INTERNATIONAL STANDARD

ISO 16564

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AMENDMENT 1
2006-05-15

Rubber, raw natural — Determination of average molecular mass and molecular-mass distribution by size exclusion chromatography (SEC)

AMENDMENT 1

Caoutchouc naturel brut — Détermination de la masse moléculaire moyenne et de la répartition des masses moléculaires par chromatographie d'exclusion stérique (SEC)

AMENDEMENT 1

Reference number
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Foreword

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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.

Amendment 1 to ISO 16564:2004 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

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Replace Clause 8 by the following:

8 Precision

8.1 An interlaboratory test programme (ITP) was carried out using the guidelines established by ISO/TR 9272, *Rubber and rubber products — Determination of precision for test method standards*, in the period June to July 2002. A type 1 precision was determined on the basis of two measurements of molecular mass M_w on each of two different days. Each measurement is designated as a test result. Homogenized natural rubber (NR) was used as the test material and each laboratory used a set of supplied polystyrene standards for calibration. Data on M_w obtained from four laboratories were used to calculate the repeatability and reproducibility.

8.2 The precision results as determined by this ITP may not be applied to acceptance or rejection testing for any group of materials or products without documentation that the results of this precision evaluation actually apply to the products or materials tested.

8.3 The precision results are given in Table 2. General statements for the use of the precision results are cited below. These are given in terms of both the absolute precision, r and R, and the relative precision, (r) and (R).

Repeatability: The repeatability, or local domain precision, of the test method has been established as the values given in Table 2. Two individual test results (obtained by the proper use of this International Standard) that differ by more than the tabulated values of r, in measurement units, or (r), in percent, shall be considered as suspect, i.e. to have come from different populations. Such a decision suggests that some appropriate investigative action be taken.

Reproducibility: The reproducibility, or global domain precision, of the test method has been established as the values given in Table 2. Two individual test results obtained in different laboratories (by the proper use of this International Standard) that differ by more than the tabulated values of R, in measurement units, and (R), in percent, shall be considered as suspect, i.e. to have come from different populations. Such a decision suggests that some appropriate investigative action be taken.

Bias: Bias is the difference between a measured average test result and a reference or true value for the measurement in question. Reference values do not exist for this test method and therefore bias cannot be determined.

Table 2 — Precision data for M_w

Material	Mean value of M_w	Within laboratory			Between laboratories		
		s_r	r	(r)	s_R	R	(R)
NR	1 910 041	46 160	250 245	13	321 309	887 030	46

where

s_r is the repeatability standard deviation;

s_R is the reproducibility standard deviation;

r is the repeatability limit, in measurement units;

R is the reproducibility limit, in measurement units;

(r) is the repeatability (relative), in percent;

(R) is the reproducibility (relative), in percent.