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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 39719-2020

**Field and concentrated natural rubber latices - Determination of
magnesium content - Cyanide-free titrimetric method**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard adopts the redrafting method to amend and adopt ISO 17403:2014 "Rubber uses titration method to determine the content of fresh and concentrated natural rubber latex

Magnesium content (cyanide-free method)":

Compared with ISO 17403:2014, this standard has structural adjustments: The specific chapter numbers are as follows:

---In the "Instrument", two "pH meter" and "pipette" were added and the order of the articles

was adjusted (see Chapter 4, ISO 17403:2014

Chapter 4);

---In the "Reagents", a "acetic acid" item was added and the order of the items was adjusted (see Chapter 5, Chapter 5 of ISO 17403:2014);

---The chapter "Precision" is added, and the "Test Report" is changed to Chapter 9 (see Chapter 8 and Chapter 9, ISO 17403:2014 Chapter

Chapter 8):

Compared with ISO 17403:2014, there are technical differences between this standard, and the clauses involved in these differences have been passed on the outer margins:

The set vertical single line (|) is marked: The technical differences and their reasons are as follows:

--- Increase the scope of application of this standard (see Chapter 1);

--- Regarding normative references, this standard has made adjustments with technical differences to adapt to my country's technical conditions: Adjustment situation

It is concentratedly reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows:

* Replace ISO 124 with GB/T 8298 which is modified to adopt international standards;

* Added normative reference documents GB/T 12805 and GB/T 12806;

* Replace ISO 648 with GB/T 12808;

---Added the corresponding English word "freshnaturalrubberlatex" for the term "fresh natural rubber latex" (see 3:2);

--- Change "ethylenediaminetetraacetic acid" to "ethylenediaminetetraacetic acid sodium salt" (see 3:3, ISO 17403:2014 3:3), because of the titration

It is not ethylenediaminetetraacetic acid, but its sodium salt;

---Added the introduction of the instrument, pH meter, 100mL and 1000mL volumetric flask regulations, and according to the order of appearance in the text

Adjust the order of the instruments (see Chapter 4, Chapter 4 of ISO 17043:2014);

---Change "burette with a scale of 50cm³" to "burette, with nominal capacities of 5 mL, 10 mL and 50 mL, in line with

The provisions of GB/T 12805" (see 4:1, ISO 17403:2014, 4:1) to meet the determination of different magnesium content;

---Added "acetic acid" to the list of reagents and adjusted the order of reagents (see

Chapter 5, Chapter 5 of ISO 17043:2014),

To meet the requirements of GB/T 20001:4-2015;

--- Change the "note" in "masking agent solution" to the text (see 5:2, ISO 17403:2014, 5:3), because it contains requirements;

--- Change "deionized water" to "water" (see 5:3, 5:5 of ISO 17403:2014), because the introduction of Chapter 5 has stipulated the water purity;

---Modified the preparation method of EDTA solution, cleared "ethylenediaminetetraacetic acid sodium salt" as "ethylenediaminetetraacetic acid disodium" and added

Heat the dissolution step (see 5:5, 5:2 of ISO 17403) to facilitate preparation;

--- In the "principle" of Method A, "magnesium content is expressed by mass fraction (%) based on the total solid content of latex" to "magnesium content is expressed by latex Calculated mass fraction (%) or mass fraction (%) based on the total solid content of the latex expressed" (see 6:1, ISO 17403:2014

6:1), because the measurement result of this method can also be expressed by the mass fraction (%) of the latex meter;

--- Change the "Note" in the "Test Procedure" of Method A to the text (see 6:2, ISO 17403:2014, 6:2), because it contains requirements;

---In the "Principle" of Method B, "Mg content expressed by mass fraction (%) based on the total solid content of latex" (see 7:1) is added to

Mention the way the measured results are expressed;

---Combine 7:2:1 and 7:2:2 into one and modify the test procedure (see 7:2, ISO 17403:2014 7:2:1 and 7:2:2) to make

The standard structure is more concise and easy to operate;

--- Change the "Note" in the "Test Procedure" of Method B to contain the required content to the text (see 7:2, ISO 17403:2014, 7:2:2);

---Modified the expression method of the magnesium content calculation formula and specified the source of the amount in the test procedure (see 6:2, 6:4, 7:2 and 7:4,

ISO 17403:2014 6:4 and 7:4) to meet the requirements of GB/T 1:1-2009 and facilitate calculation and use;

--- Add a chapter "Precision" (see Chapter 8) to mention Appendix A in the text;

--- Change ISO /T R9272 to GB/T 14838 (see A:1:1, A:2:1, references, ISO 17403:2014,

A:1:1,

A:2:1, references), because there is no currently valid version of ISO /T R9272:

--- Change "A and B samples prepared with high ammonia latex" to "Three samples A, B and C prepared with fresh natural rubber latex" to

And change "whole batch of latex" to "whole batch of fresh natural rubber latex" (see A:1:3, ISO 17403:2014 A:1:3) to correct the sample

Quantity and make it clear that the sample to be tested is fresh natural rubber latex;

---Replace "same laboratory" in the description of reproducibility with "two different laboratories" (see A:1:6, A:2:6,

ISO 17403:2014 A:1:6, A:2:6), because the reproducibility is compared with different laboratories;

--- Change "high ammonia latex" to "high ammonia concentrated natural latex" and change "whole batch of latex" to "whole batch of concentrated natural latex" (see A:2:3,

ISO 17403:2014 A:2:3), to specify that the sample to be tested is concentrated natural rubber latex:

This standard also made the following editorial changes:

---Modified the standard name;

--- "Warning" has been added to meet the requirements of GB/T 20001:4-2015:

This standard was proposed by the China Petroleum and Chemical Industry Federation:

This standard is under the jurisdiction of the National Rubber and Rubber Products Standardization Technical Committee (SAC/TC35):

Drafting organizations of this standard: Agricultural Products Processing Research Institute, Chinese Academy of Tropical Agricultural Sciences, Hainan China Rubber Technology Co., Ltd., Hainan Natural Rubber

Rubber Quality Inspection Station, Hainan Product Quality Supervision and Inspection Institute, Hainan Natural Rubber Industry Group Golden Rubber Co., Ltd: Jinlian Rubber Processing Branch

the company:

1 Scope

This standard specifies a cyanide-free titration method for determining the magnesium content in fresh and concentrated natural rubber latex:

This standard applies to the determination of magnesium content in fresh and concentrated