



**SLOVENSKI STANDARD**  
**oSIST-TP ISO/TR 22582:2019**

**01-november-2019**

---

**Kozmetika - Metoda uparevanja ekstrakta in izračun organskega indeksa - Dodatne informacije k standardu ISO 16128-2**

Cosmetics - Methods of extract evaporation and calculation of organic indexes - Supplemental information to use with ISO 16128-2

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

Cosmétiques - Méthodes d'évaporation des extraits et de calcul des indices biologiques - Informations complémentaires à utiliser avec l'ISO 16128-2

<https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-310260892/sist-tp-iso-tr-22582-2019>

**Ta slovenski standard je istoveten z: ISO/TR 22582:2019**

---

**ICS:**

71.100.70	Kozmetika. Toaletni pripomočki	Cosmetics. Toiletries
-----------	--------------------------------	-----------------------

**oSIST-TP ISO/TR 22582:2019**

**en**



**TECHNICAL  
REPORT**

**ISO/TR  
22582**

First edition  
2019-05

---

---

**Cosmetics — Methods of extract  
evaporation and calculation of organic  
indexes — Supplemental information  
to use with ISO 16128-2**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST-TP ISO/TR 22582:2020](https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020)

<https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020>



Reference number  
ISO/TR 22582:2019(E)

© ISO 2019

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST-TP ISO/TR 22582:2020

<https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020>



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Extraction</b> .....	<b>1</b>
4.1 General.....	1
4.2 Principles to apply when determining indexes.....	1
4.3 Extraction process.....	2
4.3.1 Solvents.....	2
4.4 Operations performed after extraction.....	2
4.4.1 Concentration.....	2
<b>5 Determination of organic and organic origin indexes of extracts after evaporation</b> .....	<b>3</b>
5.1 Organic index.....	3
5.2 Organic origin index.....	3
5.3 Additional method of calculation.....	4
<b>Bibliography</b> .....	<b>5</b>

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

[SIST-TP ISO/TR 22582:2020](https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020)

<https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020>

## ISO/TR 22582:2019(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 217, *Cosmetics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

ISO 16128 (all parts) provides guidelines on definitions and criteria for natural and organic cosmetic ingredients and products. These guidelines are specific to the cosmetics sector, taking into account that most existing approaches written for the agricultural and food sector are not directly transferrable to cosmetics. They apply scientific judgment and offer principles towards a consistent logical framework for natural and organic cosmetic ingredients and products incorporating common approaches employed in existing references. The purpose of these guidelines is to encourage a wider choice of natural and organic ingredients in the formulation of a diverse variety of cosmetic products to encourage innovation.

This document was prepared to identify existing industry operations involved in extraction concentration and its impact on organic content. The preparation of this document involved the collection of information based on current market practices, including the concentration of extracts and processes, as well as equipment and solvents used.

Extraction processes involve contact between a solvent and a material (solute). This physical process involves the dissolution of solute molecules in the solvent and their extraction. The remaining insoluble material is then separated, and the remaining solution or dispersion might be concentrated.

If the extracted solution is concentrated to dryness, the rules and formulae presented in ISO 16128-2 apply.

If the extract is concentrated using the information contained in this document then the calculation of the organic content should be identified as such.

iteh STANDARD PREVIEW  
(standards.iteh.ai)

[SIST-TP ISO/TR 22582:2020](https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020)

<https://standards.iteh.ai/catalog/standards/sist/2b4c9134-d0fa-47ce-9d37-9de3103b0f80/sist-tp-iso-tr-22582-2020>





# Cosmetics — Methods of extract evaporation and calculation of organic indexes — Supplemental information to use with ISO 16128-2

## 1 Scope

This document describes the industry best practices to address the concentration of extracts which is related to ISO 16128-2:2017, 4.2. Evaporation of solvents to dryness is not addressed in this document.

This document aims to delineate the cases when an extract is produced and, afterwards the mixture of evaporated solvents used, regardless of the categories, are partially evaporated.

The producer of the extract can utilize different approaches (e.g. measurement by instrumentation, characterization of solvent volatility, published values of evaporation rates, etc.) to determine the index (es) of the extract. Despite the approach and justification, the rational and determinations used is made available to interested parties, when requested.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

## 4 Extraction

### 4.1 General

The extraction process aims to deliver specific, soluble fractions of materials rather than the material in whole. The extracts of organic plants, animals and microorganisms meet the need for delivering specific constituents in the finished cosmetic product without changing their structures or properties.

### 4.2 Principles to apply when determining indexes

In the case of extracts, the following principles apply when determining indexes.

- The indexes of finished extracts should reflect the starting materials [i.e. ingredient solvent(s) and un-extracted mass].
- Extracts may be produced from fresh or dried materials.
- The extraction procedure stops at separation of the extract from the insoluble residue (e.g. at filtration). If subsequent operations are performed (e.g. dilution, preservation, etc.), their contributions to the indexes are treated as additions of new ingredients.

## ISO/TR 22582:2019(E)

- The final extract (e.g. in the case of concentration) cannot display more organic or natural content than the starting materials.
- Reconstitution of dry plants with water to their original fresh mass is allowed. The reconstitution water should be present in the finished extract in order to count towards its natural or organic content.
- When calculating the organic index, reconstitution water is considered organic while any extraction water in excess is natural.
- An extract made from non-organic plants has an organic index and an organic origin index of 0.
- Ingredient solvents are defined in ISO 16128-1:2016, Table A.1.
- The use of non-natural ingredients (e.g. alcohol denaturants) is allowed in ingredient solvents. However, if the mixture contains a non-natural ingredient solvent, then the entire mixture is non-natural.

### 4.3 Extraction process

The extraction process involves the close contact of the extracted material (e.g. plant, animal, microbiological or mineral) with a solvent (single or mixture) for a determined time at a selected temperature.

The extraction process ends when the extract is physically separated from the unextracted material.

Results indicate that, after the extraction process ends, manufacturers could either distribute the extract as it is, or perform additional operations, such as addition (e.g. preservation, dilution) and/or concentration as discussed in [4.3](#).

After this physical/chemical extraction and separation process, directed to obtain and concentrate plants in one or a variety of ingredients, the extract might be used or submitted to following operations.

Nevertheless, some manufacturers use extracts without further concentration.

#### 4.3.1 Solvents

Categories of ingredient solvents are explained in ISO 16128-1:2016, Table A.1

### 4.4 Operations performed after extraction

After the extraction process ends, transportation and/or usage may require the extract to undergo additional operations that lead to partial solvent removal.

**NOTE** Complete removal or evaporation to dryness would render the substance a “process solvent” not an “ingredient solvent.” See ISO 16128-1:2016 Tables A.1 and A.2 for the respective requirements.

Addition of any ingredient, such as preservatives, antioxidants or other non-solvent to the extract would render the ingredient a mixture with the appropriate index(es) to be calculated accordingly.

#### 4.4.1 Concentration

##### 4.4.1.1 General

There are generally two methods used to concentrate extracts:

- cold temperature vacuum extraction; and
- heating to evaporate.