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Essential oils — Sampling

Huiles essentielles — Échantillonnage

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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The main task of technical committees is to prepare International Standards. 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.

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 212 was prepared by Technical Committee ISO/TC 54, *Essential oils*.

This second edition cancels and replaces the first edition (ISO 212:1973), which has been technically revised.

Introduction

The organoleptic, physical and chemical characteristics of batches of essential oils are determined by means of examination of the samples.

A satisfactory sampling operation therefore needs to provide, for analysis, samples representative of the batches from which they originate without modification of the original composition.

Essential oils — Sampling

1 Scope

This International Standard gives the general rules for the sampling of essential oils, in order to provide a laboratory with quantities that are suitable to be handled for expertise purposes.

In the presence of a high content of water or other foreign bodies, this method may only be applicable to the "essential oil" fraction free from water and impurities.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
delivery
quantity of essential oil dispatched at a single time and forming the subject of a specific contract or dispatch document

NOTE The delivery may be made up of one or more batches.

2.2
batch
identified quantity of essential oil, assumed to have uniform characteristics, made up of one or more containers

2.3
container
recipient constituting the whole or part of the batch and containing the essential oil to be sampled

2.4
increment
quantity of essential oil sampled at a single time at a point in the container to be sampled

2.5
sample
quantity of essential oil obtained by mixing the different increments of a container

NOTE On the basis of the samples, the laboratory may conduct its own sampling plan in view of the analysis. The sampling plan is not covered in this International Standard.

3 Apparatus

The sampling devices and the related instruments shall be made of materials which do not affect the sampled essential oil.

The type of apparatus required for sampling should be adapted to the volume to be sampled: e.g. cylindrical probes, pipettes, bottom sampler.

4 Sampling

4.1 Inspection

The inspection concerns the physical condition of the delivery, the integrity of the containers, the state of the guarantee systems (lead seals, crown caps, etc.), the designation and the contractual inscriptions.

On opening, conserve the guarantee systems.

4.2 Shaking

Prior to any sampling, shake the essential oil using means suited to both the volume and the shape of the recipient.

Those essential oils that are known to crystallize or to thicken should be slowly warmed to a suitable temperature to dissolve crystals or crystalline mass, before shaking. This action shall not alter the composition of the essential oil.

4.3 Sampling method

All sampling operations shall be performed immediately after an appropriate shaking.

Take three increments per container, as follows:

— take the first increment from the section corresponding to 20 % of the container height;

— take the second between 40 % and 60 % of the container height;

— take the third at over 95 % of the container height.

Gather together the three equal part increments and mix them. After shaking, take 30 ml, which constitute the sample.

In the case of very expensive essential oils, the quantities shall be defined contractually.

The number of samples per container for the laboratory shall be equal to the number of parts concerned plus a reference sample.

5 Packaging and labelling of laboratory samples

5.1 Packaging

Use glass or inert material bottles which protect the essential oil against light.

Pack the samples in clean, dry recipients.

The nature of the recipient shall not alter the essential oil.

Leave a headspace of 2 ml between the essential oil and the stopper to allow for expansion. This space shall not be too great in order to limit possible oxidation due to the air.

Close the recipients using crown tops or new stoppers which do not have any action on the product.

Close each sample by means of a guarantee system such that it is inaccessible without breaking the seal.

Ascertain the airtightness.

5.2 Marking

The label shall be attached to each of the samples and shall bear indications enabling the traceability of the product, for example:

— the sampling date;

— the nature of the product: goods and origin;

— the name of the supplier;

— the batch number;

— the serial number of the sample out of the total number of containers.

The information on the label shall be marked in indelible ink.

5.3 Conservation

Store the samples intended for the laboratory, protected from light, at a temperature which guarantees their quality.

5.4 Dispatch

The packaging shall meet the requirements of the postal services or of the other bodies involved in the transport of the sample within the relevant country (countries).

6 Sampling report

The sampling report shall indicate:

— the identification of the supplier;

— the product identification marks;

— the origin;

— the batch number;

— the quantity represented in grams, kilograms or tons;

— the nature and the number of containers;

— the presence or absence of the guarantee systems;

— the date and time of sampling;

— the name, signature and function of the person who carried out the sampling.

The sampling report shall give the physical condition of the sampled essential oil. It shall also indicate the technique employed, if different from that described in this International Standard, as well as all circumstances which may have influenced the sampling.

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