



THAI AGRICULTURAL STANDARD

TAS 3002-2013

GINGER

**National Bureau of Agricultural Commodity and Food Standards
Ministry of Agriculture and Cooperatives**

ICS 67.080.20

ISBN 978-974-403-988-0

Unofficial Translation



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**National Bureau of Agricultural Commodity and Food Standards
Ministry of Agriculture and Cooperatives**

50 Phaholyothin Road, Chatuchak, Bangkok 10900

Telephone (662) 561 3384 Facsimile (662) 561 3357

www.acfs.go.th

Published in the Royal Gazette, Announcement and General Publication

Vol. 130, Special Section 85๓ (Ngo)

Dated 15 July B.E. 2556 (2013)

**Technical Committee on the Elaboration of the Thai Agricultural Standard
for Ginger**

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|-----|--|----------------------|
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| 13. | Ms. Somrudee Rudeechoensakun
Office of Standard Development
National Bureau of Agricultural Commodity and Food
Standards | Member and Secretary |

Ginger is an agricultural commodity which Thailand has the production potential. The establishment of ginger standard is essential for promoting and developing its quality and safety as well as enhancing trust and recognition in both domestic and international markets. The Agricultural Standards Committee, therefore, deems its necessary to establish the Thai Agricultural Standard for Ginger.

This standard is based on the following document(s):CODEX STAN 218-1999. Codex Standard for Ginger. Joint FAO/WHO Food Standards Programme, FAO, Rome.



**NOTIFICATION OF MINISTRY OF AGRICULTURE AND COOPERATIVES
ON THE ESTABLISHMENT OF THAI AGRICULTURAL STANDARD:
GINGER
UNDER THE AGRICULTURAL STANDARDS ACT, B.E. 2551 (2008)**

Whereas the Agricultural Standards Committee, by the decision of the second session dated 2 May B.E. 2556 (2013), deems it necessary to establish an agricultural standard for ginger as a voluntary standard in accordance with the Agricultural Standards Act B.E. 2551 (2008) to promote such agricultural commodity to meet its standard on quality and safety.

By virtue of Sections 5, 15 and 16 of the Agricultural Standards Act B.E. 2551 (2008), the Minister of Agriculture and Cooperatives hereby issues this Notification on the Establishment of the Agricultural Standard: Ginger (TAS 3002-2013), as a voluntary standard, details of which are attached herewith.

Notified on 4 June B.E.2556 (2013)

(Mr. Yukol Limlamthong)

Minister of Agriculture and Cooperatives

THAI AGRICULTURAL STANDARD

GINGER

1. SCOPE

- 1.1 This standard applies to the rhizome of commercial varieties of ginger grown from *Zingiber officinale* Roscoe of the Zingiberaceae family to be supplied fresh to the consumer.
- 1.2 This standard does not apply to ginger for industrial processing.

2. DEFINITIONS

For the purpose of this standard:

- 2.1 **Immature ginger or “Khing Dok Daeng”** means rhizome of the harvested ginger at the age between 7-9 months after planting (Figure A.1).
- 2.2 **Mature ginger** means rhizome of the harvested ginger at the age between 10-12 months after planting (Figure A.1).
- 2.3 **Rhizome** means the underground stem of ginger.
- 2.4 **Pest** means living organism such as plant disease, insect, animal, and weed that is injurious to crop.
- 2.5 **Defect** means healed scar, natural crack on the skin or abrasion but does not include those caused by cutting.

3. CATEGORIES

In this standard, ginger is classified into two types according to the harvesting age, as follows:

- 3.1 Immature ginger.
- 3.2 Mature ginger.

4. QUALITY

- 4.1 Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, ginger shall be as follows:

- (1) whole rhizome;
- (2) fresh;
- (3) clean and practically free of any visible foreign matter;
- (4) free of deterioration and rotting making it unfit for consumption;
- (5) skin and cut surface shall be dry;
- (6) abrasions shall be dry;
- (7) practically free of pests affecting the general appearance of ginger;
- (8) practically free of damage caused by pests affecting flesh quality;
- (9) free of abnormal external moisture at skin of ginger, excluding condensation following removal from cold storage;
- (10) free of any foreign smell and/or taste.

4.2 Classification

In this standard, ginger is classified into three classes as follows:

4.2.1 Extra Class

Ginger in this class shall be of superior quality. It shall be characteristic of the type (Section 3). The rhizome shape shall be plump (Figure A.2 (a)) and may have slight defects on the skin (Figure A.3), provided that they are healed and fully dry. The size of the overall defects on the surface shall not exceed 5% of the total surface per rhizome.

The defects shall not affect the general appearance, the flesh quality, the keeping quality and presentation in the package.

4.2.2 Class I

Ginger in this class shall be of good quality shall be characteristic of the type (Section 3) and may have slight defects on the skin (Figure A.3), provided that they are healed and fully dry. The size of the overall defects on the surface shall not exceed 10% of the total surface per rhizome

The defects shall not affect the general appearance, the flesh quality, the keeping quality and presentation in the package.

4.2.3 Class II

Ginger in this class includes ginger which does not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 4.1. The following defects may be allowed:

- (1) Skin defects (Figure A.3) are healed and fully dry. The size of the overall defects on the surface shall not exceed 25% of the total surface per rhizome.

- (2) Early signs of sprouting less than 10% by weight per package.
- (3) The natural cracks or cut surface provided that they are fully dry.

The defects shall not affect the general appearance, the flesh quality, the keeping quality and presentation in the package.

5. SIZING

Size is determined by the weight per rhizome as shown in Table 1.

Table 1: Size of ginger

Size code	Weight per rhizome (g)
1	≥ 250
2	150 to < 250
3	50 to < 150

Note: The classification of quality and size code according to this standard may be combined to stipulate trade classification. Trading partners may name the trade classification differently depending on their requirements or seasonal limitations.

6. TOLERANCES

The following tolerances in respect of quality and size shall be allowed in each package for ginger not satisfying the requirements of the class indicated:

6.1 Quality tolerances

6.1.1 Extra Class

Five percent by number or weight of ginger not satisfying the requirements of Extra Class (Section 4.2.1), but meeting those of Class I (Section 4.2.2) or, exceptionally, coming within the tolerances of Class I (Section 6.1.2).

6.1.2 Class I

Ten percent by number or weight of ginger not satisfying the requirements of Class I (Section 4.2.2), but meeting those of Class II (Section 4.2.3) or, exceptionally, coming within the tolerances of Class II (Section 6.1.3).

6.1.3 Class II

Ten percent by number or weight of ginger satisfying neither the requirements of Class II (Section 4.2.3) nor the minimum requirements (Section 4.1), with the exception of produce affected by rotting, showing deterioration or other characteristic rendering it unfit for consumption

6.2 Size tolerances

For “Extra Class” 5% and for “Class I and Class II” 10% by number or weight of ginger corresponding to the size code immediately above and/or below is allowed.

7. PACKAGING

7.1 The container shall be of good quality, hygienic, free of smell and foreign material. The container shall withstand transportation and be able to protect ginger quality until it reaches the place of destination. The materials used inside the container shall be clean, of good quality and able to protect ginger from damage affecting the quality. The use of materials, particularly paper or stamps bearing trade specification is allowed, provided that printing or labeling shall be done with non-toxic ink or glue.

7.2 The contents of each package shall be uniform and contain only ginger of the same source, type, quality and size. The visible part of the content of the package shall represent the entire contents.

8. LABELING AND MARKING

8.1 Consumer packages

The information shall appear on the package that is legible, clear, and indelible without false or deception as follows:

(1) Name of the produce

To be labeled as “fresh ginger”

(2) Class

(3) Size code

(4) Net weight

(5) Information of producer and/or distributor

Indicate the name and address of producer or re-packer or distributor. Alternatively, name and address of the head office of producer or re-packer may be given. For imported ginger, importer's name and address shall be indicated.

(6) Origin of produce

Indicate country of origin, except for domestic market.

(7) Language

Label of ginger for domestic market shall be in Thai, however, foreign language may also be added. In case of export, it can be labeled in foreign language.

8.2 Non-retail containers

The information shall be shown in the accompanied documents of the shipment, on the label, or on the container that is legible and indelible without false or deception as follows:

(1) Name of produce

To be labeled as “fresh ginger”

(2) Class

(3) Size code

(4) Net weight

(5) Information of producer and/or distributor

Indicate the name and address of producer or re-packer or distributor. Alternatively, name and address of head office of producer or re-packer may be given. For imported ginger, the importer’s name and address shall be indicated.

(6) Origin of produce

Indicate country of origin, except for domestic market.

(7) Language

Label of ginger for domestic market shall be in Thai, however, foreign language may also be added. In case of export, it can be labeled in foreign language.

8.3 Certification mark

The use of certification mark shall comply with the Ministerial Regulation of B.E. 2553 (2010) on Provisions Concerning Characteristics of Mark, Application and Display, and the relevant Notifications of National Bureau of Agricultural Commodity and Food Standards under the Agricultural Standards Act, B.E. 2551 (2008) and its amendments.

9. CONTAMINANTS

The contaminants in ginger shall comply with maximum levels established by relevant laws and regulations.

10. PESTICIDE RESIDUES

The pesticide residues in ginger shall comply with maximum residue limits established by relevant laws and regulations and the requirements under the Thai Agricultural Standards on Pesticide Residues: Maximum Residue Limits (TAS 9002) and Pesticide Residues: Extraneous Maximum Residue Limits (TAS 9003).

11. HYGIENE

Ginger shall be hygienically harvested including practices on storing, packing and transporting in order to prevent contamination that may be harmful to the consumer.

12. METHODS OF ANALYSIS AND SAMPLING

12.1 Analytical methods

Analytical methods are shown in Table 2:

Table 2: Analytical methods

Criteria	Analytical methods	Principles
1. Quality: minimum requirements (Section 4.1)	Visual inspection	–
2. Defects on the skin (Section 4.2)	Visual inspection	–
3. Sizing (Section 5)	Weighing	Gravimetry

12.2 Sampling methods

Sampling methods shall be in accordance with the relevant laws, and provisions of the Agricultural Standard on the method of sampling.

APPENDIX A

Example photos of ginger



(a) Immature ginger



(b) Mature ginger

Figures A.1 Examples of ginger types



(a) Plump ginger



(b) Thin ginger

Figures A.2 Examples of ginger shapes



(a) Ginger with natural crack



(b) Ginger with abrasion

Figures A.3 Examples of skin defects



(a) Ginger damaged by mealy bug



(b) Ginger damaged by scales



(c) Ginger infected by bacteria
(Khing Nam Nom)



(d) Ginger infected by bacteria
(Khing Sai Suem)

Figures A.4 Examples of defects not satisfying minimum requirements



(e) Ginger infected by bacteria
(Khing Sai Dang)



(f) Ginger damaged by insects



(g) green rhizome caused by above ground
exposure (Khing Hua Khiaw)



(h) pitted rhizome caused by above ground
exposure (Khing Hua Bo)



(i) galled ginger damaged by nematodes
(Khing Khi Thut)



(j) Withered ginger

Figures A.4 Examples of defects not satisfying minimum requirements
(continued)