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Tobacco and tobacco products — Preparation and constitution of identical samples from the same lot for collaborative studies for the evaluation of test methods

Tabac et produits du tabac — Préparation et constitution d'échantillons identiques à partir d'un même lot pour la conduite d'essais comparatifs portant sur la qualité des méthodes d'essai

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 7821 was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*, Subcommittee SC 1, *Physical and dimensional tests*.

This edition cancels and replaces ISO/TR 7821:1982, which has been technically revised.

Introduction

The repeatability and the reproducibility of a particular laboratory method are defined in ISO 3534-1, ISO 3534-2 and ISO 3534-3. These characteristics may be determined by means of interlaboratory tests as described in ISO 5725-2.

In addition to the description of the equipment and the test method to be used, often by reference to existing standards, the organization of such tests also includes the preparation of test materials, i.e. samples that will serve as media for the studies to be carried out.

It should be noted that, in this type of study, there is rarely any interest in the characteristics of the test material itself, provided that such characteristics are within the typical range for the materials commonly tested, and values are determined in this way only in order to obtain the quantitative data necessary for compiling a statistical report concerning the test method.

Thus, in most cases, every effort is made to obtain lots or samples which are as similar to each other as possible, in such a way as to reduce the residual variance of the tests and, in the same way, to increase the accuracy of the conclusions that may be drawn from the global analysis of the results.

Since the individual test samples do not necessarily need to represent the population from which they are taken, but only have to be identical to each other, the method for their preparation can be quite different from those needed when the aim of the study is to obtain knowledge of the original population.

In the case of certain industries, the chemical industry for example, it is relatively easy to make up samples which are practically identical to each other, as the structure of the material allows it to be divided up so as to conserve the microscopic or macroscopic homogeneity of the product (e.g. solutions, powders).

In the case of tobacco, however, it is completely different because the raw materials, and even the finished products, are affected by an intrinsic heterogeneity likely to cause considerable differences between samples if special precautions are not taken.

Tobacco, as a test medium, can occur in the following forms:

— powder;

— cut tobacco;

— cigarettes;

— leaves or strips.

The method for the preparation of samples of test media depends, in most cases, on the type of test to be carried out. Nevertheless, it is possible to lay down a few general guidelines applicable to a large number of collaborative studies, depending on the form in which the material occurs.