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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION
R 250

SAMPLING OF RAW NATURAL RUBBER

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For each individual country the only valid standard is the national standard of that country.

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BRIEF HISTORY

The ISO Recommendation R 250, *Sampling of Raw Natural Rubber*, was drawn up by Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

Work on this question by the Technical Committee began in 1956 and led, in 1958, to the adoption of a Draft ISO Recommendation.

In December 1959, this Draft ISO Recommendation (No. 344) 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	India	Sweden
Austria	Israel	Switzerland
Burma	Italy	United Kingdom
Chile	Japan	U.S.A.
Colombia	Mexico	U.S.S.R.
Czechoslovakia	Netherlands	Yugoslavia
Germany	Portugal	
Hungary	Spain	

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 March 1962, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 250 March 1962

SAMPLING OF RAW NATURAL RUBBER

1. SCOPE

This ISO Recommendation covers the sampling of raw natural rubber, whether in the form of bales or loose sheets (including crepe), and the allocation of portions of the sample for specific tests. The sampling of loose sheets is normally carried out only in rubber-producing countries.

2. DEFINITIONS

2.1 *Lot.* An assembly of bales or loose sheets characterized by some distinctive common feature.

NOTE. — All bales bearing the same marks may be regarded as a lot unless there are obvious signs of heterogeneity. Loose sheets can be regarded as forming a lot only if they are obtained from a single bulking of latex and have been dried in air or smoke under the same conditions.

2.2 *Sample.* A group of bales or loose sheets selected to represent a lot.

2.3 *Piece.* Quantity of rubber taken from a bale of the sample to represent that bale, or quantity of rubber taken from the loose sheets of the sample and combined to represent the sample.

2.4 *Test portion.* Portion of rubber taken from a piece or pieces for subjection to a test.

3. METHOD OF SELECTING THE SAMPLE

For lots where no uniformity in quality has been established, the only safe assessment of the quality of the lot is that based on 100 per cent sampling, i.e., the lot becomes the sample.

In most cases, practical considerations impose a limit on what is possible, and the following levels of sample size are recommended.

3.1 **Rubber in the form of loose sheets.** The number of sheets to be taken as the sample is 10 per cent or 40 sheets, whichever is the smaller number, and the sheets are chosen at approximately uniform intervals when sorting from the stack of sheets.

3.2 **Rubber in bales.** The number chosen as the sample should be in accordance with the following table:

Size of lot	Size of sample
bales	bales
less than 40	4
from 40 to 100	7
more than 100	10

Each bale forming the sample is tested and reported separately.

4. METHOD OF TAKING THE PIECE

4.1 **Loose sheets.** Strips of approximately uniform size are cut from positions in the sheets which are varied as much as possible. The size of the strip is adjusted so that the aggregate of all strips, one from each sheet of the sample, gives a quantity of at least 800 g. This aggregate of all strips forms the piece.

4.2 **Bales.** A piece of rubber of triangular section and weighing at least 800 g is cut from an edge of a wrapped bale or from the centre of an unwrapped bale, the piece extending the full height of the bale and containing a portion of each sheet. The remains of the rubber wrapping sheet or the portions of the top and bottom sheets are removed from the piece. Unless partition of the piece into the test portions is to be done at once, the piece is placed in an airtight container or wrapped in polyethylene until required.

When sampling an unwrapped bale, the bale is first cut into two approximately equal halves and one of these is again cut into two, cutting through the height of the bale. The required piece is then taken from one bale quarter by cutting through the height a piece of triangular section which will include the edge formed by the two previous cuts.

5. METHOD OF PREPARATION OF TEST PORTION

5.1 **Homogenization.** The piece is weighed to the nearest 0.1 g and it is then homogenized by 10 passes through the nip of a roll mill, preferably with even speed rolls. The nip is set at 2.5 mm (0.1 in) and the rolls maintained at 70 ± 5 °C. The rubber is rolled after passing through the nip and the roll presented endways for the next pass. Any solid matter parting from the rubber is returned to it. After the 10 passes, the rubber is again weighed to the nearest 0.1 g. These masses are required for the calculation of volatile matter.