INTERNATIONAL STANDARD

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# Natural rubber latex concentrate — Determination of total phosphate content by spectrophotometric method

*Concentré de latex de caoutchouc naturel — Détermination de la teneur totale en phosphate par méthode spectrophotométrique*

Reference number
ISO 19043:2023(E)

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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 document 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 of 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 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*.

This second edition cancels and replaces the first edition (ISO 19043:2015), which has been technically revised.

The main changes are as follows:

— the CAS numbers of the chemicals have been added;

— in 6.4, the requirement for potassium dihydrogen phosphate (stock solution) has been changed to include both the commercially available standard solution and the prepared one;

— in 7.1, "The difference between two readings" has been changed into "The difference between the results of duplicate determinations";

— in Clause 8, "Report the result as the mean of the duplicate determinations" has been added;

— in Annex A, the precision data have been updated by the results of an ITP evaluated in accordance with ISO 19983.

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.


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# Natural rubber latex concentrate — Determination of total phosphate content by spectrophotometric method

**WARNING — 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.**

## 1 Scope

This document specifies a method for the determination of total phosphate content of natural rubber latex concentrate. This method is not necessarily suitable for latex from natural sources other than the *Hevea brasiliensis.*

## 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 124, *Latex, rubber — Determination of total solids content*

ISO 648, *Laboratory glassware — Single-volume pipettes*

## 3 Terms and definitions

No terms and definitions are listed in this document.

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

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

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

## 4 Principle

Approximately 20 g of concentrated latex, of which the total solids content has been determined, is coagulated with hydrochloric acid (CAS 7647-01-0).

The coagulated latex is removed and the serum filtered through filter paper.

The residual phosphate present in a known volume of the serum is determined by measuring absorbance with a spectrophotometer at wavelength 470 nm.

## 5 Apparatus

**5.1 Balance**, accurate to 0,1 mg.

**5.2 Volumetric pipettes**, of capacity 10 $cm^3$ and 25 $cm^3$, complying with the requirements of ISO 648, class A.

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