



## EAST AFRICAN STANDARD

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### Solar wax extractor — Specification



EAST AFRICAN COMMUNITY

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## Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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## Introduction

Waxes secreted by different species of honey-bees have different physico-chemical characteristics and it is, therefore, advisable to extract the waxes from different Indian species separately instead of mixing them together. The uses of beeswaxes are numerous, pharmaceutical and cosmetic industries being the biggest consumers of beeswax.

It is estimated that bees consume about 8 to 10 kg of honey and secrete 1 kg of wax. Old wax-combs which are neglected by bees are often attacked and eaten away by wax worms which is a loss to the beekeeper. Such old combs should not be left either in hives or open in the apiary, but wax should be extracted from them as early as possible.

The advantages of solar wax extraction method outweigh the other method of extraction as the wax is melted and bleached to some extent and there is no deterioration of the physical or chemical properties of waxes. In our country there is considerable sunlight during the major part of the year and the solar wax extractor is a valuable equipment for the beekeeper. The old wax-combs, bridge or burr combs or cappings wax are soaked in water to remove water-soluble matter and are then placed in solar wax extractor kept in an inclined position facing the sun. The melted wax slowly flows out and accumulates in the wax receptacle.

In the preparation of this East African Standard, the following sources were consulted extensively:

IS 8524:1977(R2004), *Specification for Solar Wax Extractor*

Codex Alimentarius website: [http://www.codexalimentarius.net/mrls/pestdes/jsp/pest\\_q-e.jsp](http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_q-e.jsp)

USDA Foreign Agricultural Service website: <http://www.mrlidatabase.com>

USDA Agricultural Marketing Service website: <http://www.ams.usda.gov/AMSV1.0/Standards>

USDA Plant Inspectorate Service website: [http://www.aphis.usda.gov/import\\_export/plants](http://www.aphis.usda.gov/import_export/plants)

European Union: [http://ec.europa.eu/sanco\\_pesticides/public](http://ec.europa.eu/sanco_pesticides/public)

Assistance derived from these sources is hereby acknowledged.

*Draft for comments only — Not to be cited as East African Standard*

## Solar wax extractor — Specification

### 1 Scope

This East African Standard specifies the requirements for solar wax extractor used for extracting beeswax from the wax-combs of honey-bees.

### 2 Normative references

The following referenced documents are indispensable for the application 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.

CAC/RCP 1, *Recommended international code of practice — General principles of food hygiene*

EAS 23, *Timber — Dimensions for coniferous sawn timber (cypress and pine) sizes of sawn and planed timber — Specification*

ISO 16143-1, *Stainless steels for general purposes — Part 1: Flat products*

ISO 16143-3, *Stainless steels for general purposes — Part 3: Wire*

### 3 Materials

The timber used shall be well-seasoned and non-warping, like (a) teak (*Tectona grandis* Linn f.), (b) piney (*Hardwickia pinnata* Roxb.), (c) pine (*Pinus longifolia*) or Toon (*Cedrela toona* Roxb).

### 4 Shape and dimensions

The shape and dimensions of the solar wax extractor should, as far as possible, be as given in Figure 1.

#### 4 Essential parts

##### 4.1 Outer wooden case

This should be made out of 25 mm planks of well-seasoned wood. The case should be of 400 mm length, 250 mm breadth and 200 mm height (see Figure 1). This case should be lined from inside with tinplate of 0.5 mm thickness.

##### 4.2 Cover

The cover for this case fitted with three hinges of 80 mm each should have a double glass fitted within the wooden frames. The thickness of the glass sheets shall be 1.5 to 2 mm and the space between the two glass sheets should be 5 mm. At the bottom of the case, adjustable folding leg-strip of 20 x 80 mm should be fitted with two hinges. When unfolded, this raises the height of the wooden case on one side and makes it inclined for flow of the melted wax. The wooden case should be painted in black from outside.

##### 4.3 Semi-circular tray

This should be made from 0.71 mm thick tin sheets. On one side, it shall be fitted with 0.4 mm thick wire-gauze. From the place where wire-gauze is fitted, the tinplate should be cut to get a beak to this semi-circular tray. Wax-combs should be put in this tray for melting. The flat and metal strips of the tray rest on the edges of the upper frame of the wooden case.

**4.4 Wax receptacle**

This should be a rectangular tray of about 250 mm length, 200 mm breadth and 100 mm height which should be kept below the beak of the circular tray. When in use, small quantity of water should be put in this tray so that melted wax floats over it and can be removed easily on solidification.

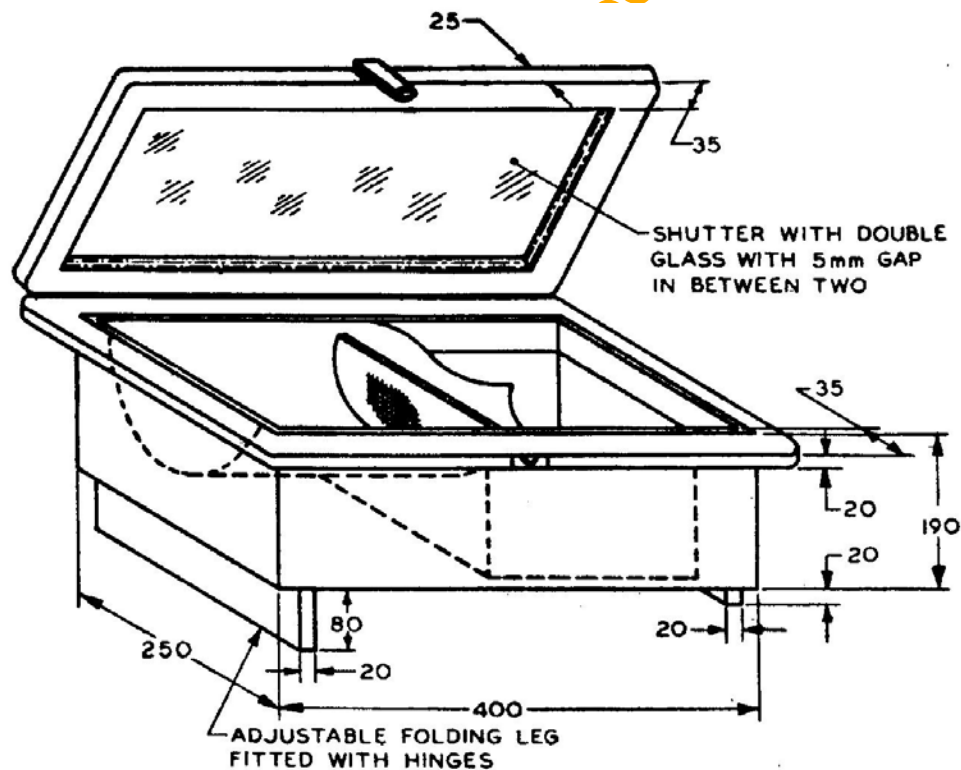
**5 Workmanship and finish**

The solar wax extractor should be strong to withstand handling. The glass sheets should be fitted snugly. It shall be finished smooth and when the cover is put on the extractor there should be no slits anywhere between the wooden case and the cover. The extractor should be air-tight so that the heat created inside should not be lost due to convection currents. It should be painted in good black colour to absorb maximum heat.

**6 Marking**

6.1 Each extractor shall be marked with the following particulars:

- a) Manufacturer's name or recognized trade-mark,
- b) Year of manufacture, and
- c) Batch or code number.



All dimensions in millimetres.

Figure 1 — Solar wax extractor

6.2 Each extractor may also be marked with a Certification Mark.

Each extractor shall be suitably packed as agreed to between the purchaser and the manufacturer.



Examples of solar wax extractors

Draft for comment

African Standard

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