KENYA STANDARD

KS 1739-1:2020

ICS 59.080

First Edition

Specification for Mosquito Nets

Part 1:

Untreated nets

Kenya Bureau of Standards

Standards for Quality life

TECHNICAL COMMITTEE REPRESENTATION

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Government Chemist Department
Kenya Agriculture and Livestock Research Organization (KALRO)
Africa PVC Industries
Nairobi University —Department of Food Science
Environment Institute of Kenya,
Moi University—Department of Industrial and Textile Engineering
Tarpo Industries Ltd.,
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National Public Health Laboratory
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REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

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Second Edition

specification for mosquito nets

Part 1:

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This Kenya Standard has been prepared by the Technical Committee on Knitted Fabrics and Netting under the guidance of the Textile Industry Standards Committee, and it is in accordance with the procedures of the Bureau.

KS 1739 consists of the following parts, under the general title; Specification for mosquito nets

KS 1739-1 Untreated mosquito nets
KS 1739-2 Treated mosquito nets which was withdrawn and replaced with KS EAS 455:2019

This Third edition cancels and replaces the second edition (KS 1739-1:2005) which has been technically revised.

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

IS 9886 — Indian Standard Mosquito Nets — Specification.

CKS 161— Specification for Mosquito nets (single-bed size).

Acknowledgement is hereby made for the assistance derived from this

Introduction

That prevention supersedes cure in matters of health management, is a fact that cannot be overemphasized. Mosquito nets are particularly useful in the prevention of malaria.

Mosquito nets when properly constructed and employed do prevent contact between the mosquito, a vector for the malaria-causing pathogen Plasmodium, and a sleeping person. While it may be difficult to monitor how individuals use mosquito nets, it is absolutely necessary that the construction of the same meets the basic requirements for a high quality net, especially if the nets are intended for use in a malaria-prone tropical zone which Kenya falls. Studies carried out around the Lake Victoria basin suggested that the Anopheles mosquito is most active between 10.00 p.m. and 4.00 a.m. a time when most people are asleep and therefore most vulnerable to the mosquito.

KS 1739-1: 2020

Specification for mosquito nets

Part 1:

Untreated nets

1. Scope

This part one of Kenya Standard specifies requirements, test methods and sampling for untreated mosquito nets.

2. Normative references

The following referenced documents 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.

3. Terms and definition

For the purpose of this standard, the definitions in KS 08-1305: Part 1[1)] shall apply along with the following:

3.1
untreated mosquito net
a mosquito net that has not been subjected to insecticide treatment

3.2
suspension mechanism
the accessories fixed to the top (roof) of a net to provide for means of hanging the net at a clearance from the ground

3.3
top ring
where included, this is a circular, triangular, rectangular or other shape of thick metallic wire or other suitable material tied, or otherwise fixed to the underside of the roof of the net so as to provide the suspended part of the net with its shape

3.4
sheeting border
a lace of woven or knitted fabric stitched or integrated around the lower extremity of the net

3.5
height
the length of the net, when freely suspended under its own weight, from the top ring to the seam of the sheeting border with netting body fabric on its shortest side

3.½ height

half the length of the dimension on 3.5
3.7

circumference
the perimeter of the sheeting border at its seam of the sheeting border with netting body fabric

4. Requirements

4.1 Visual examination

The netting shall be free of defects arising from knitting and workmanship.

4.2 Sheeting border

4.2.1 Where provided, the sheeting border shall have colourfastness rating of 4 or better.

4.2.2 The sheeting border shall have strength parameters that are at least equivalent to those of the body fabric.

4.3 Seams/stitching

4.3.1 When visually examined the seams shall be of even tension and the loose ends shall be securely and neatly fastened off.

4.3.2 The nets shall be made with lock stitch. The number of stitches per decimeter shall be 22 to 35 and shall be made from suitable sewing thread.

4.4 Fire safety

The fabrics used in the construction of mosquito nets shall not propagate fire when laces of any of the component fabrics from it are ignited at one end.

5. Specific requirements

5.1 The untreated mosquito net shall meet the physical requirements as specified in Table 1 and 2

5.2 The colorfastness requirements of untreated mosquito net shall be as specified in Table 3

Table 1: Synthetic netting fabric

SL No.	Characteristic	Requirement, min	Test method
1	Mesh per cm^2	23	Annex A
2	Mass/unit area, g/m^2	25	KS ISO 3801
3	Bursting strength at		KS 631 test area of 10 cm^3.

Table 2: Round mesh cotton netting

Characteristic	Requirement	Test method
Mesh per cm^2 min	23	Annex A
Mass/unit area, g/m^2 min	60	KS ISO 3801
Bursting strength, kPa,min	100	KS 08-631 Clause 5.3
Scouring loss,% Max	10	KS 265

Table 3 Colourfastness requirements for untreated mosquito nets

Agency	Numerical rating (min)		Test method
	Change in color	Staining	
Light	5	—	KS ISO 105 B02
Washing	4	4	KS ISO 105-C10

5.3 Dimensions

5.3.1 Circular mosquito nets

5.3.1.1 Circular mosquito nets shall comply with the dimensional requirements of Table 4

Table 4: Circular mosquito nets

Size	Top ring diameter cm, min.	Top fabric diameter (when the ring is inside), min.	Height,cm min.	Circumference, cm at ½ H min	Bottom Circumference cm, min.
Domed shape cover net	-	-	50	115	230
X small	40	33	120	170	300
Single	47	40	200	350	700
Double	47	40	200	400	800
Large	53	46	200	450	900

5.3.2. Rectangular mosquito nets

5.3.2.1 Rectangular mosquito nets shall comply with the dimensional requirements of Table 5

Table 5: Rectangular mosquito nets

Size		**Width cm min.**	**Length, CM min.**	**Height CM min.**
X-small		70	120	90
Single		90	180	180
Double		150	180	180
Large		180	180	180
Double decker	Small	90	180	210
	Double	150	180	210
	large	180	180	210

6 Marking

The following information shall be indelibly marked on the cloth label securely stitched at the top corner:

i) manufacturer's name and/or registered trade mark;

ii) size of the net, including, overall length (cm) x overall width (cm) x overall height (cm) or circumference;

iii) shape of net;

iv) care instructions;

v) recommended bed size.

7 Packaging

7.1 Outside packaging

The following information shall be legibly and indelibly marked on the outside packaging of individual nets:

i) manufacturer's name and/or registered trade mark;

ii) size of the net, including, overall length (cm) x overall width (cm) x overall height (cm) or circumference;

iii) shape of net;

iv) care instructions;

vi) recommended bed size.
vii) Country of manufacture

8 Sampling

7.1 Lot

The quantity of mosquito nets delivered to a consignee against the same despatch note shall constitute a lot.

7.2 Sampling shall be in accordance with Table 6. The acceptance quality level (AQL) shall not exceed 2.5 %.

Table 6 — Sampling

Number of units (*n*) **in the lot**	**Number of units selected**	**Method of selection**
1 to 5	All	All
6 to 99	5	at random
100 to 399	n[a)]/20	at random
400 to more	20	at random
[a)] In deciding the number of units to be selected, any remainder of less than 20 units shall be ignored.		

7.3 The nets selected shall be intact and in good external condition.

8 Packing

The mosquito nets shall be packed in visible, water-resistant packaging material to protect them from soiling while permitting visual examination.

Annex A
(normative)

Determination of the number of meshes per cm^2

A.1 Test specimen

Samples shall be taken from a netting fabric roll and shall measure at least 1 m^2.

A.2 Conditions for testing

Test shall be conducted in ambient conditions.

A.3 Apparatus

Pick (magnifying) glass.

A.4 Procedure

A.4.1 Lay the test sample on a smooth table and mark out 10 positions evenly spaced out on the sample's surface.

A.4.2 Place the pick glass on each of the 10 positions and in such a manner as to have one edge of the glass form a tangent to a row of meshes either on the baser or bias of the fabric.

A.4.3 Count the number of meshes seen through the pick glass lens for each of the 10 positions.

A.5 Calculation

A.5.1 Average number pf meshes = $\frac{\text{total number of meshes}}{}$

A.5.2 Average number of meshes/cm^2 = Average meshes seen through the pick glass ÷ Area under observation.

$$= \frac{\text{Average number of meshes}}{2.5 \times 2.5}$$

$$= \frac{\text{Average number of meshes}}{6.25}$$