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**Cosmetics — Microbiology —  
Enumeration of yeast and mould**

*Cosmétiques — Microbiologie — Dénombrement des levures et des  
moisissures*

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## 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*.

This second edition cancels and replaces the first edition (ISO 16212:2008), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- in the Scope, “see ISO 29621” has been added and the reference has been added to the Bibliography;
- in the Scope, “used” has been changed to “substituted” and “validated” has been changed to “shown to be suitable”;
- in [4.1](#), “validated” has been changed to “demonstrated”;
- in [4.3](#), “by a valid method” has been changed to “as described in Clause 12” and “validated procedure” has been replaced by “described procedure”;
- in [5.1](#), “specifications” has been changed to “instructions”;
- in [5.2.3.1.2](#), “peptone” has been changed to “peptic digest of animal tissue”;
- in [Clause 7](#), “validation” has been changed to “suitability”;
- in [9.3.2.1](#), “validated” has been changed to “demonstrated to be suitable”;
- in [9.3.2.3](#), “prepared as validated” has been changed to “demonstrated to be suitable”;
- in [11.2.1](#), “validated according to” has been changed to “demonstrated to be suitable for”;
- in [12.3](#), “validation” has been changed to “suitability”;
- in [12.3.2](#), instances of “validation” have been changed to “suitability test” and “validated” has been changed to “satisfactory”;
- in [12.3.3](#), the first instance of “validation” has been changed to “suitability” and the second instance has been changed to “suitability test”; “validated” has been changed to “satisfactory”;

- in [12.3.4](#), the first instance of “validation” has been changed to “suitability” and the second instance has been changed to “suitability test”; “validated” has been changed to “satisfactory”;
- in [Clause 13](#) f), “validation” has been changed to “suitability”;
- in [A.1](#), [B.1](#) and [C.1](#), “validated” has been changed to “demonstrated to be suitable”.

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# Cosmetics — Microbiology — Enumeration of yeast and mould

## 1 Scope

This document gives general guidelines for enumeration of yeast and mould present in cosmetics by counting the colonies on selective agar medium after aerobic incubation.

In order to ensure product quality and safety for consumers, it is advisable to perform an appropriate microbiological risk analysis to determine the types of cosmetic products to which this document is applicable. Products considered to present a low microbiological risk (see ISO 29621) include those with low water activity or extreme pH values, hydro-alcoholic products, etc.

Because of the large variety of cosmetic products within this field of application, this method might not be suited to some products in every detail (e.g. certain water-immiscible products). Other methods (e.g. automated) can be substituted for the tests presented here provided that their equivalence has been demonstrated or the method has been otherwise shown to be suitable.

Yeast enumerated can be identified using suitable identification tests, for example, tests described in the standards listed in the Bibliography. Mould enumerated can be identified by other appropriate methods, if necessary.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 21148, *Cosmetics — Microbiology — General instructions for microbiological examination*

EN 12353, *Chemical disinfectants and antiseptics — Preservation of test organisms used for the determination of bactericidal (including Legionella), mycobactericidal, sporicidal, fungicidal and virucidal (including bacteriophages) activity*

## 3 Terms and definitions

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

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/>

### 3.1

#### **yeast**

single-cell fungus, which multiplies mainly vegetatively by budding, able to grow under the test conditions specified in this document

### 3.2

#### **mould**

mycelium forming microfungus, including spores and conidia, able to grow under the test conditions specified in this document