INTERNATIONAL STANDARD

**ISO 17403**

First edition
2014-03-01

# Rubber — Determination of magnesium content of field and concentrated natural rubber latices by titration (cyanide-free method)

*Caoutchouc — Détermination par titrage de la teneur en magnésium du latex de plantation et du latex concentré de caoutchouc naturel (méthode sans cyanure)*

Reference number
ISO 17403:2014(E)

© ISO 2014



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2014

All rights reserved. Unless otherwise specified, 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
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

Published in Switzerland

# Contents

Page

**Foreword** ... **iv**

**1 Scope** ... **1**

**2 Normative references** ... **1**

**3 Terms and definitions** ... **1**

**4 Apparatus** ... **1**

**5 Reagents** ... **2**

**6 Method A — Determination of magnesium content of field latex** ... **2**
6.1 Principle ... 2
6.2 Procedure ... 3
6.3 Number of determinations ... 3
6.4 Calculation of results ... 3
6.5 Expression of result ... 3

**7 Method B — Determination of magnesium content of concentrated latex** ... **4**
7.1 Principle ... 4
7.2 Procedure ... 4
7.3 Number of determinations ... 4
7.4 Calculation of results ... 5
7.5 Expression of result ... 5

**8 Test report** ... **5**

**Annex A** (informative) **Precision** ... **7**

**Bibliography** ... **10**

© ISO 2014 – All rights reserved

# 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).

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).

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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw material (including latex) for use in the rubber industry*.


© ISO 2014 – All rights reserved

# Rubber — Determination of magnesium content of field and concentrated natural rubber latices by titration (cyanide-free method)

## 1 Scope

This International Standard specifies a cyanide-free titration method for the determination of the magnesium content in field and concentrated natural rubber latex.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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

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

**3.1**
**natural rubber latex concentrate**
natural rubber latex from *Hevea brasiliensis* containing ammonia and/or other preservatives, which has been subjected to some process of concentration

**3.2**
**field natural rubber latex**
natural rubber latex with or without a preservative and prior to concentration or any other processing

Note 1 to entry: The preservative is added to maintain the original state of the latex as it came from the tree.

**3.3**
**magnesium content**
content of magnesium equivalent to alkaline-earth metals, mainly magnesium and calcium, present in all soluble forms that may be titrated with ethylenediaminetetraacetic acid in field or concentrated natural rubber latex

## 4 Apparatus

**4.1 Burette**, 50 $cm^3$ graduated.

**4.2 Analytical balance**, accurate to 0,1 mg.

**4.3 Volumetric pipettes**, of capacities 2 $cm^3$, 5 $cm^3$ and 10 $cm^3$ complying with the requirements of ISO 648, class A.

© ISO 2014 – All rights reserved