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Synthetic rubber latex — Examination for microorganisms

Latex de caoutchouc synthétique — Examen des micro-organismes

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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).

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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

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw materials (including latex) for use in the rubber industry*.

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Introduction

Synthetic latices are susceptible to post-production contamination with microorganisms during storage and shipment. Unless precautions are taken, such as maintenance of a high pH, the addition of biocide and inspection and cleaning of tanks, these organisms may proliferate, ultimately producing unpleasant odours and changes in the chemical and physical properties of the latex. It is highly desirable to be able to detect the presence of significant microorganisms before such changes develop.

This document replaces ISO 9252:1989, *Synthetic rubber latex – Microbiological examination*, which was withdrawn due to its obsolescence and complicated testing procedures. This document provides a far more simplified method for the purpose of microbiological examination, employing a ready-made medium slide as reagent.

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Synthetic rubber latex — Examination for microorganisms

WARNING 1 — Persons using this document should be familiar with normal laboratory practice. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

WARNING 2 — Certain procedures specified in this document might involve the use or generation of substances, or the generation of waste, that could constitute a local environmental hazard. Reference should be made to appropriate documentation on safe handling and disposal after use.

1 Scope

This document specifies the method to examine the presence and approximate count of viable aerobic and facultative anaerobic microorganisms in synthetic rubber latices.

Identification of the microorganisms is outside the scope of this document.

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 123, *Rubber latex — Sampling*

ISO 7218, *Microbiology of food and animal feeding stuffs — General requirements and guidance for microbiological examinations*

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:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
colony
group of microbial cells derived, ideally, by the multiplication of a single organism

4 Principle

The slide with the medium surfaces is dipped in the test portion of the latex. The microorganisms on both sides of the slide are incubated for a certain amount of time at a regulated temperature.

After incubation, the approximate number of microorganisms is determined by comparing the density of the growth of colony on the slide with the model chart.

The approximate count is expressed in colony forming unit per millilitre (CFU/ml).

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