INTERNATIONAL STANDARD 124

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Rubber latices — Determination of total solids content

Latex d'élastomère — Détermination des matières solides totales

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 124 was drawn up by Technical Committee ISO/TC 45, *Rubber and rubber products*, and circulated to the Member Bodies in June 1972.

It has been approved by the Member Bodies of the following countries:

Australia	India	Sri Lanka
Austria	Ireland	Sweden
Belgium	Korea, Rep. of	Switzerland
Canada	Malaysia	Turkey
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	U.S.A.
France	Romania	U.S.S.R.
Germany	South Africa, Rep. of	
Hungary	Spain	

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 124-1966.

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Rubber latices — Determination of total solids content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the total solids content of natural rubber latex which contains preservative agents and which has been submitted to some type of concentration process, and also for the determination of the total solids content of synthetic rubber latices.

The method is not necessarily suitable for latices from natural sources other than *Hevea brasiliensis* or for compounded latex, vulcanized latex or artificial dispersions of rubber.

2 REFERENCE

ISO 123, *Rubber latices — Sampling.*

3 SAMPLING

Carry out the sampling in accordance with one of the methods specified in ISO 123.

4 PROCEDURE

For a natural rubber latex, proceed according to 4.1 and for a synthetic rubber latex proceed according to either 4.1 or 4.2.

4.1 Heating at atmospheric pressure

Weigh, to the nearest 1 mg, a flat-bottomed lipless dish about 60 mm in diameter, together with a cover for it. Pour into the dish 2,0 ± 0,5 g of latex, replace the cover and weigh to the nearest 1 mg. Gently swirl the contents of the dish to ensure that the latex covers the bottom. If desired, approximately 1 ml of distilled water or water of equivalent purity may be added and mixed well with the latex by swirling.

Place the dish, uncovered, in an oven so that it is horizontal and heat it at either 70 ± 2 °C or at 100 ± 2 °C until the sample has lost its whiteness, or for 16 h or 2 h respectively. Cool in a desiccator, replace the cover and weigh. Return the dish, uncovered, to the oven for 30 min if the drying temperature is 70 ± 2 °C, or for 15 min if the drying temperature is 100 ± 2 °C. Cool in a desiccator, replace the cover and reweigh. Repeat the drying procedure for intervals of 30 or 15 min, as appropriate, until the loss in mass between successive weighings is less than 1 mg.

4.2 Heating at reduced pressure

Weigh, to the nearest 0,5 mg, a flat-bottomed lipless dish about 60 mm in diameter, together with a cover for it. Pour into the dish 1,0 ± 0,2 g of latex, replace the cover and weigh to the nearest 0,5 mg. Remove the cover, add 1 ml of distilled water or water of equivalent purity and mix well by swirling to ensure that the latex covers the bottom of the dish.

Place the dish, uncovered, in a vacuum oven so that it is horizontal. Reduce the pressure slowly, to avoid foaming and splattering, and heat at 125 ± 2 °C for 45 to 60 min at a pressure below 20 kPa. Cool the dish in a desiccator, replace the cover and weigh. Repeat the drying procedure for intervals of 15 min until the loss in mass between successive weighings is less than 0,5 mg.

5 EXPRESSION OF RESULTS

Calculate the total solids content (TSC), as a percentage by mass, from the formula :

$$\frac{m_1}{m_0} \times 100$$

where

m_0 is the mass, in grams, of the test portion;

m_1 is the mass, in grams, of the dried sheet.

The results of duplicate determinations shall not differ by more than 0,2 unit.

6 TEST REPORT

The test report shall include the following particulars :

a) reference to this International Standard;

b) the results, and the form in which they are expressed;

c) any operation not included in this International Standard or regarded as optional.