

Recalling that the Commission, in its PC-XI/17, paragraph 7.2, adopted the document “Criteria for Acceptable Performance of Laboratories in proficiency Testing”,

Bearing in mind that the Commission recommended in paragraph 54.9 of its Final Report that the Conference adopt the above “Criteria for Acceptable Performance of Laboratories in proficiency Testing”,

Hereby:

1. **Adopts** the “Criteria for Acceptable Performance of Laboratories in proficiency Testing”, annexed hereto.

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Annex

CRITERIA FOR ACCEPTABLE PERFORMANCE OF LABORATORIES IN PROFICIENCY TESTING¹

1. Introduction

The following criteria are designed solely for the purpose of determining performance of laboratories in proficiency testing. Results from these tests will be used by the Director-General for designating laboratories. No such criteria shall be considered as constituting any interpretation of, or precedent for, related provisions of the Convention.

Verification analysis of samples in designated laboratories is primarily qualitative. Therefore performance criteria for proficiency testing as developed by international bodies can not be applied as such since they are based on quantitative results.

The Secretariat should inform the laboratories of the purpose of the test and the test scenario upon the arrival of the test samples in the same way as it will inform the laboratories in case of analyses of authentic samples.

The participating laboratories should report identified chemicals relevant to the test. Quantitation and an indication of the detection levels of the used analytical procedures are appreciated but not required. These analytical procedures may help during the evaluation of the test and for follow-up actions. Laboratories must strive for high performance: if they perform unsatisfactorily in the tests, they must be prepared to take remedial action.

The following performance criteria have been proposed on the basis that the test samples are spiked with chemicals relevant to the aim of the test at a level of 1-10 ppm or higher.

2. Performance criteria

- (a) Analysis of test samples and reporting of test results should be carried out within the set time frame (15 calendar days starting from the day when the samples arrive at a laboratory site).*
- (b) Identification of chemicals should be based on at least two different analysis techniques, preferably by two different spectrometric (e.g. EI-MS, CI-MS, LC-MS, IR, NMR) analysis techniques, when available, giving consistent results.

¹ Contained in PC-XI/B/WP.6 and Corr.1, Annex 1.

* The results of the test must be faxed to the Secretariat within 15 days, and the full report must be despatched to the Secretariat by the end of the same period with a suitably validated date.

- (c) All analytical data supporting the identifications made (chromatographic and spectrometric data) must be annexed to the report.
- (d) The laboratory must indicate on which basis the chemicals are identified (comparison with data on standard chemicals, data in analytical databases or interpretation of spectra).
- (e) The laboratory must describe sample preparation and analytical methods in detail or must make reference to Recommended Operating Procedures (ROPs), or Standard Operating procedures (SOPs) or to the validated procedures according to the quality assurance/quality control (QA/QC) regime of the laboratory. All deviations from the procedures will have to be described in detail.
- (f) The identified chemicals must be reported with sufficient structural information, including at least the structural formula, CAS registry number (if available) and chemical name, and preferably the CWC Schedule-, IUPAC- or CA name. If IUPAC or CA names are not available, a name from which the structure can be derived should be included.
- (g) Only chemicals relevant to the aims of the test should be reported.
- (h) False positive results must not occur. Any chemical that is not contained in or that could not be formed in the sample matrix will constitute a false positive result. Reporting any false positive result will constitute failure of the Proficiency Test.

3. Scoring of the performance

The present scoring rules should be considered separately for each test and used as a basis for measuring performance in a specific test. Before establishing the final scoring, the Secretariat will check the consistency of material received in coordination with the laboratory which provided it. If the criteria contained in paragraph 2 of this Annex are met, the result of the laboratory will be scored as follows:

- (a) Each correct identification will be positively scored (+1 point).
- (b) Identification of a degradation product(s) instead of the spiking chemical will be positively scored (+1 point), if the original spiking chemical is no longer present.
- (c) Identification of nerve agents in Schedule 1A and nerve agent precursors and degradation products in Schedule 1B and 2B shall be considered correct (+1 point) without specific identification of the locations of alkyl groups in the O-alkyl or O-cycloalkyl side chains. However, the side chain of the P-C bond must be fully identified.

- (d) Identification of minor constituents of the spiking chemical(s) will be considered correct, but will not add to the score.
- (e) False negative results arising from not finding a spiking chemical or its degradation product will be scored negatively (-1 point).

4. Follow-up actions

In case of errors (false positives and negatives) the Secretariat will report to the laboratory in question. The laboratory, after taking immediate action, should submit a full report stating the cause of the problem and any remedial actions taken to the Secretariat before the next test. If the laboratory fails to submit the report of any remedial actions taken the laboratory will not be allowed to participate in the new test. If the remedial actions taken by the laboratory prove to be ineffective, the Director-General may wish to reconsider the certification of the laboratory for performing this type of analysis (see paragraph 56(b) of the Verification Annex).

Any laboratory that fails to return the results of a Proficiency Test will fail that test unless the laboratory informs the Secretariat of its intention to withdraw before the end of the test and also provides a satisfactory explanation.

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