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EAST AFRICAN STANDARD

Fresh dewberries and blackberries — Specification and grading



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

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

United States Standards for Grades of Dewberries and Blackberries, Effective February 13, 1928
(Reprinted — January 1997)

CODEX STAN 193:1995 (Rev.5:2009), *General Standard for Contaminants and Toxins in Foods*

CODEX STAN 228:2001 (Rev.1:2004), *General methods of analysis for contaminants*

Codex Alimentarius website: http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_q-e.jsp

USDA Foreign Agricultural Service website: <http://www.mrlatabase.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

European Union: http://ec.europa.eu/sanco_pesticides/public

Assistance derived from these sources and others inadvertently not mentioned is hereby acknowledged.

This standard has been developed to take into account:

- the needs of the market for the product;
- the need to facilitate fair domestic, regional and international trade and prevent technical barriers to trade by establishing a common trading language for buyers and sellers.
- the structure of the CODEX, UNECE, USA, ISO and other internationally significant standards;
- the needs of the producers in gaining knowledge of market standards, conformity assessment, commercial cultivars and crop production process;
- the need to transport the product in a manner that ensures keeping of quality until it reaches the consumer;
- the need for the plant protection authority to certify, through a simplified form, that the product is fit for crossborder and international trade without carrying plant disease vectors;
- the need to promote good agricultural practices that will enhance wider market access, involvement of small-scale traders and hence making fruit and vegetable production a viable means of wealth creation; and
- the need to keep unsatisfactory produce from the market by allowing the removal of unsatisfactory produce from the markets and to discourage unfair trade practices e.g. trying to sell immature produce at the beginning of the season when high profits can be made. Immature produce leads to dissatisfaction of customers and influences their choices negatively, which disadvantages those traders who have waited until the produce is mature.

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

Fresh dewberries and blackberries — Specification and grading

1 Scope

This standard applies to dewberries grown from *Rubus* sect. *Eubatus* and blackberries of varieties (cultivars) grown from the genus *Rubus* in the rose family *Rosaceae* and their hybrids, to be supplied fresh to the consumer, dewberries and blackberries for industrial processing being excluded.

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/GL 21, *Principles for the Establishment and Application of Microbiological Criteria for Foods*

CAC/RCP 1, *Recommended International Code of Practice — General Principles of Food Hygiene*

CAC/RCP 44, *Recommended International Code of Practice for the Packaging and Transport of Tropical Fresh Fruit and Vegetables*

CAC/RCP 53, *Code of Hygienic Practice for Fresh Fruits and Vegetables*

EAS 38, *Labelling of prepackaged foods — Specification*

CD/K/378:2010, *Horticultural industry — Code of practice*

3 Definitions

For the purpose of this standard the following definition shall apply:

3.1

well colored

the whole surface of the berry shall be a blue or black color

3.2

well developed

the berries shall not be misshapen owing to anthracnose injury, frost injury, lack of pollination, insect injury, or other causes

3.3

overripe

dead ripe or soft, necessitating immediate consumption

3.4

damage

any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the berry

3.5

serious damage

any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the berry. Berries which are badly deformed, crushed, leaky, moldy, decayed, or which have less than one-half of the surface covered with a blue or black color shall be considered as seriously damaged.

4 Provisions regarding quality

4.1 General

The purpose of the standard is to define the quality requirements of dewberries and blackberries at the market control stage after preparation and packaging.

4.2 Minimum requirements

4.2.1 In all classes, subject to the special provisions for each class and the tolerances allowed, dewberries and blackberries must be:

- (a) intact
- (b) sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- (c) clean, practically free of any visible foreign matter, and unwashed
- (d) fresh in appearance
- (e) practically free from pests
- (f) practically free from damage caused by pests
- (g) free of hard (undeveloped) berries
- (h) free of abnormal external moisture
- (i) free of any foreign smell and/or taste.

Dewberries and blackberries must have been carefully picked.

4.2.2 The condition and degree of ripeness of dewberries and blackberries must be such as to enable them:

- (a) to withstand transport and handling, and
- (b) to arrive in satisfactory condition at the place of destination.

4.3 Minimum maturity requirements

Dewberries and blackberries must be sufficiently developed and display satisfactory ripeness.

4.4 Classification

Dewberries and blackberries are classified in three classes defined below:

4.4.1 Class I

Dewberries and blackberries in this class must be of good quality. They must be characteristic of the variety or commercial type. They must be practically covered with a waxy bloom and practically free of agglomerated berries.

This class consists of dewberries or blackberries of one variety which are firm, well colored, well developed and not overripe, which are free from caps (calyxes), mold and decay, and from damage caused by dirt or other foreign matter, shriveling, moisture, disease, insects, mechanical or other means.

The following slight defects, however, may be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defect in colouring
- slight defect in development
- slightly less turgid.

4.4.2 Class II

Class II consists of dewberries or blackberries of one variety which fail to meet the requirements of the Class I but which do not contain more than 10 percent, by volume, of berries in any lot which are seriously damaged by any cause, including therein not more than 2 percent for berries which are affected by mold or decay.

The following defects may be allowed provided the dewberries and blackberries retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in colouring
- defects in development
- less turgid
- slight leakage of juice, but practically free of squashed berries.

4.4.3 Unclassified

"Unclassified" consists of dewberries or blackberries which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of this standard but is provided as a designation to show that no grade has been applied to the lot.

5 Provisions concerning sizing

Sizing is not compulsory.

6 Provisions concerning tolerances

Tolerances in respect of quality shall be allowed in each package for produce not satisfying the requirements of the class indicated.

6.1 Quality tolerances

6.1.1 Class I

In order to allow for variations incident to proper grading and handling, not more than 10 percent, by volume, of the berries in any lot may fail to meet the requirements of this grade, including therein not more than 5 percent for defects causing serious damage, and including in this latter amount not more than 1 percent for berries which are affected by mold or decay.

6.1.2 Class II

10 per cent by weight of dewberries or blackberries satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption. Within the tolerance unripe, over-ripe, or damaged berries¹ are allowed.

¹ Berries with slight laceration of the skin which does neither impair the edibility of the produce nor affect its resistance to transport, are not regarded as damaged.

7 Provisions concerning presentation

7.1 Uniformity

The contents of each package must be uniform and contain only bilberries or blueberries of the same origin and quality.

In Class I, the contents of each package must be practically uniform as regards degree of ripeness.

The visible part of the contents of the package must be representative of the entire contents.

7.2 Packaging

Dewberries and blackberries must be packed in such a way as to protect the produce properly.

The materials used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed provided the printing and labelling has been done with non-toxic ink or glue.

Packages must be apart from the quality tolerances for each class free of leaves, stalks or other foreign matter.

7.3 Presentation

Dewberries and blackberries may be presented:

- in small packages
- in small open baskets
- in trays.

8 Labelling or marking

8.1 Consumer packages

In addition to the requirements of EAS 38, the following specific provisions apply:

8.1.1 Nature of produce

“Dewberries” or “Blackberries”, where appropriate.

8.2 Non-retail containers

Each package² must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

8.2.1 Identification

The exporter, packer and/or dispatcher shall be identified by name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority.³

² Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to the national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units.

³ The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

8.2.2 Nature of produce

"Dewberries" or "Blackberries", where appropriate.

8.2.3 Origin of produce

Country of origin and optionally, district where grown, or national, regional or local place name.

8.2.4 Commercial specifications

- Class
- Net weight (optional).

8.2.5 Official control mark (optional)

9 Contaminants

9.1 Heavy metals

Dewberries or blackberries shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for this commodity. The current limits are as indicated below:

Metal	Unit of measurement	Maximum limit	Test method
Lead (Pb)	mg/kg wet weight	0.20	ISO 6633 (AAS)
Cadmium (Cd)	mg/kg wet weight	0.050	ISO 6561-1 or 6561-2

9.2 Pesticide residues

Dewberries or blackberries shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity. The limits listed below were current as of the dates indicated. The table below provides current MRLs while Annex E provides current MRLs for the USA, EU and Codex markets.

Maximum pesticide residue limits and extraneous maximum residue limits in dewberries (current as at 2009-06-09)

Type	Unit symbol	Limit	Method of test	Notes
Blackberries				
DIAZINON	mg/kg	0.1		
FENHEXAMID	undef	15		
FLUDIOXONIL	undef	5		Interim MRL (2005-2009)
IPRODIONE	mg/kg	30		
PERMETHRIN	mg/kg	1		
TOLYLFLUANID	mg/kg	5		
VINCLOZOLIN	mg/kg	5		
Boysenberry				
DIAZINON	mg/kg	0.1		
Dewberries (including boysenberry and loganberry)				
FENHEXAMID	undef	15		
FLUDIOXONIL	undef	5		
PERMETHRIN	mg/kg	1		
VINCLOZOLIN	mg/kg	5		

10 Hygiene

10.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of CAC/RCP 1, CAC/RCP 53, and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

10.2 The produce should comply with any microbiological criteria established in accordance with CAC/GL 21.



Fresh blackberries

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Annex D
(informative)

Blackberries and dewberries— Fact sheets

D.1 *Rubus fruticosus*



Authority	L.
Family	Magnoliopsida:Rosidae:Rosales:Rosaceae
Synonyms	
Common names	blackberry, scaldberry, bramble, ronce commune, brombeere, brombær, silva das amoras, amora silvestre, amora de silva, sarca
Editor	
Ecocrop code	9359

D.2 *Rubus idaeus* ssp. *idaeus*



Authority	L.
Family	Magnoliopsida:Rosidae:Rosales:Rosaceae
Synonyms	<i>Rubus idaeus</i> ssp. <i>idaeus</i> L., <i>Rubus idaeus</i> ssp. <i>vulgatus</i> Arrhen., 1839
Common names	European raspberry, red garden raspberry, red raspberry, hindberry, rasberry, raspberry, hindbær, frambuesa, framboise, framboeza, sarca-ideia, Himbeere, Rubi idaei folium
Editor	
Ecocrop code	1877

D.3 *Rubus occidentalis*



Authority	L.
Family	Magnoliopsida:Rosidae:Rosales:Rosaceae
Synonyms	
Common names	black raspberry, blackcap raspberry, framboise noire, frambuesa negra, framboeza preta
Editor	
Ecocrop code	9373

Notes

Description

Deciduous shrub forming arching canes which may reach 1.2-2 m high, often forming tangles. The fruit is a juicy, black, multiple of drupes, 12-15 mm in diameter. When picked they separate from the fleshy core forming a hollow shell. Stems rooting at the tips.

Uses

The fruits are eaten raw or made into jams and jellies. The Kiowa and Apache indians made a tea from the roots of *Rubus* species to treat stomach ache. Blackberry root tea was also part of the traditional pharmacopea for treatment of hemorrhaging and hemophilia. In the south, blackberry tea was mixed with whiskey to expel gas. The juice of raspberry fruits was used to flavour medicines.

Growing period

Perennial, fruiting for 5-10 years.

Common names

Black raspberry.

Further information

Black raspberry is native of North America where it can be found wild in thickets, at roadsides and in open woodlands.

D.4 *Rubus occidentalis x idaeus*

Authority	
Family	Magnoliopsida:Rosidae:Rosales:Rosaceae
Synonyms	
Common names	
Editor	
Ecocrop code	9374

Notes**Sources**

Sims D (pers. comm.)

Roecklein J 1987 pp 234 [USE]

Duke J 1975 pp 26 [PH, RAIN, TEMP]

Growing period

Perennial shrub

Common names

Purple raspberry.

D.5 *Rubus* sp.

Authority	
Family	Magnoliopsida:Rosidae:Rosales:Rosaceae
Synonyms	
Common names	dewberry
Editor	
Ecocrop code	1881

Notes

Sources

Roecklein J 1987 pp 212 [USE]

Duke J 1975 pp 26 [PH, RAIN, TEMP]

Growing period

Perennial herb

Common names

Dewberry.

D.6 Dewberry

Dewberries (*Rubus* sect. *Eubatus*) are a group of species closely related to the blackberries. They are small brambles with berries reminiscent of the raspberry, but are usually purple to black instead of red.

Mayes dewberry, *Rubus almus*
Aberdeen dewberry, *Rubus depavitus*
European dewberry, *Rubus caesius*
Northern dewberry, *Rubus flagellaris*
Southern dewberry, *Rubus enslenii*
Swamp dewberry, *Rubus hispidus*
Upland dewberry, *Rubus invisus*
Pacific blackberry, *Rubus ursinus*

The leaves of dewberries can be used for a tea, and the berries are sweet and edible. They can be eaten raw, or used to make cobbler or jam.

The plants start to grow white flowers that develop into small green berries. The tiny green berries grow red and then a deep purple-blue as they ripen. When the berries are ripe, they are tender and difficult to pick in any quantity without squashing them. The plants do not have upright canes like some other *Rubus* species, but have stems that trail along the ground, putting forth new roots along the length of the stem. The stems are covered with fine spines or stickers. The berries are sweet and for many, are worth the scratches and stains that come from picking them.

The leaves are sometimes eaten by the larvae of some *Lepidoptera* species including Peach Blossom.

The European dewberry, *Rubus caesius*, grows more upright like other brambles but is frequently restricted to coastal communities especially sand dune systems. Its fruits are a deep, almost black, purple and are coated with a thin layer or 'dew' of waxy droplets. Thus, they appear sky-blue (*caesius* is Latin for pale blue). It is less sought after, because its fruits are small and retain a markedly tart taste even when fully ripe.

