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COUNCIL DIRECTIVE

of 17 July 1972

on the approximation of the laws of the Member States relating to certain methods for the quantitative analysis of binary textile fibre mixtures

(72/276/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof;

Having regard to the proposal from the Commission;

Whereas the Council Directive of 26 July 1971[1] on the approximation of the laws of the Member States relating to textile names lays down provisions on labelling based on the fibre composition of textile products;

Whereas the methods used for official tests in the Member States to determine the fibre composition of textile products should be uniform, as regards both the pre-treatment of the sample and its quantitative analysis;

Whereas Article 13 of the above Directive provides that the sampling and analysing methods to be used in all Member States for the purpose of determining the fibre composition of products will be specified in separate directives;

Whereas, initially, methods applicable to certain binary mixtures of textile fibres should be laid down, to be followed by directives specifying methods for mixtures of more than two textile fibres or of fibres of the same chemical composition (in particular microscopic analysis);

Whereas developments in technology necessitate frequent adaptation of the technical specifications defined in the separate directives on methods of textile analysis; whereas, in order to facilitate the implementation of measures required to that effect, a procedure should be laid down establishing, within a Committee for the Adaptation of Methods of Textile Analysis to Developments in Technology, close cooperation between Member States and the Commission;

Whereas, in the case of binary mixtures for which there is no uniform method of analysis at Community level, the laboratory responsible for the test may determine the composition of such mixtures using any valid method at its disposal, indicating in the analysis report the result obtained and, in so far as this is known, the degree of accuracy of the method used;

HAS ADOPTED THIS DIRECTIVE:

Article 1

This Directive concerns methods for the quantitative analysis of certain binary textile fibre mixtures, including the preparation of test samples and test specimens.

Article 2

'Test sample' means a sample of a suitable size for analysis, taken from laboratory bulk samples in turn taken from a batch of articles for analysis.

'Test specimen' means that part of the test sample required to give an individual test result.

Article 3

The Member States shall take all necessary steps to ensure that, in accordance with the Directive of 26 July 1971, the provisions in Annexes I and II on methods for the quantitative analysis of certain binary mixtures, including the preparation of test samples and test specimens, are applied in all official

[1] OJ No L 185, 16.8.1971, p. 16.

tests to determine the composition of textile products put on the market.

Article 4

Any laboratory responsible for the testing of binary mixtures for which there is no uniform method of analysis at Community level shall determine the composition of such mixtures by using any valid method at its disposal, indicating in the analysis report the result obtained and, in so far as this is known, the degree of accuracy of the method used.

Article 5

1. There is hereby set up a Committee for the Adaptation of Methods of Textile Analysis to Developments in Technology (hereinafter called the 'Committee'); it shall consist of representatives of the Member States with a representative of the Commission as Chairman.

2. The Commission shall adopt its own rules of procedure.

3. Adaptations to developments in technology of the methods of quantitative analysis provided for in Annex II shall be made in accordance with the procedure laid down in Article 6.

Article 6

1. Where the procedure laid down in this Article is invoked, matters shall be referred to the Committee by its Chairman, either on his own initiative or at the request of the representative of a Member State.

2. The representative of the Commission shall submit to the Committee a draft of the measures to be adopted. The Committee shall deliver its opinion on the draft within a time limit set by the Chairman having regard to the urgency of the matter. Opinions shall be delivered by a majority of twelve votes, the votes of the Member States being weighted as provided in Article 148 (2) of the Treaty.

The Chairman shall not vote.

3. (a) The Commission shall adopt the measures envisaged where they are in accordance with the opinion of the Committee.

(b) Where the measures envisaged are not in accordance with the opinion of the Committee, or if no opinion is delivered, the Commission shall without delay propose to the Council the measures to be adopted.

The Council shall act by a qualified majority.

(c) If, within three months of the proposal being submitted to it, the Council has not acted, the proposed measures shall be adopted by the Commission.

Article 7

1. Member States shall put into force the provisions necessary to comply with this Directive within eighteen months of its notification and shall forthwith inform the Commission thereof.

2. Member States shall ensure that the texts of the main provisions of national law which they adopt in the field governed by this Directive are communicated to the Commission.

Article 8

This Directive is addressed to the Member States.

Done at Brussels, 17 July 1972.

For the Council

The President

P. LARDINOIS

ANNEX I

PREPARATION OF TEST SAMPLES AND TEST SPECIMENS TO DETERMINE THE FIBRE COMPOSITION OF TEXTILE PRODUCTS

1. FIELD OF APPLICATION

This Annex gives procedures for obtaining laboratory test samples of a suitable size for pre-treatment for quantitative analysis (i.e. of a mass not exceeding 100 g) from laboratory bulk samples, and for selecting test specimens from the laboratory test samples that have been pre-treated to remove non-fibrous matter[1].

2. DEFINITIONS

2.1 **Bulk source** — That quantity of material which is judged on the basis of one series of test results. This may comprise, for example, all the material in one delivery of cloth; all the cloth woven from a particular beam; a consignment of yarn, a bale or a group of bales of raw fibre.

2.2 **Laboratory bulk sample** — That portion of the bulk source taken to be representative of the whole, and which is available to the laboratory. The size and nature of the laboratory bulk sample should be sufficient to overcome adequately the variability of the bulk source and to facilitate ease of handling in the laboratory[2].

2.3 **Laboratory test sample** — That portion of the laboratory bulk sample that is subjected to pre-treatment to remove non-fibrous matter, and from which test specimens are taken. The size and nature of the laboratory test sample should be sufficient to overcome adequately the variability of the laboratory bulk sample[3].

2.4 **Test specimen** — The portion of material required to give an individual test result, and selected from the laboratory test sample.

3. PRINCIPLE

The laboratory test sample is selected so that it is representative of the laboratory bulk sample.

The test specimens are taken from the laboratory test sample in such a way that each of them is representative of the laboratory test sample.

4. SAMPLING FROM LOOSE FIBRES

4.1 **Unorientated fibres** — Obtain the laboratory test sample by selecting at random tufts from the laboratory bulk sample. Mix thoroughly the whole of the laboratory test sample by means of a laboratory carder.[4] Subject the web or mixture, including loose fibres and fibres adhering to the equipment used for mixing, to pre-treatment. Then select test specimens, in proportion to the respective masses, from the web or mixture, from the loose fibres and from the fibres adhering to the equipment.

If the card web remains intact after pre-treatment, select the test specimens in the manner described in 4.2. If the card web is disturbed by the pre-treatment, select each test specimen by removing at random at least 16 small tufts of suitable and approximately equal size and then combine them.

4.2 **Orientated fibres (cards, webs, slivers, rovings)** — From randomly selected parts of the laboratory bulk sample cut not less than ten cross-sections each of mass approximately 1 g. Subject the laboratory test sample so formed to the pre-treatment. Recombine the cross-sections by laying them side by side and obtain the test specimen by cutting through them so as to take a portion of each of the ten lengths.

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1 In some cases it is necessary to pre-treat the individual test specimen.

2 For made-up and finished articles see section 7.

3 See 1.

4 The laboratory carder may be replaced by a fibre blender, or the fibres may be mixed by the method of 'tufts and rejects'.

5. SAMPLING YARN

5.1 **Yarn in packages or in hanks** — Sample all the packages in the bulk laboratory sample.

Withdraw the appropriate continuous equal lengths from each package either by winding skeins of the same number of turns on a wrap-reel,[1] or by some other means. Unite the lengths side by side either as a single skein or as a tow to form the laboratory test sample, ensuring that there are equal lengths from each package in the skein or tow.

Subject the laboratory test sample to the pre-treatment.

Take test specimens from the laboratory test sample by cutting a bunch of threads of equal length from the skein or tow, taking care to see that the bunch contains all the threads in the sample.

If the tex of the yarn is t and the number of packages selected from the laboratory bulk sample is n, then to obtain a test sample of 10 g, the length of yarn to be withdrawn from each package is $\frac{10^6}{Nt}$ cm.

If nt is high, i.e. more than 2000, wind a heavier skein and cut it across in two places to make a tow of suitable mass. The ends of any sample in the form of a tow should be securely tied before pre-treatment and test specimens taken from a place remote from the tie bands.

5.2 **Yarn on warp** — Take the laboratory test sample by cutting a length from the end of the warp, not less than 20 cm long and comprising all the yarns in the warp except the selvedge yarns, which are rejected. Tie the bunch of threads together near one end. If the sample is too large for pre-treatment as a whole divide it into two or more portions, each tied together for pre-treatment, and reunite the portions after each has been pre-treated separately. Take a test specimen by cutting a suitable length from the laboratory test sample from the end remote from the tie band, and comprising all the threads in the warp. For warp of N threads of tex t, the length of a specimen of mass 1 g is $\frac{10^5}{Nt}$ cm.

6. SAMPLING FABRIC

6.1 From a laboratory bulk sample consisting of a single cutting representative of the cloth

— Cut a diagonal strip from one corner to the other and remove the selvedges. This strip is the laboratory test sample. To obtain a laboratory test sample of x g, the strip area shall be $\frac{x\ 10^4}{G}$ cm², where G is the mass of the cloth in g/m².

Subject the laboratory test sample to the pre-treatment and then cut the strip transversely into four equal lengths and superimpose them.

Take test specimens from any part of the layered material by cutting through all the layers so that each specimen contains an equal length of each layer.

If the fabric has a woven design, make the width of the laboratory test sample, measured parallel to the warp direction, not less than one warp repeat of the design. If, with this condition satisfied, the laboratory test sample is too large to be treated as a whole, cut it into equal parts, pre-treat them separately, and superimpose these parts before selection of the test specimen, taking care that corresponding parts of the design do not coincide.

6.2 From a laboratory bulk sample consisting of several cuttings

— Treat each cutting as described in 6.1, and give each result separately.

7. SAMPLING MADE-UP AND FINISHED ARTICLES

The bulk laboratory sample is normally a complete made-up or finished article or a representative fraction of one.

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1 If the packages can be mounted in a convenient creel a number can be wound simultaneously.

Where appropriate determine the percentage of the various parts of the article not having the same fibre content, in order to check compliance with Article 9 of the Directive on the approximation of the laws of the Member States relating to textile names.

Select a laboratory test sample representative of the part of the made-up or finished article, whose composition must be shown by the label. If the article has several labels, select laboratory test samples representative of each part corresponding to a given label.

If the article whose composition is to be determined is not uniform, it may be necessary to select laboratory test samples from each of the parts of the article and to determine the relative proportions of the various parts in relation to the whole article in question.

Then calculate the percentages taking into account the relative proportions of the sampled parts.

Subject the laboratory test samples to the pre-treatment.

Then select test specimens representative of the pre-treated laboratory test samples.

$$P_1A = \frac{100\ P_1 \left(1 + \frac{a_1 + b_1}{100}\right)}{P_1 \left(1 + \frac{a_1 + b_1}{100}\right) + (100 - P_1) \left(1 + \frac{a_2 + b_2}{100}\right)}$$

where

P_1A is the percentage of insoluble component, adjusted by conventional recovery factors and for loss of mass during pre-treatment;

P_1 is the percentage of clean, dry insoluble component as calculated from the formula shown in I.8.1;

a_1 is the conventional recovery factor for the insoluble component (see Annex II of the Directive on textile names);

a_2 is the conventional recovery factor for the soluble component (see Annex II of the Directive on textile names);

b_1 is the percentage loss of insoluble component caused by the pre-treatment;

b_2 is the percentage loss of soluble component caused by the pre-treatment.

The percentage of the second component (P_2 A) is equal to 100 — P_1 A.

Where a special pre-treatment has been used, the values of b_1 and b_2 should be determined, if possible, by submitting each of the pure fibre constituents to the pre-treatment applied in the analysis. Pure fibres are those free from all non-fibrous material except that which they normally contain (either naturally or because of the manufacturing process), in the state (unbleached, bleached) in which they are found in the material to be analysed.

Where no clean separate constituent fibres used in the manufacture of the material to be analysed are available, average values of b_1 and b_2, as obtained from tests performed on clean fibres similar to those in the mixture under examination, should be used.

If normal pre-treatment by extraction with light petroleum and water is applied, correction factors b_1 and b_2 may generally be ignored, except in the case of unbleached cotton, unbleached flax and unbleached hemp, where the loss due to the pre-treatment is conventionally taken as 4%, and in the case of polypropylene, where it is taken as 1%.

In the case of other fibres, losses due to the pre-treatment are conventionally disregarded in calculations.