
**Rubber — Determination of magnesium
content of field and concentrated natural
rubber latex by titration**

*Caoutchouc — Détermination par titrage de la teneur en magnésium du
latex de plantation et du latex concentré de caoutchouc naturel*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 11852 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*.

Rubber — Determination of magnesium content of field and concentrated natural rubber latex by titration

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard 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.

1 Scope

This International Standard specifies titration methods for the determination of the magnesium content of field and concentrated natural rubber latex, respectively.

2 Normative references

The following referenced documents are indispensable for the application 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 385:2005, *Laboratory glassware — Burettes*

ISO 648:2008, *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 and which has been subjected to some process of concentration

3.2

magnesium content

amount of magnesium, and possibly also other alkaline-earth metals (see the Note), present in a sample of natural rubber field latex or latex concentrate

NOTE When ammonia is added to field latex, the calcium and magnesium ions present in varying concentrations in the serum of the latex are to a large extent precipitated as ammonium phosphate complexes, which gradually settle out in the sludge. The results of the test methods described in this International Standard are expressed as the magnesium content on the assumption, which is not strictly true, that magnesium is the only divalent alkaline-earth ion remaining in the latex after the sludge has been removed. Calcium ions are also present, occasionally in appreciable amounts.

4 Field latex

4.1 Principle

The latex is centrifuged at between 2 500 m/s² (250g) and 5 000 m/s² (500g), using a laboratory centrifuge, for 3 min. A known mass of the resultant latex, free of sludge, is diluted with water, and the residual magnesium