

Coco leaf midrib brooms (*Petiole*) — Specification

DKS 2467: 2018

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Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. KEBS shall not be held responsible for identifying any or all such patent rights.

This Kenya Standard was prepared by Technical Committee KEBS/TC 171, *Coconut and Coconut Related Products and Services*.

During the development of this Workshop Agreement, reference was made to the following documents:

KS 982:1990, Method of determination of physical and mechanical properties of wood, Part 12: Sampling and general requirements.

KCDA 05:2010, Coco leaf midrib brooms (*Petiole*)

Acknowledgement is hereby made for the assistance received from these sources

Coco leaf midrib brooms (*Petiole*) — Specification

1 Scope

This Kenya National Workshop Agreement prescribes requirements and test methods for brooms made from coconut leaf midrib (*Petiole*).

2 Terminology

For the purpose of this Workshop Agreement, the following definitions shall apply:

2.1

broom

a cleaning tool consisting of dry stiff leaf midribs (*petiole*) from coconut tree (*cocos nuciferus*) tied together in bundles parallel to each other and the stock ends bound together using a metallic strip, or sisal, or plastic, or better still, securely sewed raffia leaves

2.2

leaf midrib

central or main vein of a leaf, as in magnolids and ferns, generally protruding from the underside of leaves with pinnate venation

3 Requirements

3.1 Moisture content

When measured in accordance with the method described in Annex A, the broom shall be dry with a maximum moisture content of 20 % — 25 %.

3.2 Weight

The weight of a broom shall be 400 g \pm 5 g when weighed using a properly calibrated weighing scale.

3.3 Workmanship

3.3.1 The binding material used for binding shall be a metallic strip, or sisal, or plastic, or better still, securely sewed raffia leaves.

3.3.2 The binding material shall be free of sharp edges that can cause injury and if metallic, shall be one that is rust-free. If metallic, the binding material shall be rust proof when tested by a method described in Annex B.

3.4 Length

When measured using a metre rule, the mean length of the broom strands shall be 800 \pm 5 mm. There shall be 90 % of the midribs, meeting the 800 mm.

3.5 Description

The brooms made from midribs of coconut leaves that are shaven and are used for cleaning rough grounds and floors. These brooms are ideal for stiff sweeping jobs such as sweeping fallen leaves and cleaning between stones etc.



Figure 1 — Coconut midrib broom

3.5.1 Appearance

Coconut midribs shall have a brown coloration in appearance – ready to use, when examined visually.

3.5.2 The single strands shall be appropriately shaven and shall not have any sharp edges that can cause injury during use.

3.6 Labelling and packaging

3.6.1 Labelling

Brooms made from coconut leaves shall be legibly and indelibly marked with the following information:

- i) name and address of manufacturer, or a registered trade mark, if any;
- ii) length of the broom;
- iii) weight of broom;
- iv) country of origin.

3.6.1 Packaging

Brooms shall be packaged in appropriate materials that shall protect the integrity of the brooms themselves during transportation and storage. The brooms shall be packed in bundles of 5 or multiples of 5.

4 Sampling and acceptance criteria

4.1 Consignment

Shall be the quantity of coconut brooms from the same source delivered or sampled at any one time.

4.2 Any sample of coconut brooms randomly sampled from a consignment shall comply with the requirements of this Workshop Agreement and shall be representative of the entire consignment. Sampling shall be done in accordance with Annex B.

PUBLIC REVIEW DRAFT

Annex A
(Clause 3.1)
(normative)

Determination of moisture content of brooms

A.1 Scope

This Kenya Standard specifies the method for determining the moisture content of brooms.

A.2 Principles

Determination, by weighing, of the loss in mass of the test piece of drying to constant mass. Calculation of the loss in mass as a percentage of the mass of the test piece after drying.

A.3 Apparatus

A.3.1 Balance, capable of weighing to an accuracy of 0.01 g (or 0.001 g for testing under Clause A.5).

A.3.2 Equipment, capable of drying broom to absolutely dry condition.

A.3.3 Flasks, with ground glass necks, and stoppers or other equipment, for ensuring the retention of moisture in the test pieces.

A.4 Preparation of test pieces

A.4.1 Test pieces for determination of moisture content shall be prepared from material selected in accordance with KS 982-12, Methods of test for determination of physical and mechanical properties of wood Part 12: Sampling and general requirements and made preferably in the form of right prisms having a square cross-section of side 20 mm and length along the grain of 25 ± 5 mm. After preparation, the test pieces shall be conditioned in accordance with 4.6 of KS 982-12 and stored under conditions which ensure that their moisture content remains unchanged.

A.4.2 It is recommended that the moisture content be determined on the test pieces made for other tests or on samples cut from them. The form, dimensions and method of taking sample from test pieces as well as well as the minimum number of test pieces for the determination of the mean moisture content of the test pieces are specified in KS 982-12.

A.5 Procedure

A.5.1 Weigh the test piece to an accuracy of 0.5 % of its mass in the absolutely dry condition.

A.5.2 Dry the test piece to constant mass at a temperature of $103 \text{ }^\circ\text{C} \pm 2 \text{ }^\circ\text{C}$. Constant mass is considered to be reached if the loss in mass between two successive weighings carried out at an interval of 6 h is equal to or less than 0.5 % of the mass of the test piece.

A.5.3 After cooling the test piece in a desiccator, weigh it rapidly enough to avoid an increase in moisture content by more than 0.1%. The accuracy of weighing shall be at least 0.5 % of the mass of the test piece.

A.5.4 If it is necessary (special types of tests) to determine the moisture content to an accuracy of 0.1 %, dry the test pieces in flasks according to Clause A.2. Determine the masses of the flasks containing the test pieces to the nearest 0.005 g.

A.6 Calculation and expression of results

A.6.1 The moisture content, W , of each test piece, as a percentage by mass, shall be calculated to an accuracy of 1 % from the formula.

$$W = \frac{m_1 - m_2}{m_2} \times 100$$

where,

m_1 = is the mass, in grams, of the test piece before drying; and

m_2 = is the mass, in grams, of the test piece after drying.

A.6.2 If it is necessary to determine the moisture content to an accuracy of 0.1 per cent using flasks, the following formula shall be used

$$W = \frac{m_1 - m_2}{m_1 - m_0} \times 100$$

where,

m_0 = is the mass, in grams, of the flask;

m_1 = is mass, in grams, of the flask containing the test piece before drying; and

m_2 = is the mass, in grams, of the flask containing the test piece after drying.

A.6.3 Calculate the arithmetic mean of the results obtained for the individual test pieces and report this as the average value for the moisture content of the pieces.

A.7 Test report

The test report shall include the following particulars:

- i) a reference to this Kenya Standard;
- ii) details concerning sampling of the test pieces;
- iii) the test results, calculated as specified in Clause A.6, and their statistical values.

Annex B
(Clause 4)
(normative)

Sampling plan and preparation of samples

B.1 Scale of sampling

B.1.1 The number of brooms to be selected from a consignment shall depend on the size of the consignment and shall be in accordance with Table A.1.

Table B.1 — Scale of sampling coconut brooms

| Number of bales in the consignment | Number of bales to be selected |
|---|---------------------------------------|
| Up to 50 | 3 |
| 51 to 100 | 4 |
| 101 to 150 | 5 |
| 151 to 300 | 7 |
| 301 to 500 | 10 |

B.1.2 These brooms shall be selected at random.

B.2 Preparation of samples

B.2.1 From each of the brooms selected as in Clause B.1, draw an individual sample of about 3 000 g for laboratory analysis.

B.2.2 Each sample selected shall be properly packed and marked with the following information:

- i) supplier's name;
- ii) date of sampling;
- iii) identification code.