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Cigars — Specification



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In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 410 was prepared by Technical Committee RSB/TC 24, *Chemicals and consumer products*.

In the preparation of this standard, reference was made to the following standard:

IS 1769-1:1994, *Cigars and Cheroots - Specification, Part 1: Cigars*

The assistance derived from the above source is hereby acknowledged with thanks.

Committee membership

The following organizations were represented on the Technical Committee on Chemicals and consumer products (RSB/TC 24) in the preparation of this standard.

University of Rwanda- College of Science and Technology

University of Rwanda- College of Education

Star Construction and Consultancy Ltd

AB Chalk

STB

Unique Chalk

Rwanda Investigation Bureau

Here and Now Group Ltd

AGROPY Ltd

AMEKI Color

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Introduction

A cigar is a rolled bundle of dried and fermented tobacco leaves made to be smoked. They are produced in a wide variety of sizes and shapes. Almost all cigars are made up of three distinct components: the filler, the binder leaf which holds the filler together, and a wrapper leaf, (which is often the best leaf used). Regular cigar smoking is known to carry serious health risks including increased danger of various types of cancer and cardiovascular illnesses.

Some cigars use different varieties of tobacco for the filler and the wrapper. Long filler cigars are a far higher quality of cigar, using long leaves throughout. These cigars also use a third variety of tobacco leaf, called a "binder", between the filler and the outer wrapper. This permits the makers to use more delicate and attractive leaves as a wrapper. These high-quality cigars almost always blend varieties of tobacco.

Tobacco leaves are harvested and aged using a curing process that combines heat and shade to reduce sugar and water content without causing the bigger leaves to rot. This takes between 25 and 45 days, depending upon climatic conditions and the nature of sheds or barns used to store harvested tobacco. Curing varies by type of tobacco and desired leaf colour. A slow fermentation follows, where temperature and humidity are controlled to enhance flavour, aroma, and burning characteristics while forestalling rot or disintegration.

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Cigars — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, methods of sampling and test for cigars.

It does not cover the requirements for flavour and aroma of cigars.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

RS ISO 3402, *Tobacco and tobacco products — Atmosphere for conditioning and testing*

RS ISO 8454, *Cigarettes — Determination of carbon monoxide in the vapour phase of cigarette smoke — NDIR method*

ISO 16632, *Tobacco and tobacco products — Determination of water content — Gas chromatography method*

ISO 15152, *Tobacco — Determination of the content of total alkaloids as nicotine — Continuous-flow analysis method*

RS ISO 17318, *Solid fertilisers and soil conditioners — Determination of arsenic, cadmium, Chromium, lead and mercury contents.*

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply.

3.1

nicotine

toxic colourless or yellowish oily liquid which is the chief active constituent of tobacco

3.2

moisture content

ratio of the mass of water in a sample to the mass of solids in the sample, expressed as a percentage

3.3

wrapper

cigar's outermost layer. It is the most expensive component of a cigar. The wrapper determines much of the cigar's character and flavour, and as such its colour is often used to describe the cigar as a whole

3.4

binder

small bunch of "filler" leaves bound together inside of a leaf, beneath the wrapper. Binder leaf is generally considerably thicker and hardier than the wrapper leaf surrounding it

3.5

filler

bulk of a cigar, a bound bunch of tobacco leaves. These leaves are folded by hand to allow air passageways down the length of the cigar through which smoke is drawn after the cigar is lit

4 Requirements

4.1 General requirements

4.1.1 Description

4.1.1.1 Cigars are made from uncut tobacco. Cigar shall be made of filler tobacco forming its central core, the binder tobacco binding the filler and folding it into shape. The outside of the cigars shall be wrapped with wrapper leaves. A typical cigar shall approximately contain 85 % filler tobacco, 10.5 % binder and 4.5 % wrapper tobacco. It is the cigar wrapper that imparts to the cigar the fine finish, good burn, agreeable flavour and delectable aroma. Cigar shall be closed at one end and open at the other end or both ends may be kept open. The ends may be cylindrical

4.1.1.2 The adhesive shall not contain copper sulphate or any other preservative.

4.1.2 Length

The length of cigar shall be between 75 mm and 150 mm.

4.1.3 Mass Per 1000 Cigars

The mass of 1 000 cigars shall be between 3.0 kg and 11.0 kg.

4.1.4 Freedom from mould attack and tobacco beetle attack

Cigars shall be free from any mould attack and tobacco beetle attack when examined by the method prescribed in Annex A.

4.1.5 Harmful substances

The material shall not contain any harmful substances.

4.1.6 Additives

Any substances, if added, shall be of nature and purity which are suitable for use as food additives.

4.1.7 Burning quality

Cigars shall burn evenly. Chemical agents shall not be used for obtaining better burn of cigars.

4.1.8 Filler tobacco

It shall consist of air-cured or sun-cured cigar tobacco, sweated or unsweated. The desirable quality characteristics shall be thin to medium and pliable texture, good size, mild strength, good burning with white ash and agreeable flavour. For binder, leaf with thin veins is considered more suitable.

4.1.9 Wrapper tobacco

It shall consist of cigar-wrapper tobacco grown under shade or in open and air-cured under shade. The leaf shall be thin, elastic, free from damage and blemish, of parrot green colour, having fine texture and good burning quality.

4.2 Specific requirements

Table 1 — Specific requirements for cigar

S/N	Characteristics	Requirement	Test method
i)	Moisture content, percent by mass	11.0 to 16.0	ISO 16632
ii)	Nicotine (on dry basis), percent by mass, <i>Max</i>	3.0	ISO15152
iii)	Carbon monoxide, mg/m ³ , max	15	RS ISO 8454
iv)	Total ash (on dry basis), percent by mass, <i>Max</i>	25.0	Annex C
v)	Acid insoluble ash (on dry basis), percent by mass, <i>Max</i>	5.0	Annex D
vi)	Total chlorides (on dry basis), percent by mass, <i>Max</i>	1.5	Annex E
vii)	Freedom from poisonous and toxic materials, mg/Kg, max	Lead as Pb	10
		Arsenic as As ₂ O ₃	2
		Cadmium	7
			RS ISO 17318

		Chromium	10	
		Mercury	2	

5 Packaging and labelling

5.1 Packaging

Cigars shall be packaged in 5, 10, 25, 50 or 100 numbers in a wooden, tin or cardboard box opening only at the top; or on a paper wrapper completely closed on all sides and with all outer edges gummed down; or as agreed to between the purchaser and the vendor.

5.2 Labelling

Each packet of cigars shall be legibly and indelibly marked with the following:

- a) description of contents;
- b) name of the manufacturer or the distinguishing mark of the manufacturer;
- c) brand or brand code;
- d) number of cigars;
- e) date of manufacture or date code;
- f) colour of wrapper; and
- g) any other statutory information.

5 Sorting

After manufacture, cigars shall be graded according to the colour of the wrapper. Cigars of uniform colour shall be packaged in one packet.

6 Sampling

Draw of representative samples of the material and the criteria of conformity shall be as prescribed in **Annex B**.

Annex A
(normative)

Examination for freedom from mould attack and tobacco beetle attack

A.1 Take five cigars and visually examine the surface of each for the presence of any penetrations by tobacco beetles. Cut open these cigars one by one on a clean white sheet of paper.

A.2 Examine the cut material carefully for the presence of *Lasioderm serricorne* (tobacco beetle) in all its stages, that is egg, larval, pupal and alive or dead adult, either visually or with the help of a hand lens (magnification x 10).

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Annex B (normative)

Sampling of cigar

B.1 General requirements of sampling

B.1.1 In drawing, preparing, storing and handling samples, the following precautions and directions shall be observed.

B.1.1.1 Precautions shall be taken to draw the samples so as to protect the sample, the material being sampled and the receptacles for samples from loss or gain of moisture and from adventitious contamination.

B.1.1.2 The samples shall be placed in clean and dry receptacles. The receptacles shall be sealed airtight after filling and marked with full details of sampling, date of manufacture, name of the manufacturer and other important particulars of the consignment.

B.1.1.3 Samples shall be stored in such a manner that the conditions of storage do not unduly affect the quality of the material.

B.1.1.4 Sampling shall be done by a person agreed to between the purchaser and the vendor and in the presence of the purchaser (or his representative) and the vendor (or his representative).

B.2 Scale of sampling

B.2.1 All the bulk containers in a single consignment of the material pertaining to the same brands shall constitute a lot. If the consignment is declared to consist of different brands, the bulk containers belonging to the same brand shall be grouped together to constitute a lot.

B.2.2 Samples shall be tested for each lot for ascertaining conformity of the materials to the requirements of this standard.

B.2.3 The number of bulk containers to be selected from the lot shall depend on the size of the lot and shall be in accordance with Table B1.

Table B1 — Number of Bulk Containers to be selected for Sampling

Lot size	Number of bulk containers to be selected
N	n
1	2
Below 5	2
6 to 10	3

Over 10	4
---------	---

B.2.4 These bulk containers shall be chosen at random and for this purpose some random number table as agreed to between the purchaser and the vendor shall be used. In case such a table is not available, the following procedure shall be adopted.

B.2.5 Arrange all the bulk containers in the lot in one order and count them as 1, 2, 3..., up to r and so on, every r th bulk container thus counted shall be withdrawn to give a sample for test, where $r = N/n$ (see Table B1). If r comes to be a fractional number, its value shall be taken as equal to the integral part of it.

B.3 Preparation of samples

B.3.1 Individual samples

B.3.1.1 The number of packets to be taken at random from each selected bulk container shall be sufficient so as to give about 300 g of the material. The material so taken shall be mixed 150 g of the same shall be taken, crushed into small pieces, thoroughly mixed together and then divided into three equal parts. Each part shall constitute an individual sample representing the bulk container and shall be transferred immediately to thoroughly clean and dry receptacles and sealed air-tight. The receptacles shall be labelled with the particulars given under B.2.2.

B.3.1.2 The individual samples so obtained from the lot shall be divided into three sets in such a way that every set has an individual sample representing each selected bulk container. One of these sets shall be marked for the purchaser, another for the vendor and the third for the referee and all the three sets shall bear the seals of the purchaser and the vendor.

B.3.2 Composite sample

B.3.2.1 From the portion of the material left over after preparing the individual sample (see B.3.1), equal quantities of material shall be taken for each selected container and well mixed together to form a composite sample of about 150 g for the lot.

B.3.2.2 The composite sample shall be divided into three equal parts, one for the purchaser, another for the vendor and the third for the referee and all the three samples shall bear the seals of the purchaser and the vendor.

B.3.3 Referee sample

Referee sample shall consist of a set of individual sample (see B.3.1) and a composite sample (see B.3.2) marked for this purpose and shall bear the seals of the purchaser and the vendor. These shall be kept at a place agreed to between the two.

B.4 Number of tests

B.4.1 Tests for the determination of moisture content, nicotine and total ash shall be conducted on each of the individual sample (see B.3.1).

B.4.2 Tests for the determination of the remaining characteristics shall be conducted on the composite sample (see B.3.2).

B.5 Criteria of conformity

B.5.1 A lot shall be declared as conforming to the specification when:

- a) each of the test results for moisture content, nicotine and total ash satisfies the corresponding requirement specified in Table 1. If, however, one or more test results do not satisfy the respective requirement, for moisture content, the conformity of the lot shall be ascertained in accordance with B.5.1.1; and
- b) the test results on the composite samples for the remaining requirements shall satisfy the corresponding requirements as given in Table B2.

B.5.1.1 In case one or more of the test results do not satisfy the requirements for moisture content, nicotine and total ash, the following procedure shall be adopted for determining conformity of the material in respect of these characteristics. The mean and the range of the corresponding test results shall be calculated as:

$$\text{Mean}(X) = \frac{\text{Sum of the test results}}{\text{Number of the test results}}$$

Range (R) = Difference between the maximum and the minimum of the test result

The appropriate expression as shown in column 6 of Table 3 shall be calculated. If the values of these expression satisfy the relevant condition as given in column 6 of Table 3, the lot shall be deemed to have satisfied the requirements for moisture content, nicotine and total ash.

Table B2 — Criteria for Conformity

S/N	Characteristics	Test result 1,2,3,...,n	Average	Range	Criteria for Conformity
i)	Moisture content	-	X_1	R_1	$X_1 \pm 0.4$ R_1 shall lie between 11.0 and 16.0
ii)	Nicotine	-	X_2	R_2	$X_2 + 0.4$ $R_2 \leq 3.0$
iii)	Total ash	-	X_3	R_3	$X_3 + 0.4$ $R_3 \leq 25.0$

Annex C (normative)

Determination of total ash

C.1 Procedure

C.1.1 Accurately weigh about 10g of the material into a tared 9 cm diameter platinum, porcelain or silica dish. Carefully dry the material on a burner flame and char it completely until all organic matter is destroyed. Ignite the charred material by placing the dish in a muffle furnace maintained at a temperature of $550 \pm 25^\circ\text{C}$ for 2 hours. Cool the dish and weigh. Note the mass of the ash contained in the dish.

C.1.2 preserve the ash for the determination of acid insoluble ash

C.1.3 Calculation

Total ash content of the material (on dry basis), % by mass = $\frac{10\,000\ w}{W (100 - M)}$

where,

w = mass, in grams, of the ash;

W = mass, in grams, of the material taken for the test;

M= loss on heating, percent by mass

Annex D (normative)

Determination of acid insoluble ash

D.1 Reagents

D.1.1 Dilute Hydrochloric Acid, 1:1 (v/v)

D.1.2 Concentrated Nitric Acid, 1.42g

D.2 Procedure

D.2.1 Moisten the ash contained in the dish with a few drops of water. Cover the dish and carefully add 20 ml of dilute hydrochloric acid avoiding loss due to effervescence. Place the covered dish on a water bath and digest for 20 to 30 minutes. Remove and rinse the cover, add one millilitre of concentrated nitric acid to oxidize any ferrous salts and evaporate the contents to dryness. Heat for about 30 minutes on water bath dehydrate the silica. If necessary, heat for one hour in an oven at 110°C to complete the dehydration. Moisten the dry salt with 10 ml of dilute hydrochloric acid and 50 ml of water. Heat on water bath until all soluble salts are in solution. Filter through a filter paper (Whatman No. 44 or equivalent) and collect the filtrate in a 500 ml volumetric flask. Transfer the residue to the filter paper and wash several times with hot dilute hydrochloric acid.

D.2.2 Transfer the filter paper along with the residue to a platinum dish or silica crucible and ignite to bright red heat. Cool and weigh the material.

D.2.3 Calculation

$$\text{Acid insoluble ash (on dry basis), } = \frac{10\,000(W_2 - W)}{W_1(100 - M)}$$

where,

W_2 = mass, in grams, of dish with acid insoluble ash;

W = mass, in grams, of empty dish;

W_1 = mass, in grams, of the material taken for the test; and

M = loss on heating, percent by mass

Annex E (normative) Determination of total chlorides

E.1 Reagents

E.1.1 Standard Silver Nitrate Solution, 0.1 N. Standardize against potassium chloride as in E.2.

E.1.2 Dilute Nitric Acid, 1:9 (v/v).

E.2 Procedure

Weigh accurately about 2 g of tobacco into a 250 ml beaker. Add 100 ml of water, a small amount in the first instance to wet the tobacco thoroughly and then the remainder. Allow it to stand for at least 5 minutes at room temperature, stirring intermittently. Add 5 ml of dilute nitric acid into the mixture and insert the clean electrodes. Start magnetic stirrer and continue stirring throughout titration at a rate sufficient to produce vigorous agitation without sputtering. Titrate with standard silver nitrate solution to the potential previously established as equivalent point. Determine equivalence point graphically by making several titrations on one or more tobacco samples. Recheck occasionally and determine when either electrode is replaced. Record the volume of the titrant.

E.3 Calculation

Total chlorides (on dry basis), percent by mass = $\frac{V \times N \times 3.54533}{W}$

where,

V = volume, in ml, of silver nitrate solution required for the test

N = normality of silver nitrate solution

W = mass in grams, of the sample taken for the test

Bibliography

- [1] IS 5643 (1999): Tobacco and tobacco products— Methods of tests for tobacco

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