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COM (73)1731

Vol. 1973/0299

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## COMMISSION OF THB RUROPEAN COMMUNITHES

COM(73) 1731 Finel<br>Brussels, 17 October 1973

PROPOSAL FOR A COUNCIL DIRECTIVE<br>on the approxination of the laws of the Member<br>States relating to the making-up by weight or by volume of certain prempackaged products.<br>(submitted to the Council by the Commission)

## RYPI, MATORY METMORNDDUN

1. GMNSRIL

This Directive has been drawn up pursuant to irticle 100 of the Treaty and in conjunction with the Council Directive of 26 July 1971 on the approximation of the laws of the Member States rolating to common provisions for measuring instruments and methods of metrological control ${ }^{1}$. The object of the Directive is to eliminate technical obstacles to intra-Community trade which currently exist in the case of prepackages made up by weight or by volume and containing products referred to in Article 4.

A comparative examination of the various laws and regulations on prepackages, as referred to in this Directive, has shown that the difforences are not restricted to technical requirements concerning closencss with which actual and stated contents correspond, but also cover methods of metrological control to which these packages are subject prior to being placed on the market and used.

With regard to cross-frontiers trade, the result of this situation is that manufacturers and packagers are obliged to diversify their products in order to take account of the regulations in force in the Member State in which such prepackaged products are to be used, and to comply with repeated checks, carried out by different procedures.

Given the fact that the current national laws are justified by a legitimatc concern to protect the consumer and user, the harmonization of these laws would appear to be the only way of removing difficulties arising out of divergencies between them and of creating the conditions necessary for the establishment of the Common Market.

But this proposal for a Directive, which followsson logically from two other proposals for Directives already sent to the Council, (one relating to prepackages containing beverages and the other to bottles used as measuring containers ${ }^{2}$ ), harmonizes the provisions relating to prepackages only as regards the quantity in relation to the tolerances, and does not settle problems regarding the shape of the packages, the nature of the meterials used and ranges (series) of weights and volumes; these will be covered, if necessary, by future provisions.
(1) OU Io L 202, 6 Septenber, 1971 (2) OJ No C 50, 19 Hay, 1972.

Froquent consultations were held with representatives both of the various trade foderations concerned, and with consumers during the preparation of this proposal for a directive, in which experts appointed by the governments took an active part.

The method of harmonization selected is the somcalled optional approach, as embodied, also, in the majority of specific directives concerning measuring instruments. The optional approach to harmonization is allowed, as is total harmonization, by the Council Directive on common provisions for measuring instruments and methods of metrological control.

Under optional harmonization the Member States are obliged to accept prepackages satisfying the requirements of this Directive in the same way as those complying with the provisions in force in their territory, without, howover, having to rescind the latter.
II. COMMBNTS ON THP PROPOSAL FOR $A$ DIRECTIVE
2.1 Prxpose

The Directive does not set out to settle, as a whole and completely, the problem of prepackages:
a) out of all prepackaged products, the Dircctive concerns only the consumer goods listed in Annex III;
b) it concerns only those of the latter which, in accordance with established practices, or pursuant to national regulations or international agreements, are sold by weight or by measure, in pre-selected nominal unit quantities with the same value for all prepackages of the same pattern.

Products sold by the piece or in accordance with specific conventions (e.g., size and number in the case of fruit) and "premeasured" products, i.e., ones prepacked in quantities measured by the packer (e.g., on "weight/price weighing machine" in the case of certain preserved meats) are not included.
c) the Directive does not lay dom how products are to be sold - by weight or by volume, in pre-selectcd or pre-measured quantities (prepackages); it is applicable, however, if the products in question are sold by weight or by volume, in preselected quantities, in the range 5 g or 5 ml to 10 kg or 10 I .

In order to ensure thet market conditions are intelligible and consumers are protected, proceeding from the principle of muturl recognition of the checks carried out by the competent authoritics of the Nember States and looking only at the quantitative aspect of the matter, the Directive establishes how the contents of prepackeges shall be detornined, speciried and checked.

The Directive does not deal with commercial practices - but is concerned purely with metrology. The provisions relating to labelling, for example, are strictly limited to what is needed in order to know the quantity contained and who was responsible for measuring it.
The provisions of this Directive are therefore limited to requirements regarding:

1. The marking on the prepackage of the weight or volume contained:
2. The maximum permissible errors in the weight and volune of the contents in relating to the nominal weight and volume (the average, and individual errors):
3. The method employed by the competent departments or agoncies in checking the weight and volume of the contents of prepackages.
2.2. Relation between stated and actual_amounts contained

At the present time, two different principles govern this major problem in the Member States:

- in some countries, the actual quantity must be not less than the stated quantity;
- in others, the actual quantity must on average be equal to the stated quantity.

The question of which to select was discussed at length when the Directive was being drawn up. Since unanimity among the various government experts proved to be unattainable the Commission -
falling into line with the great majority of those experts - chose the second altcrnative, for the following reasons:
a) At international meetings, particularly at the last meeting of the CODEX ALIMETMARUS Committee (Oitawa, My-June 1973), the delegations were virtually unanimous in favouring this method (i.e., the 'averago' method). The Comnission considered that choosing the first method would carry with it the risk of the Commity's being isolated in internctional trode with non-member countrics.
b) The reputation for simplicity created for the 'minimu' nethod by its adherents appears to be nocoted by the need to takc account anyhow of the accuracy of the filling and inspection equipront, which leads the countrics where it is used to employ a statistical method of checking similar to that prescibed in the Directive.
c) The Comission's proposel is also consistent with that relating to propackenges containing beverages which was forwarded to the Council on 29 Fc bruary 1972.

Of course, if the Council, when deciding upon the directive relating to beverages, decided to adopt the minimum-contents prinsiple, the Comission would forthwith submit the appropriate proposils for altering this Directive in order to meintain the necessary uniformity, since the two proposals complementary.
d) In order to allay the fears of several consumer associctions, however, it is pointed out that these products are fast-moving consumer goods of which every consumer generally buys several examples a year. The avoraco-contents principle, therefore, which is perfectly fair to the packnger, and to consumers in the agerogate, is also fair in practice to every consumer considered as àn individual. In order to limit the unpleasantness of sonetimes receiving short weight or volune (which, over several purchases, would be made good by an over-weight or voluma prepackage), marimun permissible errors in deficiency have boen specified in order to limit the amount of scatter. They hive been kept to the minimurn strictly essential to take account of technical capabilities.

Even when every precaution is taken to ensure that the actual contents of prepackages equal the nominal quantity, it is actually found that in mass production, owing to the incvitable imperfections of filling and measuring couipment, the values of the actual cquantity display a certain "scatter" and constitute a population which generally conforms closely to a normal or Gaussian distribution curve. If the average (mean) is aligned with the nominal quantity, the number of prepackages with a content of any given value decreases very rapidly the more that value diverges from the average (mean). The maximun permissible error is therciore a limit reached by only. a very small number of units. Spocifying not only the average but also maximum permissible errors in deficiency, compels tho packager: $-\quad$ either to reảuce scatter as much as possible, or $\therefore$ to raise the average.

In any case, bocause the arerago is attained, deficient prepackages are always at least compensated for by those with more than the stated quantity, while observance of the maximum permissible errors neans that shortages and the number of short propackages are reduced.
2.3 Methods of checking provided for by the Directive
2.3.- 1 Proliminary remaris

It should first be pointed out that the Directive clearly states (Anner I, Section 5) thet it does not preclude any checks thit may be carried out by the compctent authorities of the Nember States in the course of trade. Furthermore, uncier the terms of irticle 15 (2) of the Directive of 26 July 1971 (the general Directive), a prepackage which bears ETBC signs or marks but does not satisfy the requirenconts of this Directive, particularly in respect of the maximum permissible crrors, may be banned fron scrvice (i.c.; withidrawn from sale) as may a prepackage bearing only national marks.

It should be pointed out, however, that present checks are purely repressive. In nost cases they cause the destruction of the packaging of the products being checked." They ere therefore restrictive and costly for the trader and the service (whose repayment budget is usually small), and in practice they can only cover a limited muber of products.

For this reason, in order to provide a better public guarantee and better consumer-protection, the Directive introduces preventive provisions, an imnovation in nearly all the Member States.

## 2.3-2 - Deta on the ouantity conteined

Apart from other marks which may bo required by various directives or regulations, any prepackege made up in accordance with this Dircctive must bear the following markings, made or affired in such a mnner as to be sufficiently durabla (indelible), easily legible (contrasting sufficiently with the background) and visible on the prepackage when displayed in the normal manner (grouped on a face or part of the package which is not obscrued either in the meual position of display, or by an outer wrapping): $\therefore$ the nominal quantity (minimum sizes are laid dow);

- a sign or marking enabling the competent department to identify the party responsible for packaging';
.- a smell "e" indicating that the propackage is supposed to. satisfy the requirerents of this Dircetive. Article 12 of the general Directive of 26 July 1971 provides that Member States shall teke all necessary measures to prevent the use of signs or marinins liable to be confused with the RTC signs or markings, such as the "e" mentioned above.

[^0]Preventive checks on the packer's premises provided for by the proposal which, it must be remembered, supplement the repressive chocks at the final point of sale, have a number of edvantages:
... It this level, the inspecting department is in direct contact with the party responsible for the quantity packaged. can acquaint itself with the method of, and examine the oquipnent used to make up the prepackages and form an impression of the environment in which the operations are carried cut.

- It can often easily establish the tare weight of the packages sufficiently accurately to be able to carry out a non-destructive test by weighing.
$\therefore$ It can check the uniformity of complete or, at least, large batches, and finds good conditions under which to detervine the average contents, and scatter. It is thus able to judge the packager's intentions.
- In most cases, it induces the packager to carry out a contimous check on its products by a method approved by the department, which monitors its application (e.g., statistical control using cards).

Since there are far fewer packagers than retailers and inspection is non-destructive, spot checks, carried out as thoroughly and as often as the size of the department permits, make it possible to monitor the actual quantities contained, and to do so practically continuously.
In view of the high rate of production of propaokages which can be as much as several tens of thousands an hour, a cieck carried out on the packager's premises can only take the forn of irmanon sampling offected under the internetionally agreed rules for this type of check.

In order to ensure uniformity in this, innex II to the Directive provides a reference method which fixes the degree
 authorities of the Member States and also permits mutual recogrition of such cheoks.

The Member States may also in practice adopt any other, equally effective method.

It should be remembered, however, that the recommended procedures are based on the tables in the Military Standard which still appear to be the most commonly used in statistical quality control.

The minimum individual permissible contents are checked by meens of a method based on attributes (sound or defective)-which may, moreover, be valid for non-Gaussian distributions - which is quick and easy to use. The Member States may choose between single and double sampling plans; both are equally effective, but, with the double sampling plan, which is a little more difficult to use, the total mumber of prepackage samples to be checked can be reduced. The method used to check the average contents is based on measurement. Since measuring takes longer than procedures designed to check that a minimun-contents limit has been complied with, it was deemed preferable to adont as the scattor factor the standard deviation of the sample, which provides an affective mans of assessing the standard deviation of the batch of prepackages under inspection.

The reasons for including the third subparagraph of Section 4 of Annex I should also be stated: if the average is correct (this is required in all cases), a batch may be accepted whon the scatbon is statistically verified if the number of defective units in the sample is below the acceptance criterion; if a defective unit thus discovered in the sample from an accepted batch displays a minus error greater than twice the maximun pormissible crror, it an not be marketed; if the error is below or equal to twice the maxirmum permissible error, it may be returned to the batch and consequently sold.

## III. SPECIFIC COMMGNDS FROM BUSINESS ORGANIZATIONS AND CONSUMERS' ASSOCUTIMNO.

3.1. Tolerances and product classes.

It proved exiromely difficult to draft a proposal which would take account of the problems specific to the packing of each type of product. Clearly, if this had been attempted, the nunber of classes would have been so large, and the probler of defining them precisely so great, as to mullify completcly the clarity which the proposal for a Directive is intended to create.

In agreement with experts, the Commission therefore decided to keep only two product classes and to set less stringent tolerances for products which present major filling problems.

Despite this, there is no doubt that in certain cases producers will find it difficult to keep within the prescribod tolerances by setting the avcrage at the nominal value. In these cases, in order to meet the required minimm values, they would have to set the average actual contents above the nominal value.

This drawback did not cscape the experts but they considered that since the rule was harmonized at Comanity level it could not distort competition vetween producers in the various Niember States, and, furthermore, that producers would thereby be encouraged to use suitable equipnent and to oontrol and inspect theis products more strictly. It was also considered inodvisakle, : as stated earlier, to increase the muber of product classes.

On the other hand, certain consumers' associations would have liked the tolerances to be made tighter.

It is perhans useful to stress once age in that the prescription of maximum permissible errors is not equivalent to a routine tolerance in deficiency, but rather to a limitatinn of scatter.

Maximum permissible error values were chosen in the light of the results of a great many checks, surveys and tests, conductod mainly in France and Germany, so that the present capabilitics of properly equipped undertakings were taken into account.
iny appreciable reduction of these tolerances would raise the value of the product because, to comply with stricter error values, the packagers would be obliged either to equip thenselves with far more costly and sophisticated machinery, or to slow down the rate of production, or to overfill systemetically. This being the case, it did not appear advisable to comply with the wishes of the consumer associations.
3.2. Scope of the Directive

Several trade associations expressed the wish that, following the cxample of a number ci countrios, the scope of the Directive should not extend so far downvards but inelude only those greater than 20 g and 20 ml , or even 50 g and 50 ml .

In view of the subject of their concern, it is not certain, however, that such an amendment would have been to their advantage. Indeed, since application of the Directive is optional, prepackagers are entitled to benefit fron the rogime of free movement offored by the Directive for prepackaged products with nominal contents between 5 g or 5 ml and 10 kg or 10 l , but they are in no way obiiged to avail themselves thereof provided that they comply with netional laws.

However, some governments consider it necessary to indicate the weight, even of small quentities, of certain high-cost products such as condiments or seeds. If these were excluded from the scope of the Directive, the existing national disparities which create obstacles to trade would persist. Moreover it is clear that, unless the national regulations of the country where the product is marketed forbid it, the prepackaging company may, for instance, make as FISC prepackages only those with a nominal quintity not less than 50 g or 100 ml .

### 3.3. Rules concorning permissible quantity ranges

The Commission is aware that the problem of permissible ranges (serics) of volumes and weights mist also be settled at Comminity level, as it was in the proposed Directive on beverages, and as is the wish of the consumers' associations and business organizations.

Unfortunately this question is very complex because this proposal covors almost all prepackaged products in the Menber States, where measuring and comercial practices are very diverse ${ }^{1}$.

The variety of nominal quentities of prepackages offered to the consumer is so wide that the responsible authorities of the various Miomber States have ofton been prompted to restrict their muraber in ordor to protact consumers, to raise the standare of fair competition between mnufacturers and dealers and to rationalize production and distribution. However, preliminary discussions on this point revealed such widely divorse practices and rules that it was deemed preferable to put forward this first proposal while continuing the search for a solution to the problen of renges. is soon as the Comission is in a position to supploment this proposal, therefore, it will present a further proposol for a Directive indicating the ranges of permissible quantities. The adoption of all these provisions, which form a sort of Buropean quantitative charter on the making-up of prepackaged procucts, will meet an ever-increasing dosire on the part of the consuner for greater clarity in this ficld.

## IV. SURTVR

To sun up:
The directive applies to propackages of constant nominal quantity of the major consumer products listed in Annex III.
$1_{\text {For }}$ instance, certain products are sold by volume in some countries and by weight in others. Since their density is not constant, a range valid for both quantities cannot be defined.

It is strictly confined to the field of legal metrology and has no bearing on labelling in general or of the way in which products must be sold.

The checks now carried out by the competent authorities of the Member States at all stages of the comercial process, and especially at the point of final sale, will continue.

Lut these repressive checks cannot be contiruous. To onsure that market conditions are fully intelligible, and to give consumers a better quantitative guarantee, (assuming mutual recognition of the checks performed), the Directive introduces virtually contimous preventive inspections at source, i.e. on the packager's or importer's premises.

The responsible packoger is recquired to ensure that the actual contents of the prepackages are at least equal to the nominal quantity; this requirement applies to the averoge of every batch of the same make. In addition, the scatter of actual content values below the nominal value is limited by the setting of a maximum pormissible error in defieiency.
Prepackaging firms must keep a oonstant check on what they produce, under the supervision of the competent official bodies. The latter will also carry out statistical control by sampling, sinilar in effectiveness to the reference method described in Annex II. Ls an anncx or supplement to this Directive, a study will be made of the ranges of values imposed for the nominal quantities of the prepackages of certein products.
V. CONSLTATLOT OF TEW PABLIMTMT AND ECONOMC STD SOCIL COIMTTME

Pursuant to the provisions of Article 100.(2), the opinions of these two institutions are needed because implementation of the Directive will require amordments to the laws of certain Member Statos.

AnNTME
TO THE EYPLANMTORY MHORIMDUM

Laws rolating to prepackeges currently in force in the Member States

## BELGIUM

- Law on commercial practice, (14 July 1971)
- Royal Decree of 4 September 1972 on oruntity specification.


## DRMPYTRT

- Decrees relating to:

The marking of net weight or net quantity on preserved foods (Monopoltilsynet, 4 April 1961);
Deep-frozen foodstufis (Monopoltilsynet, 15 Noverber 1965);
Prepackazed gooảs ( 21 September 1964, 10 March 1965, 21 March 1966, 17 Hovember 1967):

- Decrec amending the decree on preserved and somi-preserved fish (Ministry of Fisheries, 1 Septermer 1966).


## GERMTY

-. Law on metrology and the verification of weights and measures (Law on verification - Eichgesctz), 11 July 1959.

- Law on prepackaginc (Fertigpackungsverordnung), 16 December 1971. FRATCD
- Law of 13 June 1806 on trade practice.
- Law of 1 dugust 1905 on the suppression of fraud, toeether with the following implementing decrees:
- Decree No. 72639 of 12 October 1972 implementing the Law of 1 August 1905 on the suppression of fraud with regard to the conditions of sale of foodstuffs, i.e., solids and liquids intended for humin and animal consumption, and also the rules governing the labolling and presentation of all goods which have been prepackaged for retail sale.
- Onder No. 4.5-2405 of 18 October 1945 on liquid volume measurement (Journal Officiel, 19 October, 1945).


## IRELAPD

- Merchandise Marks (pre-packed goods).


## ITMY

- Royal Decree of 23 iugust 1890, No. 7068
(wití slocessive amenáments)
Sole text of the laws governing weights and measures.
- Law of 30 April 1962, No. 283
(with successive amendments)
Hygiene requirements in respect of the mamfacture and sale of foodstuffs and bevereges.
(in implementing regulation is currently being preparod).
LUXEMBOURG
- Law of 17 May 1882 on weights and measures.
- GrandmDucal Roval Decree of 30 May 1882 implementing the law on weights and neasures.
- Opinion delivered by the Director-General for Finance on 11 ipril 1933 stating certain requirements (including the specification of woight or measurement and respect of prepacicages) stipulated in the law of 17 liey 1382 on weights and mosures.


## NETHURI_ANDS

- Food and Drugs Let (Worenwet), 1935.
- Implementing provisions of the Food and Drugs Act, and in particuliur the Generel Order (11gemeon Besluit).
- Royal Decree on Government marking of butter (Rijksbotermerkbeschiklcing), 1947.
- Regulations deriving from Statutory Trade Orgeniration (PBO Verordeningen) decling minly with the producte referred to in this Directive.


## UNTTTED KTNGDOM

- Weights and Measures Act, 1963.
- Trede Descriptions Act, 1960.
- Laws and regulations made on the basis of these two ncts.


# PROPOSN <br> FOR $n$ COUNCIL DIRPCTIVE ON  MPMBRE STATES RELATING TO THE MAKIMG UP BY WEIGHT OR BY VOLUNE OF CERTMIN PRT——AACKAGED PRODUCTS 

THE COUNCIL OF THR BUROPEIN COMANITIES,

Having regard to the Treaty establishing the European Economic Commanty and in particular inticle 100 thereof;

Having regard to the proposal from the Comission;
Having regerd to the Opinion of the Buropean Parliament;
Having regard to the Opinion of the Economic and Social Committec;

Whercas in most of the Member States sale presentation conditions of products in prepackages are the subject of mandatory regulations which differ from one Member Stato to another, thereby hindering trade in such propaclages;

Whereas such provisions must therefore be approximated:

Whereas, in order to enable consumers to be corractly informed, the method of marking the nominal weight or volume of the product contained in the prepackage should be indicated;

Whereas it is also necessary to specify the marimum permissible errors in the content of prepackages and whereas in order to facilitate control of compliance of prepackages with the provisions laid down a referenco method for such control should be defined;

Whereas Article 16 of the Council Directive of 20 July 1271 on the approximation of the laws of the Member States relating to common provisions for both measuring instruments and riethods of metrologioal control ${ }^{1}$ provides that the haraonisation of the requirements for marketing certain products, in particular as rogerds the prescription, measueement and marking of prempacked quantities, may also be covered by specific directives:

Whereas the Council Directive of 26 July 1971 states that the specific directives may specify, conditions permitting, the dato on which each Member State may repeal tho national provisions applicable to products similar to those which comply with Comrmity provisions; whereas in the present case it is not yet penmissible to set such a dete;

HLS ADOPTED THIS DIRECTIVE:

1 DJ No L 202; 6 September 1971.

## Artigle 1

This Directive shall apple to propackages conteining products listed in Limer. III and intonded for sale in constant unit nowinel quantitios which are:

- equal to values predeterined by the packer;
- erpressed in units of woight or of volume;
- not iess than 5 or 5 ml and not more than 10 kg or 101 .

Propackages which co not bear an indication by weiglt or by volune are not covered by this Directive.

## intiole 2

A prepackoze within the meaning of this Directive is the combination of a product and the irdividual packege in which it is propacked.

A product is prepacked when, without the purchaser being present, it is placed in a package of whatever nature in such a manner that the quantity of product contained therein has a predctermined value and carnot be altered without the package being opened or undergoing a perceptible modification.

## Article 3

Prepacieges made up in accordance with this Directive shell be marized with the weicht or volunc, referred to as the nominal weight or nominal volume, of product which thoy are required to contain, purcuant to Anncx I hereto, at the time of peckeginc.

Propackages containing liquid products shall be markod with their nominal volure and prepacharges containing other products shall be marked with their nominal weicht.

If, for a class of product or for a given type of prepackage, commercial practice regerding sale by weight or by volume is not the same in all Menbor States, and if such prepackages are not marised both with their nominal woight and with their nominal volumes they shall be marked in accordanco, with the comercial proctice prevailing. in the country to which they are consigned.

Until the expiry of the transitional period, during which the use of the Imperial units of measurement appearing in Annexe II to the Council Directive of 18 October 1971 concerning units of measurement (1), modified by the Act concerning the conditions of Accession and Adjustments to the Treaties (2), is authorised in the Community, the indication of the nominal weight and/or no:ainal volume expressed in IS units in accordance with Annex I sub-section $2_{0} l_{0}$, to this Directive nay be accompanied by that of the equivalent value in Imperial (听) units of measurements, calculated on the basis of the following practical conversion factors :
$1 \mathrm{~g}=0.0353$ ounce (avoirdupois) $1 \mathrm{nl}=0.0352$ fluid ounce
$1 \mathrm{~kg}=2.205$ pounds $\quad 11=1.760$ pints or 0.220 gallon.

## Article 4

The prepackages waich are authorized to bear the RWC symbol provided for in Annex $I$, sub-section 203; shall be these which contain products listed in Annex III and which satisfy the requirements of this Directive, and in particular Annex I thereto.

They shall be subject to metrologioal checking under the conditions set out in Annex I, sub-section 4, and in Annex II.

## Article 5

The Nember States shall not, for reasons concerning the markings required to be borme by prepackages pursuant to this Directive, the determination of the volume or weight of prepackages, or the methods by which the latter have been measured or checked, refuse, prohibit or restrict the narketing of prepackage bearing the EES symbol provided for in Annex III which satisfy the requirements of this Directive, Annex I section 4 and Annex II thereto.

## Article 6

Member States shall bring into force the measures necessary to compły with this Directive within a period of 18 months from the date of its notification and shall immediately inform the Comnission of such measures.

Member States shall ensure that the text of all provisions adopted under national law in the field covered by this Directive is communicated to the Commission.

## Article 7

This Directive is addressed to the Member States.

## ANIIXTI

I .The quantity of product contained in a prepackage (or quantity of filling), lnown as the "actual contents" shall be measured or checked (by volune or by weight) on the responsibility of the packer. The measurement or chock she.ll be corried out by means of a legal measuring instrument appropriate to the nature of the operetions to be performed.

Onc of the several methods of meeting the measuring or checking requirement is to use a measuring container, as defined in the Directive relating thereto and filled under the conditions prescribed therein, when making up the prepackace.
The check riay be performed by sampling.
Where the actual contents are not moasured, the check perrormed by the packer shall be so organized that the value of the said contents is offectively ensured.
This condition is fulfilled if the packer cerrics out a production check in accordance with the procedures recognized by the competent authorities in the Member State and if he holds at the disposal of these authorities the documents containing the results of such checks, and, if appropriate, the corresponding itoms.
2 -inl propackages made up in accordance with this Directive shall bear on the package the following markings affixed in such a manner as to be indelible, sufficiently contrasted, easily legible and visible on the prepackage in normal conditions of presentation:
2.1 The nominel quantity (nominal weight or nominal volume), expressed in litres or kilograms; centilitres, millilitres or grams, and marked in figures at least 6 m high if the nominal quantity is more than $1,000 \mathrm{~g}$ or $100 \mathrm{cl}, 4 \mathrm{~mm}$ high if it is from $1,000 \mathrm{~g}$ or 100 cl down to but not including 200 g or 20 cl or less and 3 mm high if it is not more than 200 or 20 cl , followed by the symbol for the unit of measurenent used or, where appropriate, by its name, in accordance with the provisions of the Council Directive of 10 October 1971 relating to units of measurement. Markincs in Imperial (UN) units shall be in letters and figures of dimensions not larger than those of markings in IS units.
2.2 i mark or inscription enabling the department concerned to identify the packer or the person responsible for the packing or the imporier established in the Community.
2.3- A small "e", at least 3 mm high, placed in the same visual field as the indication of the nominal weight or nominal volume and certifyine that the prepackege meets the requirements of this Directive.

This letter shall have the form show in the draving contained in Annex II, sub-section 3; to the Council Directive of $26 \mathrm{July}, 1971$ concerning the provisions common to measuring instruments and to methods of metrological checking.
Article 12 of the aforesaid Directive shall apply ratctis matandis.
3. Prepackages covered by this Directive shall be made up in such a way that the completed prepackages satisfy the following requirements:
3.1 The actual contents of the prepackages at a temperature of $20^{\circ} 0^{*}$ shall not be less, on average, than the nominal quantity. 3.2 The maximm permitted error in deficiency in the contents of a prepackage, i.e., the maximum permitted difference in deficiency at a temperature of $20^{\circ} \mathrm{C}$ between the actual contents and the nominal quantity of the prepackage, is fired in accordance with the table below, in which products are divided, as set out in sub-sections 3.3 and 3.4 ., into two classes ("A" and " $B$ ") according to their physical characteristics and/or the processing they underfo. The difference between the nominal quantity and maxirum permitted error is know as the "minimum permitted contents".
For the use of the table, maximum permitted errors in percentages should be rounded off the nearest one-tenth of a gram or millilitre.

| Nominal quantity $Q_{n}$ in grams or millilitros | Maximum permitted errors in deficiency |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Class " $¢$ " |  | Class "B" |  |
|  | as a \% of $Q_{n}$ | g or ml | as a \% of $\mathrm{C}_{\mathrm{n}}$ | E or ml |
| z. $5-25$ | - | - | 9 | - |
| 25-50 | 4.5 | - | 9 | - |
| 50-100 | - | 2.25 | - | 4.5 |
| 100-200 | 2.25 | - | 4.5 | - - |
| 200-300 | , | 4.5 | $\therefore$ - | 9 |
| 300-500 | 1.5 | - | 3 | - |
| 500-1000 | - | 7.5... | - | 15 |
| 1000-10 000 | 0.75 | - | 1.5 | - |

[^1]3.3- The following products shall be considered as belonging to Class "B":

- prepackaged products of a nominal quantity less than 25 grams or millilitres;
- liquid products;
- products the flow properties or density of which cannot be kept constant except at the cost of considerable technical effort;
- products containing several substances of different densities or different physical phases and/or the packaging of which requires several operations;
- products which, after they have been packed, are subjected to additional processing, e.g., heat treatment, likely to affect their weight in an irregular manner;
- products with a high unit weight, i.e., products composed of pieces, fragments or grains the maximu unit weight of which is greater than or equal to the maximum permitted error corresponding to the nominal weight of the prepackare which contains them, as set out in the table in sub-section 3.2 (Category " $A^{\prime \prime}$ ).
3.4 - Products not falling within the categories referred to in the preceding sub-section (3.3) shall be considered as belonging to Class "A".

4.     - A check that the prepackages comply with the provisions of this Directive shall be carried out by the competent authorities in the Member States by sampling on the packers' premises or, if this is not practicable, on the premises of the importer or his agent established in the Community.
This sampling check shall be carried out in accordance with the accepted rules on quality control. Its effectiveness shall be comprable to that of the reference method specified in Annex II.

However, no prepackage having an error in deficiency greater than twice the maximum permitted error, as defined in Annex $I$, sub-section $3 .$, shall knowingly be marketed under the $\operatorname{FFC}$ symbol provided for in sub-section 2.3.
5. - This Directive shall not preclude any checks that may be carried out by the competent authorities of the Merber States in the course of trede.
Article 15.2 of the above-mentioned Directive of 26 July shall apply mutatis mitandis.

## ANNTXE II

This Annex lays down the procedures for the checking of prepackages in order to meet the requirements of Article 4 of the Directive and those of innex I, sub-section 4. Except in the case reforred to in 4.1.3. below, these checks shall take the form of random sampling.

1. Requiroments for determination of the actual contents of prepackages.

The actual contents of prepackages may be measured directly by means of weighing or volumetric measuring instruments or $;$ in the case of liquids, indirectly by weighing and measuring the density of the prepacked product.

Irrespective of the method used, the error made in the determination of the actual contents of a prepackage shall not exceed one-fifth of the maximum permitted error for the nominal quantity of the prepackare, as set out in the table in Annex $I$, sub-section 3.2 .
2. Terminolory.

The terminology of the statistical vocabulary used in this inner is that of the vooabulaxy of statistical quality contiol.
3. Place for the performance of the check

Checks shall, as a general rule, be performed on the premises where the prepackages were filled, but may also be performed at their place of storace notably in the case of imports.
4. Requiremonts for checkin betches of prepackages.

The checking of propackages shall be carried out by sempling and shall comprise the following two checks:

- a first check covering the average actual contents of the prepackages in the sample;
- a second check covering the actual contents of each prepackage
in the sample.
$A$ batch of prepackages shall be considered acceptable if the results of both these checks satisfy the acceptance criteria.

For each of these checks, provision is made for the use of two sampling schedules:

- one for non-destructive testing;
- the other for destructive testing.

The latter method shall be limited to the absolutely essential minimum.

Destructive testing shall therefore be only performed when nondestructive testing is impracticable.
4.1 Composition of the prepackage batch
4.1.1. The batch shall be composed of all the prepackaces of the same type and the same production mun which are to be inspected.
The number of prepackages in a batch shall not, however, exceed 10,000.
4.1.2. When prepackages are checked at the end of the packing line, the number in each batch shall be equal to the maximum hourly output of the packivg line, without any restriction as to the number of prepackages in betch.
4.1.3. For batches in which the number of prepackages.N is less than 100, the non-destructive test, where performed, shall be $100 \%$.
In such cases a batch shall be finally accepted if this check shows that:

1) the average actual contents of the batch is greater than or equal to the nominal quantity;
2) the number of prepackages displaying an error greater than the maximum permitted error is not more than 0.025 N, rounded upwards to the nearest whole number.
4.2. Method of sampling.

The prepackages making up the samples shall be taken at random from the batch submitted for checking.

As a general rule, sampling shall be completed before a metrological examination of the samples is begun (except for the second sample where a double sampling scheme is used).

## 4.3 - First check:

Checking of the average actual contents of the individual prepackages making up a batch.

For the purpose of this check, specimens shall be taken at random from among the individual units in the sample required for the checking of the minimu acceptable contents if the number of prepackages in the sample is sufficient. If not, en additional sample shall be taken.
4.3.1. A batch of prepaokiges shall be considered acceptable for the checking of the average contents if the mean value $\bar{x}=\frac{\sum_{i} x_{i}}{n}$ of the actual contents $x_{i}$ of the $n$ prepackages in the sample is greater than the value:

$$
\begin{aligned}
& Q_{n}-\frac{s}{\sqrt{n}} t_{1} \cdots \not \\
& \text { in which: }
\end{aligned}
$$

$Q_{n}=$ the nominal quantity in the prepackages,
$\mathrm{n}=$ the number of prepackages in the sample to be checked,
$\mathrm{B}=$ the estimated standard deviation of the actual contents
c of the batch,
$s=\sqrt{\frac{\sum\left(x_{i}-\bar{x}\right)^{2}}{n-i}}$
$t_{1}-\alpha=$ quantile of the order of 0.995 of the Student variable at $\left(\begin{array}{l}(n-1) \text { degrees of freedom } \\ (V-1) \text {. }\end{array}\right.$.
4.3.2. Criterion for acceptance or rejection of the batch of prepackeges for the first check.
4.3.2.1. . Criteria for non-destructive testing

| .Number in batch | $\begin{aligned} & \text { Number in } \\ & \text { sample } \end{aligned}$ | - ....... Criteria |  |
| :---: | :---: | :---: | :---: |
|  |  | Licceptance | Rejection |
| 100-500 (incl.) |  | $\bar{x} \geqslant Q_{n}-0.503 \mathrm{~s}$ | $\bar{x}<Q_{n}-0.503 \mathrm{~s}$ |
| $>500$ |  | $\bar{x} \gg Q_{n}-0.379 \mathrm{~s}$ | $\bar{x}<Q_{n-}-0.379 \%$ |

4.3.2.2. - Criteria for destructive testing

| Number in batch | Number in sample | Criteria |  |
| :---: | :---: | :---: | :---: |
|  |  | Acceptance | Rejoction |
| $\leq 500$ | 8 | $\bar{x} \geqslant{ }^{2}-1.237 s$ | $\bar{x}<\theta_{n}-1.237 s$ |
| 501-1200 | 13 | $\bar{x} \geqslant 2_{n}-0.847 s$ | $\overline{\mathrm{x}}<\mathrm{o}_{\mathrm{n}}-0.347 \mathrm{~s}$ |
| $>1200$ | 20 | $\bar{x} \geqslant Q_{n}-0.640 s$ | $\bar{x}<O_{n}-0.640 s$ |

4:4-Second checl: checking of the minimum acceptable contents.
Prepackeges in the batch the actual contents of which are less than the minimu acceptable contents shell be declared defective.

For checking by sampling, one of the following sampling schodules shall be used, the choice being left to each Member State. 4.4.1. Single sompling project

The number of prepackaces checked shall be equal to the number
in the sample, as indicated in the schedule:

- if the mumber of defective units found in the scmple is less than or equal to the oriterion for acceptance, the batch of propackages shall be considered acceptable for the purpose of this second check;
- if the mumber of defective units found in the sample is equal to or greater than the criterion for rejection, the batch of prepackeges shall be rejoctod.
$\therefore \therefore . \quad$ 4.4.1.1. Schedule for non-destructive testing.

4.4.1.2. Schedule for destructive testing

| Number in batch | Number in <br> sample | Irumber of defective units <br> icceptance <br> criterion | Rejection <br> criterion |
| :---: | :---: | :---: | :---: |
| 2 | 500 | 8 | 0 |
| $501-3200$ | 13 | 1 | 1 |
| $>$ | 20 | 1 | 2 |

4.4.2. Double-sampling schedule for non-destructive testing.

The first mumber of prepackages checked shall be equal to the mumer of units in the first sample, as indicated in the schedule:

- if the number of defective units found in the first scmple is less than or equil to the first acceptance coriterion, the batch shall be considered acceptable for the purpose of this second check;
- if the nuiber of defective items found in the first sample lies between the first acceptance criterion and the first rejection criterion, a second sarmle, the number of units in which is indicated in the schedule, shall be checkecl.

The mumbers of defective units found in the first and second samples shall be added together;

- if the agEregate number of defective units is less than or equal to the second accoptance criterion, the batch shall be considered acceptable for the purpose of this seoond checl;
-. if the ageregate muniver of defective units is greater than or equal to the second rejection criterion, the batch shall be rejected.

| Number in batcti | Samplos |  |  | Number of defective units |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Order | ITumber | Asgregato number | Acceptance criterion | Rejection criterion |
| 100-150 | 1st 2nd | 13 13 | 13 26 | 0 1 | 2 |
| 151-280 | lst 2nd | 20 20 | 20 40 | 0 3 | 3 4 |
| 281-500 | $\begin{aligned} & \text { 1st } \\ & \text { 2nd } \end{aligned}$ | 32 32 | $\begin{aligned} & 32 \\ & 64 \end{aligned}$ | 4 | $\begin{aligned} & 4 \\ & 5 \end{aligned}$ |
| 501-1200 | $\begin{aligned} & \text { lst } \\ & \text { 2nd } \end{aligned}$ | 50 50 | 50 100 | 2 6 | $\begin{array}{r} 5 \\ 7 \end{array}$ |
| 1,201-3,200 | $\begin{aligned} & \text { 1st } \\ & \text { 2nd } \end{aligned}$ | 80 30 | 80 150 | 3 | $\begin{array}{r}7 \\ \hline 9\end{array}$ |
| 3,201 and over | $\begin{aligned} & \text { 1st } \\ & \text { 2nd } \end{aligned}$ | 125 125 | 125 250 | 5 -12 | 9 13 |

## SNTHE III

## Product rroups covered by the Directive

1. Foodstuffs (without reference to the CCT), other than liquids
covered by the Directive on the making-up by volume of certain
prepackaged liquids.
2. Perfumery, cosmetics and toilet preparations ..... CCT 33.05
3. Soaps - surface-active ..... )
detergents - washing powders) ..... CCT 34.0134.02 B
4. Wax polishes; waxes; metal polishes ..... CCT 34.05
5. Horticultural fertilizers ..... CCT 31.05 B
6. Glues and adhesives ..... CCT 35.06
7. Herbicides; pesticides ..... CCT 38.11
8. Paint solvents ..... CCT 38.18
9. Pet foods without reference to the CCT
10. Soeds ..... CCT 12.03
11. Paints and varnishes; inks ..... CCT $32.09 \quad 32.10$$32.11 \quad 32.12$32.13

[^0]:    1 This is of interest only to tho inspection departments, which want to be able to go back to the source. For the consumer, (the final purchaser), the responsible party is the sellor.

[^1]:    *This theoretical rule does not affect the temperature at which the measurements are really made, which with some products may have to be different from the reference temperature (e.g.; ices and deep-frozen goods).

