INTERNATIONAL STANDARD 126

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Natural rubber latex — Determination of dry rubber content

First edition — 1972-06-01

UDC 678.4.031 : 543.062

Ref. No. ISO 126-1972 (E)

Descriptors : natural rubber, latex, chemical analysis, determination of content.

Price based on 1 page

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 126 was drawn up by Technical Committee ISO/TC 45, *Rubber and rubber products.*

It was approved in September 1971 by the Member Bodies of the following countries :

Canada	Italy	Sweden
Czechoslovakia	Korea, Dem.P.Rep. of	Switzerland
Egypt, Arab Rep. of	Netherlands	Thailand
France	New Zealand	United Kingdom
Germany	Portugal	U.S.A.
Hungary	Romania	U.S.S.R.
India	South Africa, Rep. of	Yugoslavia
Ireland	Spain	

No Member Body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 126-1959.

Printed in Switzerland

Natural rubber latex — Determination of dry rubber content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the dry rubber content of natural rubber latex which contains preservative agents and which has been submitted to some type of concentration process. 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, and is not applicable to synthetic rubber latices.

2 REFERENCE

ISO/R 123, *Sampling of latex.*

3 REAGENT

Distilled water or water of equivalent purity shall be used wherever water is specified.

3.1 Acetic acid, 2 % solution of recognized analytical reagent quality.

4 PROCEDURE

Prepare the latex in accordance with ISO/R 123.

Into a suitable container, such as a dish approximately 100 mm in diameter and 50 mm deep, weigh to the nearest 5 mg, by difference from a weighing bottle, 10 ± 1 g of latex. Pour down the inside edge of the container 20 ml of water and carefully rotate the container on a smooth surface to dilute the latex homogeneously.

Add, over a period of 5 min, 75 ± 5 ml of the acetic acid (3.1) down the inside edge of the container, slowly rotating the container while the acid is being added.

Gently depress the coagulated sheet of rubber below the surface of the acid. Place a watch glass on the container and heat on a steam bath for 15 to 30 min. If the serum remains milky, add 5 ml of 95 % (V/V) ethanol.

When the serum is clear, collect any small particles of coagulated rubber by rubbing with the main bulk.

Soak the coagulated rubber in several changes of water until the water is no longer acid to litmus.

Press the coagulated rubber to expel water and obtain a uniform sheet not exceeding 2 mm in thickness. A suitable method is to place the coagulated rubber carefully on a glass plate and with a glass stopper about 45 mm in diameter, or a small photographic roller, to press first around the circumference and then work towards the centre. Rinse the sheet in water.

Dry the sheet at a temperature of 70 ± 2 °C. If the sheet is dried on a large watch glass, carefully turn it over two or three times during the first few hours of drying. Cool in a desiccator and weigh. Repeat the procedure of drying, cooling and weighing until the loss in mass is less than 5 mg after heating for 30 min.

5 EXPRESSION OF RESULTS

Calculate the dry rubber content (DRC), as a percentage by mass, from the following 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 dry sheet.

The results of duplicate determinations shall agree within 0.2 unit.