INTERNATIONAL STANDARD

ISO 976

Third edition 1996-06-15 **AMENDMENT 1** 2006-02-01

Rubber and plastics — Polymer dispersions and rubber latices — Determination of pH

AMENDMENT 1: Precision data

Caoutchouc et plastiques — Dispersions de polymères et latex de caoutchouc — Détermination du pH

AMENDEMENT 1: Données de fidélité



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Foreword

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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 976:1996 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 and plastics — Polymer dispersions and rubber latices — Determination of pH

AMENDMENT 1: Precision data

Page 1, Clause 2

Update the year of publication of ISO 123 to 2001.

Replace ISO 842 by

ISO 15528:2000, Paints, varnishes and raw materials for paints and varnishes — Sampling

Add the following reference:

ISO/TR 9272, Rubber and rubber products — Determination of precision for test method standards

Page 2, Clause 5

Replace ISO 842 by ISO 15528.

Page 4

Add the following new clause, renumbering the test report as Clause 9:

8 Precision statement

- **8.1** The precision of this method was determined in accordance with ISO/TR 9272. Refer to this document for terminology and explanations of statistical concepts.
- **8.2** The precision details in this precision statement give an estimate of the precision of this test method with the materials used in the particular interlaboratory programme as described below. The precision parameters should not be used for acceptance/rejection testing of any group of materials without documentation that the parameters are applicable to those particular materials and the specific test protocol of this test method.
- **8.3** The precision results are given in Table 1. The precision is expressed on the basis of a 95 % confidence level for the values established for repeatability r and reproducibility R.
- **8.4** The results contained in Table 1 are mean values and give an estimate of the precision of this test method as determined in an interlaboratory test programme (ITP) conducted in 2001. Thirteen laboratories performed triplicate analyses on two samples, A and B, which were prepared from highly ammoniated latex. The bulk latex was strained and then homogenized by thorough blending and stirring prior to being subsampled into 1-litre bottles labelled A and B. Thus, essentially, samples A and B were the same and were treated as such in the statistical computations. Each participating laboratory was required to carry out the test using these two samples on the dates which had been given to the participants in the ITP.
- **8.5** A type 1 precision was determined, based on the sampling method used for the latex samples in the ITP.

- **8.6** Repeatability: The repeatability r (in measurement units) of this test method has been established as the appropriate value tabulated in Table 1. Two single test results, obtained in the same laboratory under normal test conditions, that differ by more than the tabulated value of r (for any given level) shall be considered to have come from different (non-identical) sample populations.
- **8.7 Reproducibility**: The reproducibility R (in measurement units) of this test method has been established as the appropriate value tabulated in Table 1. Two single test results, obtained under normal test conditions, that differ by more than the tabulated value of R (for any given level) shall be considered to have come from different (non-identical) sample populations.
- **8.8 Bias**: In test method terminology, bias is the difference between an average test value and the reference (or true) test property value.

Reference values do not exist for this test method since the value (of the test property) is exclusively defined by the test method. Bias, therefore, cannot be determined for this particular test method.

Table 1 — Estimate of precision of determination of pH

Mean -	Within laboratory		Between laboratories		
	S_r	r	s_R	R	
10,56	0,021	0,06	0,174	0,49	

 $r = 2.83 \times s_r$

where r is the repeatability (in measurement units) and s_r is the within-laboratory standard deviation.

 $R = 2.83 \times s_R$

where R is the reproducibility (in measurement units) and S_R is the between-laboratory standard deviation.

Page 6, Annex A

Delete the annex.



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