

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 124

DETERMINATION OF TOTAL SOLIDS OF LATEX

2nd EDITION

August 1966

This second edition supersedes the first edition.

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BRIEF HISTORY

The ISO Recommendation R 124, *Determination of Total Solids of Latex*, was drawn up by Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1948 and led, in 1955, to the adoption of a Draft ISO Recommendation.

In March 1957, this Draft ISO Recommendation (No. 145) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Australia	Hungary	Romania
Austria	India	Spain
Canada	Indonesia	Sweden
Czechoslovakia	Ireland	Switzerland
Denmark	Italy	United Kingdom
Finland	Japan	U.S.A.
Germany	New Zealand	U.S.S.R.
Greece	Pakistan	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in August 1959, to accept it as an ISO RECOMMENDATION.

BRIEF HISTORY CONCERNING THE 2nd EDITION

With the publication of ISO Recommendation R 124, in 1959, a start was made by Secretariat of Technical Committee ISO/TC 45, *Rubber*, in revising this document in order to make it suitable for synthetic rubber latices.

Work on this question by the Working Group ISO/TC 45/WG A led, in 1962, to the adoption of a Draft Revision of ISO Recommendation R 124.

In November 1963, this Draft Revision (No. 629) was circulated in its final form to all the ISO Member Bodies for enquiry. It was approved by 27 Member Bodies. No Member Body opposed the approval of the Draft.

The Draft Revision of ISO Recommendation R 124, was then submitted by correspondence to the ISO Council which decided, in August 1966, to accept it.

The present edition (2nd edition) embodies this revision.

DETERMINATION OF TOTAL SOLIDS OF LATEX

1. SCOPE

This ISO Recommendation describes a procedure for the testing of natural rubber latex which contains preservative agents and which may have been submitted to some type of concentration process, and also for the testing of synthetic rubber latices. The procedure is not necessarily suitable for latices from natural sources other than *Hevea brasiliensis* or for compounded latex, vulcanised latex or artificial dispersions of rubber.

2. PROCEDURE

Approximately 2.0 g of the well-mixed sample (to obtain about 1.0 g total solids) is weighed accurately to 1 mg into a light, substantially horizontal, flat-bottomed open vessel of about 6 cm in diameter and provided with a suitable cover for use when weighing. The vessel is made of non-volatile inert material.

For synthetic latex a drying aid of approximately 1 ml of isopropanol or distilled water may be added dropwise and mixed well with the latex by swirling.

The vessel is gently swirled to ensure that the latex covers the bottom of the dish. The test portion is dried in air at a temperature of 70 to 100 °C or, for synthetic latex, in vacuo, at a pressure not above 60 mm of mercury, at a temperature between 100 and 125 °C. It is then cooled in a desiccator and weighed as quickly as possible. The drying operation is repeated until the loss in mass is less than 1 mg during a period of 30 min for temperatures between 70 and 85 °C, or during a period of 15 min for temperatures between 85 and 125 °C.

3. EXPRESSION OF RESULTS

$$\text{Total solids (TS), \%} = \frac{\text{mass of dried film, in grammes}}{\text{mass of test portion, in grammes}} \times 100$$

A difference of 0.2% between the results of duplicate determinations on the same sample is not considered significant.