



**SLOVENSKI STANDARD**  
**DSIST ISO 8243:199'**  
**01-1 b]1199'**

---

**Cigarette - Vzorčenje**

Cigarettes -- Sampling

Cigarettes -- Échantillonnage

**Ta slovenski standard je istoveten z: ISO 8243:1991**

---

**ICS:**

65.160	Tobak, tobačni izdelki in oprema	Tobacco, tobacco products and related equipment
--------	----------------------------------	---

**DSIST ISO 8243:199'** **en**



# INTERNATIONAL STANDARD

**ISO  
8243**

Second edition  
1991-10-15

---

---

## **Cigarettes — Sampling**

*Cigarettes — Échantillonnage*



Reference number  
ISO 8243:1991(E)

**ISO 8243:1991(E)****Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8243 was prepared by Technical Committee ISO/TC 126, *Tobacco and tobacco products*.

This second edition cancels and replaces the first edition (ISO 8243:1988), which has been technically revised.

Annexes A and B form an integral part of this International Standard. Annex C is for information only.

© ISO 1991

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization  
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

## Introduction

Existing national standards, rules, regulations and laws were taken into account when preparing this International Standard and two different procedures are described:

- sampling at the point of sale;
- sampling at the producer's premises or importer's and distributor's warehouses.

Sophisticated sampling plans are often too expensive to be used. The two procedures in this International Standard are both simple and reliable.

Sampling is carried out either as a single procedure or as part of a series of samplings.

Sampling is carried out "at one point in time", e.g. of cigarettes available for distribution from a factory/warehouse or available at a retail outlet on the market on a particular day. When a sample is required which represents cigarettes available over an appreciable period of time (e.g. cigarettes representing several months' production) a number of sub-period samples will be taken at different times and the results combined.

The sampling plan depends upon the purpose of sampling, e.g. determination of physical properties or of smoke constituents. Further background considerations on the choice of sampling procedures are given in annex C. It concludes that determinations of smoke yield should be made on the population manufactured for sale, sampled at manufacturers' factories or importers' warehouses; and that because of variations in cigarette manufacture the "sampling over a period of time" mode should be used wherever possible.

Detailed sampling plans are given in annexes A and B.

NOTE 1 Although outside the scope of this International Standard at present, it is recognized that there may be circumstances where it is relevant to the objectives for which test results are required to sample over a period of time at point of sale.

This page intentionally left blank

# Cigarettes — Sampling

## 1 Scope

This International Standard specifies two methods of sampling a population of cigarettes manufactured for sale for the preparation of samples. Different procedures are specified, as follows, according to whether sampling is undertaken at the point of sale, at the producer's premises or importer's and distributor's warehouses.

- a) Sampling "at one point in time" provides an instantaneous estimate of one or more characteristics of cigarettes. Sampling is carried out within as short a period as possible, not exceeding 14 d.
- b) Sampling "over a period of time" provides a continuous estimate of one or more characteristics of cigarettes. It can be considered for practical purposes as a series of samples each taken "at one point in time".

**Table 1 — Sampling possibilities**

Sampling procedures	Sampling mode	
	1 At one time (instantaneous)	2 Over a period (continuous)
<b>A</b> At point of sale	Subclause 4.1	
<b>B</b> At producer's premises or importer's and distributor's warehouses	Subclause 4.2	Subclause 6.1

This International Standard provides information on the statistical treatment of data and provides estimates, based on practical experience of the order of ranking in condensate and nicotine which is present when a product is sampled in accordance with the specified procedures.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publi-

cation, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 2602:1980, *Statistical interpretation of test results — Estimation of the mean — Confidence interval*.

ISO 3534:1977, *Statistics — Vocabulary and symbols*.

ISO 5725:1986, *Precision of test methods — Determination of repeatability and reproducibility for a standard test method by inter-laboratory tests*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

**3.1 sale unit:** A quantity of cigarettes ready to be offered for sale to the public.

NOTE 2 The commonly sold packet of 20 cigarettes is used as the basis of this International Standard, but cigarettes are also sold loose and in other size packets.

**3.2 population:** The aggregate of sale units of the cigarette to be sampled, intended for sale to consumers in a given geographical area in a given time period.

The definition includes different sub-populations, two of which are

**3.2.1 population available to consumers:** The aggregate of sale units in retail outlets in a given geographical area, at any time in a given time period.

**3.2.2 population manufactured for sale:** The aggregate of sale units at a manufacturer's premises available for commercial distribution in a given geographical area, at any time in a given time period.

**ISO 8243:1991(E)**

**3.3 increment:** The sample of cigarettes taken at one time, at one sampling point, to be combined to produce the gross sample.

**3.4 gross sample:** The aggregate of the increments.

**3.5 sub-period sample:** That part of the whole sample taken in a brief period when sampling over a long period of time.

**3.6 laboratory sample:** The sample intended for laboratory inspection or testing and which is representative of the gross sample or the sub-period sample.

**3.7 test sample:** Cigarettes for test taken at random from the laboratory sample and which are representative of each of the increments making up the laboratory sample.

**3.8 test portion:** A group of cigarettes prepared for a single determination and which is a random sample from the test sample or conditioned sample as appropriate.

**3.9 place of purchase:** The town, village or district within the area to be sampled, or that part of the area where the cigarettes are available.

Examples of boundaries are those of cantons, local government districts, electoral areas, postal code areas or any boundaries in accordance with the geographical context, or others.

**3.10 sampling point:** The specific location (e.g. shop, specialist tobacco shop, vending machine, place in warehouse, place in factory, etc.) from which an increment is to be taken.

**3.11 factory:** The place of manufacture or its associated distribution depots or the warehouse of an importer.

**3.12 carton:** A commercial package available within a factory; e.g. packets of 20 cigarettes are usually put into cartons of 200 cigarettes.

## **4 Mode for sampling at one time**

**NOTE 3** When a sale unit does not consist of a packet of 20 cigarettes, adjust the number of sale units sampled to produce the required number of cigarettes.

Two sampling procedures are described: in 4.1, a procedure for sampling at the point of sale and in 4.2, a procedure for sampling at the premises of the manufacturer or importer.

## **4.1 Procedure for sampling at the point of sale**

### **4.1.1 Selection of the places of purchase**

The required number of increments and the number of places of purchase to be used will depend on the purpose of the test and are given in annex A, A.2.

### **4.1.2 Selection of the sampling points**

The increments obtained in each place of purchase shall originate from sampling points which are distributed over separate locations throughout the place of purchase.

The choice of sampling points shall, whenever possible, reflect the pattern of retail distribution of cigarettes in that sampling place to be sampled.

**NOTE 4** This is usually done by defining for each sampling scheme several kinds of sampling points (e.g. automatic vending machines, supermarkets, specialist tobacco shops).

Each kind of sampling point is sampled at random throughout the place of purchase and, in total, the sample from each kind of sampling point shall make up a defined proportion of the whole sample (this is called a quota from each kind of sampling point).

Sampling shall only be carried out at another kind of sampling point after two unsuccessful attempts have been made at sampling points of the specified kind.

### **4.1.3 Constitution of the gross sample**

The gross sample is the aggregate of the increments. However, for reasons of convenience and also representativeness, it is preferable to prepare the laboratory sample directly from the increment (3.3). This is particularly important in order to secure matched laboratory samples when several laboratories are to run tests.

### **4.1.4 Constitution of the laboratory sample**

**4.1.4.1** If cigarettes of the same name and characteristics are required for several tests, sufficient sale units shall be obtained from each sampling point. If several laboratories are to run tests, an equal number of sale units from each sampling point shall be contained in each laboratory sample.

**4.1.4.2** Each laboratory sample shall be marked with at least the following information:

- a) name of the cigarettes and their characteristics;
- b) date of sampling;