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EAST AFRICAN STANDARD

Canned pineapples — 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

This second edition of this standard supersedes and cancels EAS 50:2000, *Canned pineapples — Specification.*

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

CODEX STAN 042:1981, *Standard for Canned Pineapple*

United States Standards for Grades of Canned Pineapple, Effective March 1, 1990

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

CODEX STAN 230:2001 (Rev.1:2003), *Maximum levels for lead*

CODEX STAN 193:1995 (Rev.3:2007), *General Standard for Contaminants and Toxins in Foods*

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

USDA Foreign Agricultural Service website: http://www.mrldatabase.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 gain market access locally, regionally and internationally;

— the structure of the CODEX, UNECE, USA, ISO and other internationally recognized standards;

— the needs of the producers in gaining knowledge of market standards and conformity assessment; and

— the need to promote good manufacturing practices that will enhance wider market access, involvement of small-scale traders and hence making production of fruit and vegetable products a viable means of wealth creation.

Contents

Canned pineapple — Specification

1 Scope

This Standard applies to canned pineapples grown from *Ananas comosus* (L.) Merr., of the *Bromeliaceae* family.

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

EAS 38, *Labelling of prepackaged foods — Specification*

CD/K/370:2010 [CAC/GL 21], *Principles for the establishment and application of microbiological criteria for foods*

CD/K/371:2010 [CAC/GL 30], *Principles and guidelines for the conduct of microbiological risk*

CD/K/344:2010 [CODEX STAN 234], *Recommended methods of analysis and sampling*

CD/K/372:2010 [CAC/GL 33], *Sampling for pesticide residues for the determination of compliance with MRLs — Recommended methods*

CD/K/375:2010 [CAC/GL 50], *General guidelines on sampling*

3 Description

3.1 Product definition

Canned pineapple is the product (a) prepared from fresh, frozen, or previously canned, mature pineapple, conforming to the characteristics of *Ananas comosus* (L) Merr. (*Ananas sativus* (L) Lindl.) and from which peel and core have been removed, (b) packed with water or other suitable liquid medium; it may be packed with nutritive sweeteners, as specified in 4.1.1.1.3, seasonings, or other ingredients appropriate to the product; and (c) processed by heat in an appropriate manner before of after being sealed in a container, so as to prevent spoilage.

3.2 Varietal type

Any commercially cultivated variety suitable for canning may be used.

3.3 Styles

Canned pineapple may be packed in the following styles:

3.3.1 Whole: consists of whole fruit peeled and cored into reasonably symmetrical pineapple cylinders with both ends cut perpendicular to the cylinder axis.

3.3.2 Slices or spiral slices or whole slice or rings: uniformly cut circular slices or rings cut across the axis of the peeled, cored pineapple cylinders.

3.3.3 Half slices: consist of uniformly cut, approximately semi-circular halves of slices.

3.3.4 Quarter Slices: uniformly cut, one-fourth portions of slices.

3.3.5 Broken slices: consist of arc-shaped portions which are not required to be uniform in size and/or shape.

3.3.6 Spears or fingers: long, slender pieces cut radially and lengthwise or the cored pineapple cylinder, predominantly 65 mm or longer.

3.3.7 Tidbits: reasonably uniform, wedge-shaped sectors cut from slices or portions thereof, predominantly from 8 mm to 13 mm thick.

3.3.8 Chunks: short, thick pieces cut from thick slices and/or from peeled cored pineapple and predominantly more than 12 mm in both thickness and width, and less than 38 mm in length.

3.3.9 Diced or cubes: reasonably uniform, cube-shaped pieces, predominantly 14 mm or less in the longest edge dimensions.

3.3.10 Pieces: irregular shapes and sizes not identifiable as a specific style and does not include "chunks" or "chips" styles.

3.3.11 Chips: small, irregular shapes and sizes of pineapple pieces similar to that left over after dicing of pineapple and which may be included in crushed style.

3.3.12 Crushed or crisp cut: finely cut or shredded or grated or diced pieces of pineapple and which may include chips in the crushed mass.

3.4 Other styles

Any other presentation of the product shall be permitted provided that the product:

(a) is sufficiently distinctive from other forms of presentation laid down in this standard;

(b) meets all relevant requirements of this standard, including requirements relating to limitations on defects, drained weight, and any other requirements in this standard which are applicable to that style in the standard which most closely resembles the style or styles intended to be provided for under this provision;

(c) is adequately described on the label to avoid confusing or misleading the consumer.

3.5 Types of pack

Canned pineapple may be packed in the following types of pack:

3.5.1 Regular Pack: with a liquid packing medium.

3.5.2 Heavy Pack: "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 73% drained fruit weight.

3.5.3 Solid Pack: "Chips" or "Crushed" styles with or without sweetening ingredients and containing at least 78% drained fruit weight.

3.6 Definitions

In this East African Standard, unless otherwise required by the contest, the following terms shall be construed, respectively, to mean:

3.6.1
acid
the grams of anhydrous citric acid in 100 ml of the liquid drained from the product 15 days or more after the pineapple is canned, or the blended homogenized slurry of the comminuted entire contents of the container when measured less than 15 days after canning

3.6.2
blemish
surface areas and spots which contrast strongly in color or texture with the normal pineapple tissue, and are in excess of 2 mm (0.08 in) in the longest dimension of the exposed surface of the unit. Blemished include deep fruit eyes, fragments of shell, brown spots, bruised portions and other abnormalities that are possible to detect in good commercial practice before sealing in the containers. In crushed pineapple the term applies to each fragment of crushed pineapple that bears a blemish. **Serious blemish** means that the blemish seriously affects the appearance or edibility of the unit.

3.6.3
Brix measurement
the total soluble solids content of the product corresponding to a pure sucrose solution of the same specific gravity. It is measured 15 days or more after canning (natural equalization) or less than 15 days after canning on the blended homogenized slurry of the comminuted entire contents of the container (simulated equalization).

3.6.4
broken unit
the whole slice is severed from the core hole to the outer circumference

3.6.5
character
degree of ripeness and maturity, the texture of the fruit, and the degree of freedom from core material

(1) **Good character** (applies to all styles) means the units are of practically uniform ripeness, are reasonably firm with fruitlets appearing as a compact structure, are reasonably free from porosity and there is not more than 11 g of core material contained in one pound of drained fruit.

(2) **Reasonably good character** (applies to all styles) means the units are of reasonably uniform ripeness, the fruitlets are reasonably compact in structure, are fairly free from porosity, and there is not more than 31 g of core material contained in one pound of drained fruit.

(3) **Fairly good character** (applies only to half slices or broken slices styles) means the units are of fairly uniform ripeness, the fruitlets are fairly compact in structure, the units are fairly free from porosity, and there is not more than 31 g of core material contained in one pound of drained fruit.

(4) **Poor character** means product that fails to meet the requirements of reasonably good or fairly good character as applicable for the style.

3.6.6
chip
any unit in cubes style that is less than 8 mm in the greatest dimension

3.6.7
color
refers to the predominant varietal characteristic color of properly ripened and properly processed pineapple

(1) **Good color** (applies to all styles) means that the color of the canned pineapple units or mass is bright and is characteristic of properly ripened and properly processed pineapple of similar varieties; and that there may be slight variations in shades of such characteristic color in the

units within each unit or within the mass, and that white radiating streaks may be present: **Provided,** that such variations do not materially affect the appearance or edibility of the product.

(2) **Reasonably good color** (applies to all styles) means that the color of the canned pineapple units or mass may be no more than slightly dull but is characteristic of properly ripened and properly processed pineapple of similar varieties; and that there may be marked variations in shades of such characteristic color in the units, within each unit, or within the mass, and that white radiating streaks may be present: **Provided,** that such variations do not seriously affect the appearance or edibility of the product.

(3) **Fairly good color** (applies only to half slices or broken slices styles) means that the color of the canned pineapple units or mass may be dull, but is characteristic of properly ripened and properly processed pineapple of similar varieties; and, that there may be marked variations in shades of such characteristic color in the units, within each unit, or within the mass, and that white radiating streaks may be present which may seriously affect the appearance or edibility of the product.

(4) **Poor color** (applies to all styles) means product that fails to meet the requirements of **reasonably good color or fairly good color** as applicable for the style.

3.6.8
core material
the pineapple portion which is identified as definitely hard and characteristic of the center structure of pineapple, normally removed during processing

3.6.9
defect
degree of freedom, for the applicable style, from trimmed units, blemished units, mashed units and from any other defects, including specks, in crushed style, that cannot be weighed which detract from the appearance or edibility of the product

(1) **Practically free from defects** (applies to all styles) means that the canned pineapple is practically free from any defects including defects not specifically mentioned. **Practically free from defects** means, for the respective styles:

(i) **Whole:** Not more than 10 percent, by count, of the fruit units (cylinders) may be slightly trimmed, based on the average of all containers in the sample; not more than 10 percent by count of the fruit units (cylinders) may have an area greater than 7 percent of the total surface area which is mashed; however, a sample having less than 10 containers is permitted to have one slightly trimmed unit and one unit with more than 7 percent of the surface area mashed. Not more than 2 blemishes, including serious blemishes, per fruit unit (cylinder) is permitted.

(ii) **Slices:** Not more than an occasional unit may be insignificantly or slightly trimmed, and no slices may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished; or one unit in a container is permitted to be blemished, including seriously blemished if such unit exceeds the allowance of 5 percent, by count: **Provided,** that in all containers comprising the sample, such blemished including seriously blemished units, do not exceed an average of 5 percent of the total number of units. Not more than one unit in containers of less than 25 units, or more than three units in containers of 25 units or more, may be mashed.

(iii) **Tidbits:** Not more than 5 percent of the drained weight may consist of units that are excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished: **Provided,** that not more than 2.5 percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 150 units, or not more than 2 percent of the units in containers of 150 or more, may be mashed.

(iv) **Chunks:** Not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished: **Provided,** that not more than 2.5 percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 70 units, or not more than 5 percent of the units in containers of 70 units or more, may be mashed.

(v) **Cubes:** Not more than a total of 2 percent of the drained weight may be blemished and seriously blemished: **Provided,** that not more than 1 percent of the drained weight may be seriously blemished.

(vi) **Spears:** Not more than a reasonable amount of units may be insignificantly or slightly trimmed, but none may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished, or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 5 percent, by count: **Provided,** that in all containers comprising the sample, such blemished units and seriously blemished units do not exceed an average of 5 percent of the total number of units. Not more than one unit per container may be mashed.

(vii) **Crushed:** Not more than 0.5 percent of the drained weight may consist of fragments bearing blemished, including seriously blemished fragments. Defects also include dark specks that cannot be weighed, yet affect the appearance or edibility of the product.

(viii) **Half slices:** Not more than a reasonable amount of units may be insignificantly or slightly trimmed, but none may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished, or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 5 percent, by count: **Provided,** that in all containers comprising the sample, such blemished and seriously blemished units do not exceed an average of 5 percent of the total number of units. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(ix) **Broken slices:** Not more than 5 percent, by count, of the units may be excessively trimmed, not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished. Not more than 5 percent of the units, by count, of the units may be mashed.

(2) **Reasonably free from defects** (applies to all styles) means that the canned pineapple is reasonably free from any defects, including defects not specifically mentioned. **Reasonably free from defects** means, for the respective styles:

(i) **Whole:** Not more than 10 percent, by count, of the fruit units (cylinders) may be excessively trimmed, based on the average of all containers in the sample; not more than 10 percent, by count, of the fruit units (cylinders) may have an area greater than 10 percent of the total surface area which is mashed; however, a sample having less than 10 containers is permitted to have one excessively trimmed unit and one unit with more than 10 percent of the surface area mashed. Not more than 3 blemishes, including serious blemishes, per fruit unit (cylinder) is permitted.

(ii) **Slices:** Not more than a total of 20 percent, by count, of the units may be slightly and excessively trimmed: **Provided,** that not more than 7.5 percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units, one unit may be excessively trimmed; and in any container having more than 10 units, but not more than 27 units, two units may be excessively trimmed. Not more than a total of 12.5 percent, by count, of the units may be blemished and seriously blemished but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished or seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(iii) **Tidbits:** Not more than 15 percent of the drained weight may consist of units that are excessively trimmed. Not more than a total of 12.5 percent, by count, of the units may be blemished and seriously blemished: **Provided,** that not more than 6.25 percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 150 units, or not more than 2 percent of the units in containers of 150 units or more, may be mashed.

(iv) **Chunks:** Not more than a total of 12.5 percent, by count, may be blemished and seriously blemished: **Provided,** that not more than 6.25 percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 70 units, or not more than 5 percent of the units in containers of 70 units or more, may be mashed.

(v) **Cubes:** Not more than a total of 12.5 percent, by count, may be blemished and seriously blemished: **Provided,** that not more than 6.25 %, by count may be seriously blemished.

(vi) **Spears:** Not more than a total of 20 percent, by count, of the units may be insignificantly, slightly or excessively trimmed: **Provided,** that not more than a total of 15 percent, by count, of the units may be excessively trimmed. Not more than 12.5 percent, by count, of the units may be blemished and seriously blemished; but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished and seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit per container may be mashed.

(vii) **Crushed:** Not more than 1.25 percent of the drained weight may consist of blemished and seriously blemished fragments.

(viii) **Half slices:** Not more than a total of 20 percent, by count, of the units may be slightly and excessively trimmed: **Provided,** that not more than 7.5 percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units one unit may be excessively trimmed, and in any containers having more than 10 units but not more than 27 units, two units may be excessively trimmed. Not more than a total of 8 percent, by count, of the units may be blemished and seriously blemished; or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 8 percent, by count: **Provided,** that in all containers comprising the sample, such blemished and seriously blemished units do not exceed an average of 8 percent of the total number of units. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(ix) **Broken slices:** Not more than 10 percent, by count, of the units may be excessively trimmed. Not more than 8 percent, by count, of the units may be blemished or seriously blemished. Not more than 5 percent, by count, of the units may be mashed.

(3) **Fairly free from defects** (applies only to half slices or broken slices styles) means that the canned pineapple is **fairly free from defects**, including defects not specifically mentioned. Half slices or broken slices styles that fall into this classification, shall not be graded above U.S. Grade C, regardless of the total score for the product, and, in addition, has the following meanings with respect to the following styles of canned pineapple:

(i) **Half slices.** Not more than 7.5 percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units, one unit may be excessively trimmed; and in any container having more than 10 units, but not more than 27 units, two units may be excessively trimmed. Not more than 12.5 percent, by count, of the units may be blemished and seriously blemished; but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished and seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(ii) **Broken slices.** Not more than 15 percent, by count, of the units may be excessively trimmed. Not more than 12.5 percent, by count, of the units may be blemished or seriously blemished; but in any container having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than 5 percent, by count, of the units may be mashed.

(4) **Excessive defects** means canned pineapple which fails to meet either **reasonably free from defects** or **fairly free from defects** as applicable for the style. Product that falls into this classification shall not be graded above Substandard, regardless of the total score for the product.

3.6.10
eye
the blossom cup of the pineapple that is normally removed during processing (see blemish)

3.6.11
extraneous vegetable material (EVM)
any objectionable vegetable material regardless of size, from other than the pineapple fruit, which is harmless

3.6.12
flavor and odor
(1) **Good flavor and odor** means that the flavor and odor is normal for canned pineapple and is free from objectionable flavors and odors of any kind.

(2) **Fairly good flavor and odor** means that the flavor and odor may be lacking in good flavor and odor, but is free from objectionable flavors and odors of any kind.

3.6.13
mashed (in styles other than cube or crushed)
a unit that has lost its normal shape as evidenced by marks of mechanical injury. A unit that has lost its normal shape because of ripeness and which bears no mark of mechanical injury shall not be considered as mashed.

3.6.14
porosity
the degree of freedom from air spaces in the pineapple unit that gives a spongy texture

3.6.15
sample unit size
the amount of product specified to be used for grading

3.6.16
shell
all the outer layer of the fruit that is normally removed during processing (see blemish)

3.6.17
tartness
the taste sensation that is biting, sharp, and sour which is characteristic of the pineapple fruit
(1) **Excessively tart** means that more than 1.35 g of acid is present in 100 ml of the drained liquid.

(2) **Not excessively tart** means that not more than 1.35 g of acid is present in 100 ml of the drained liquid.

3.6.18
trim
the degree of impairment of the pineapple units from the paring, coring, cutting or trimming process

(1) **Insignificantly trimmed** means any trimming that is noticeable but of lesser degree than slightly trimmed.

(2) **Slightly trimmed** (applies only to whole, slices, or half slices styles) means that the portion trimmed away approximates 3 percent to not more than 5 percent of the apparent physical bulk of the perfectly formed unit and if such trimming materially affects the normal circular shape of the outer or inner edge of the unit.

(3) **Excessively trimmed in whole, slices, or half slices styles** means that the portion trimmed away exceeds 5 percent of the apparent physical bulk of the perfectly formed unit and if such trimming destroys the normal circular shape of the outer or inner edge of the unit. In broken slices, spears, or tidbits styles means that the normal shape of the unit is destroyed by trimming.

3.6.19
uniformity of size and shape is not scored for crushed style. The other three factors (color, defects, and character) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score for crushed style canned pineapple. For broken slices style, this quality factor may be scored no higher than 15 points. The four factors (color, uniformity of size and shape, defects, and character) are scored and the total is multiplied by 100 and divided by 95, dropping any fractions to determine the total score for broken slices.

(1) **Radial axis in whole, slices, and half slices styles,** means the measurement along the radius from the inside arc to the outside arc.

(2) **Length:**

(i) **in tidbits and chunks styles** means the measurement along the radius from the inside arc to the outside arc.

(ii) **in spears style** means the longitudinal measurement of the spear.

(3) **Practically uniform in size and shape** means for the following styles:

(i) **Whole.** The maximum radial axis of the cylinder does not exceed the minimum radial axis of the cylinder by more than 6 mm. The cylinder may be cracked but not broken into separate pieces.

(ii) **Slices.** The diameter of the largest slice does not exceed the diameter of the smallest slice by more than 2 mm. The thickest slice does not exceed the thinnest slice by more than 2 mm in thickness. The maximum radial axis of any slice does not exceed the minimum radial axis of the same slice by more than 3 mm. The drained weight of the largest slice is not more than 1.4 times the drained weight of the smallest slice.

(iii) **Tidbits.** Not more than 7.5 percent of the drained weight may consist of units each of which weighs less than threefourths as much as the average weight of all the untrimmed tidbits.

(iv) **Chunks.** None of the units may have a longest dimension (along any edge) greater than 38 mm. Not more than 10 percent of the drained weight consists of pieces weighing less than 5 g each.

(v) **Cubes.** Not more than a aggregate of 10 percent of the drained weight may consist of units of such size that they pass through the meshes of a sieve with 8 mm square openings, and pieces weighing more than 3 g each.

(vi) **Spears.** The units are of substantially equal length. Not more than 10 percent, by count, of the units or not more than one unit in a container of less than 10 units, may be less than 19 mm or more than 45 mm in the longest edge dimension other than the

longitudinal measurement of the spear. The drained weight of the largest spear is not more than 1.4 times the weight of the smallest spear.

(vii) **Half slices.** The diameter of the largest half slice does not exceed the diameter of the smallest half slice by more than 2 mm. The thickest half slice does not exceed the thinnest half slice by more than 2 mm. The drained weight of the largest half slice is not more than 1.75 times the drained weight of the smallest half slice (except for an occasional broken piece due to splitting or an occasional whole slice not quite completely cut through).

(4) **Reasonably uniform in size and shape** (applies to all styles except broken and crushed styles). Reasonably uniform in size and shape has the following meanings with respect to style:

(i) **Whole.** The maximum radial axis of the cylinder does not exceed the minimum radial axis of the cylinder by more than 10 mm. The cylinder may be cracked but not broken into separate pieces.

(ii) **Slices.** The diameter of the largest slice does not exceed the diameter of the smallest slice by more than 3 mm in thickness. The maximum radial axis of any slice does not exceed the minimum radial axis of the same slice by more than 6 mm. The drained weight of the largest slice is not more than 1.4 times the drained weight of the smallest slice.

(iii) **Tidbits.** Not more than 15 percent of the drained weight may consist of units each of which weighs less than three-fourths as much as the average weight of all the untrimmed tidbits.

(iv) **Chunks.** None of the units may have a longest dimension (along any edge) greater than 38 mm. Not more than 15 percent of the drained weight consists of pieces weighing less than 5 g each.

(v) **Cubes.** Not more than 10 percent of the drained weight may consist of units of such size that they pass through the meshes of a sieve with 8 mm square openings. Not more than 15 percent of the drained weight may consist of pieces weighing more than 3 g each.

(vi) **Spears.** The units are of reasonably uniform length. Not more than 20 percent, by count, of the units or not more than one unit in a container of less than 5 units, may be less than 19 mm or more than 45 mm in the longest edge dimension other than the longitudinal measurement of the spear. The drained weight of the largest spear is not more than 1.4 times the weight of the smallest spear.

(vii) **Half slices.** The diameter of the largest half slice does not exceed the diameter of the smallest half slice by more than 3 mm. The thickest half slice does not exceed the thinnest half slice by more than 3 mm in thickness. The drained weight of the largest half slice is not more than 1.75 times the drained weight of the smallest half slice (except for an occasional broken piece due to splitting or occasional whole slice not quite completely cut through).

(6) **Fairly uniform in size and shape** (applies only to the style of half slices) means that the units fail to meet the requirements of **reasonably uniform in size and shape**. The drained weight of the largest half slice is not more than 1.75 times the weight of the smallest half slice (except for an occasional broken piece due to splitting or an occasional whole slice not quite completely cut through).

(7) **Not uniform in size and shape** (applies only to broken slices style) means:

(i) Not more than 10 percent of the drained weight may consist of pieces having an arc of less than 90 degrees.

(ii) Not more than 5 percent of the drained weight may consist of pieces that measure in thickness less than 8 mm or more than 25 mm; or pieces that measure less than 19 mm in width as measured from the outer edge to the inner edge; and

(iii) Not more than 5 percent of the drained weight may consist of broken slices having an outside diameter differing by as much as 10 mm from those present in the greatest proportion by weight.

(8) **Poor uniformity of size and shape** (applies to all styles except crushed style) means canned pineapple which fails to meet in some respect; **reasonably uniform in size and shape, fairly uniform in size and shape,** or **not uniform in size and shape,** as applicable for the style. Products that falls into this classification, shall not be graded above Substandard, regardless of the total score for the product.

3.6.20
unit
one whole cylinder, slice, half slice, broken slice, spear, tidbit, chunk, cube or a specified weight of crushed pineapple

4 Essential composition and quality factors

4.1 Basic ingredients

Pineapple with or without liquid packing media or with dry nutritive sweeteners appropriate to the product and other optional ingredients as follows:

4.1.1 Packing media

4.1.1.1 Where a packing medium is used, it may consist of:

4.1.1.1.1 Water: in which water, or any mixture of water and pineapple juice, is the sole liquid packing medium;

4.1.1.1.2 Juice: in which natural pineapple juice, or clarified pineapple juice, is the sole liquid packing medium;

4.1.1.1.3 Dry nutritive sweetener: with one or more of the following nutritive sweeteners — sucrose, invert sugar, dextrose, dried glucose syrup — and without added liquid except such slight amounts of steam, water, or natural juice as occur in the normal canning of the product;

4.1.1.1.4 Syrup: in which water or juice is combined with one or more of the following nutritive sweeteners — sucrose, invert sugar, dextrose, dried glucose syrup, glucose syrup — and classified on the basis of cut-out strength as:

— Extra Light Syrup: not less than 10° Brix

— Light Syrup: not less than 14° Brix

— Heavy Syrup: not less than 18° Brix

— Extra Heavy Syrup: not less than 22° Brix

4.1.1.2 The cut-out strength of syrup shall be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below.

4.1.2 Other permitted ingredients

(i) Natural fruit flavors.

(ii) Mint flavor.

(iii) Spices, spice oils.

(iv) Vinegar or organic acids.

(v) Dimethylpolysiloxane in an amount not greater than 10 milligrams/kilogram (10 parts per million) by weight of the finished food as a defoaming agent.

4.2 Quality criteria

4.2.1 Definition of defects

4.2.1.1 Blemish — surface areas and spots which contrast strongly or colour or texture with the normal pineapple tissue or which may penetrate into the flesh. Such blemishes are normally removed in preparation of pineapple for culinary use and include deep fruit eyes, pieces of shell, brown spots, bruised portions and other abnormalities.

4.2.1.2 Broken — (considered a defect only in Sliced and Spear styles). A unit severed into definite parts; all of such portions that equal the size of a full-size unit are considered one defect in applying the allowances herein.

4.2.1.3 Excessive trim — (considered a defect only in the styles of Whole, Slices including Spiral Slices, Half Slices, Quarter Slices and Spears). A unit trimmed to the extent that its normal shape and conformation is destroyed and detracts from the appearance of such unit. Trim will be considered "excessive" if the portion trimmed away exceeds five percent of the apparent physical bulk of the perfectly formed unit and if such trimming destroys the normal circular shape of the outer or inner edge of the unit.

4.2.2 Flavour

Canned pineapple shall have a normal flavour and odour free from flavours or odours foreign to the product, and canned pineapple with special ingredients shall have a flavour characteristic of that imparted by the pineapple and the other substances used.

4.2.3 Colour

The colour of the product shall be normal for the varietal type. White radiating streaks may be present. Canned pineapple containing special ingredients shall be considered to be of characteristic colour when there is no abnormal discolouration for the respective ingredient used.

4.2.4 Texture

The canned pineapple shall have a reasonably good texture, the fruitlets shall be reasonably compact in structure, and the product shall be fairly free from porosity. The drained pineapple — of all styles — may contain no more than 7% by weight of "core material". In determining, the percentage of core material, the areas which consist of core material are trimmed from the pineapple unit and weighed against the drained fruit ingredient in the container.

4.2.5 Uniformity of Size and Shape

These requirements do not apply to canned pineapple in the styles of: Whole, Broken Slices, Pieces, Chips or Crushed.

4.2.5.1 Slices or Spiral Slices or Whole Slices or Rings — the weight of the largest slice in a container shall not be more than 1.4 times the weight of the smallest.

4.2.5.2 Half slices or quarter slices — the weight of the largest unit in a container shall be not more than 1.75 times the weight of the smallest, except for an occasional broken piece due to splitting or an occasional whole slice not completely cut through.

4.2.5.3 Spears or fingers — the weight of the largest unbroken unit in a container shall be not more than 1.4 times the weight of the smallest unbroken unit.

4.2.5.4 Tidbits — not more than 15% of the drained weight of pineapple in the container may consist of tidbits, each of which shall weigh less than three-fourths of the average weight of the untrimmed tidbits.

4.2.5.5 Chunks — not more than 15% of the drained weight of pineapple in the container may consist of pieces which weigh less than 5 grammes each.

4.2.5.6 Cubes or Diced

(a) not more than 10% of the drained weight of pineapple in the container may consist of units of such size that they will pass through a screen that has square openings of 8 mm;

(b) not more than 15% of the drained weight of pineapple in the container may consist of pieces which weight more than 3 grammes each.

4.2.6 Allowances for defects

Canned pineapple shall not contain excessive defects (whether or not specifically defined or as allowed in this standard). Certain common defects shall not be present in amounts greater than the following limitations:

Styles	Units with Excessive Trim	Blemishes or Blemished Units
Whole	10% by count of fruit units (cylinders)[1]	3 blemishes per fruit unit (cylinder)
Slices or Spiral Slices or Whole Slices;	1 unit if 10 or less per can;	1 unit if 5 or less per can;
Half Slices; Quarter Slices	2 units if over 10 but not over 27 per can; or 7.5% by count if over 27 per can	2 units if over 5 but not over 10 per can; 4 units if over 10 but not over 32 per can; or 12.5% by count if over 32 per can
Spears	15% by count of all units	Same as for Slices and Half Slices
Broken Slices; Tidbits; Chunks; Cubes; Pieces	Not applicable	12.5% by count of all units
Chips; Crushed	Not applicable	Not more than 1.5% by weight of the drained fruit

4.2.7 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements as set out in 4.2.2 through 4.2.6 (except units with excessive trim in "Whole" style which are based on sample average), shall be considered a "defective".

4.2.8 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in 4.2.7 when:

(a) for those requirements which are not based on averages — the number of "defectives", as defined in 4.2.7, does not exceed the acceptance number (*c*) of the appropriate sampling plan in Annex A.

(b) the requirement which is based on sample average is complied with.

[1] Based on average from all containers in the sample.

5 Food additives

		Maximum Level
5.1	**Flavours**	
5.1.1	Natural fruit essences	Limited by GMP
5.1.2	Mint flavour (mint oil)	Limited by GMP
5.2	**Acidifying agent**	
	Citric acid	Limited by GMP
5.3	**Anti-foaming agent**	
	Dimethylpolysiloxane	10 mg/kg

6 Contaminants

6.1 Metal contaminants

Lead (Pb)	1 mg/kg
Tin (Sn)	250 mg/kg, calculated as Sn

6.2 Pesticide residues

Canned pineapple shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity. 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 pineapples (current as at 2009-06-09)

Type	Unit symbol	Limit	Method of test	Notes
CARBENDAZIM	MRL (mg/kg)	5		
DIAZINON	MRL (mg/kg)	0.1		
DIMETHOMORPH	MRL (mg/kg) (*)	0.01		
DISULFOTON	MRL (mg/kg)	0.1		
ETHEPHON	MRL (mg/kg)	2		
HEPTACHLOR	EMRL (mg/kg)	0.01		
METHIDATHION	MRL (mg/kg)	0.05		
PROPICONAZOLE	MRL (undef)	0.02		
TRIADIMEFON	MRL (undef) Po	5		Based on triadimenol use only
TRIADIMENOL	MRL (undef) Po	5		Based on triadimenol use only

7 Hygiene

7.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of EAS 39, and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

7.2 To the extent possible in Good Manufacturing Practice, the product shall be free from objectionable matter.

7.3 When tested by appropriate methods of sampling and examination, the product:

— shall be free from microorganisms in amounts which may represent a hazard to health;

— shall be free from parasites which may represent a hazard to health; and

— shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

8 Weights and measures

8.1 Fill of container

8.1.1 Minimum fill

The container shall be well filled with fruit and the product (including packing medium) shall occupy not less than 90 % of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20 °C which the sealed container will hold when completely filled.

8.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill (90% container capacity) of 8.1.1 shall be considered a "defective".

8.1.3 Acceptance

A lot will be considered as meeting the requirement of 8.1.1 when the number of "defectives", as defined in 8.1.2, does not exceed the acceptance number (*c*) of the appropriate sampling plan in Annex A.

8.1.4 Minimum drained weight

8.1.4.1 The drained weight of the product shall be not less than the following percentages, calculated on the basis of the weight of distilled water at 20 °C which the sealed container will hold when completely filled:

(a) All styles other than Whole or Crushed or Chips styles - 58%

(b) Regular packs: Crushed or Chips styles - 63%

(c) Heavy pack: Crushed or Chips styles when designated as "Heavy Pack" - 73%

(d) Solid pack: Crushed or Chips styles when designated as "Solid Pack" - 78%

8.1.4.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

9 Labelling

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

9.1 The Name of the food

9.1.1 The name of the product shall be "pineapple".

9.1.2 The style, as appropriate, shall be declared:

"Whole"
"Slices" or "Spiral Slices" or "Whole Slices" or "Rings"
"Half Slices"

"Quarter Slices"
"Broken Slices"
"Spears" or "Fingers"
"Tidbits"
"Chunks"
"Diced" or "Cubes"
"Pieces"
"Chips"
"Crushed" or "Crisp Cut"

9.1.3 If the product is produced in accordance with the other styles provision (3.3), the label shall contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.

9.1.4 The packing medium shall be declared as part of the name or in close proximity to the name: "Water", "Juice", the name of the dry sweetener, "Extra Light Syrup" "Light Syrup", "Heavy Syrup" or "Extra Heavy Syrup", as appropriate.

9.1.5 As part of the name or in close proximity to the name, any seasoning which characterizes the product shall be declared, e.g. "With X", when appropriate.

9.1.6 When "Crushed" or "Crisp Cut" style is packed in natural pineapple juice (whether clarified or not), the following may be stated on the label in addition to the declaration of packing medium:

"Unsweetened" or "No sugar added"

9.1.7 When "Crushed" or "Crisp Cut" style is packed in pineapple juice and sugar, the packing medium may be declared as:

"Lightly Sweetened" in lieu of "Light Syrup"
"Heavily Sweetened" in lieu of "Heavy Syrup"
"Extra Heavily Sweetened" in lieu of "Extra Heavy Syrup".

9.1.8 The type of "Heavy Pack" or "Solid Pack" for "Crushed" or "Crisp Cut" or "Chips" styles may be stated on the label, if the pack complies with the appropriate requirements of 8.1.4.1.

9.1.9 The varietal type may be declared.

9.2 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion in accordance with EAS 38, except that dimethylpolysiloxane and water need not be declared.

10 Methods of analysis and sampling

10.1 Sampling

Sampling shall be carried out in accordance with Annex A.

10.2 Test of mineral impurities

According ISO 762:2003, *Fruit and vegetable products — Determination of mineral impurities content*

10.3 Determination of cadmium

According to the following standards:

— ISO 6561-1:2005, *Fruits, vegetables and derived products — Determination of cadmium content — Part 1: Method using graphite furnace atomic absorption spectrometry*

— ISO 6561-2:2005, *Fruits, vegetables and derived products — Determination of cadmium content — Part 2: Method using flame atomic absorption spectrometry*

10.4 Determination of ascorbic acid

According to the following standards:

— ISO 6557-1:1986, *Fruits, vegetables and derived products — Determination of ascorbic acid — Part 1: Reference method*

— EAS 41-12 [ISO 6557-2:1984], *Fruits, vegetables and derived products — Determination of ascorbic acid content — Part 2: Routine methods*

— ISO 6558-2:1992, *Fruits, vegetables and derived products — Determination of carotene content — Part 2: Routine methods*

10.5 Determination of formic acid

According to the following standards:

— ISO 6638-1:1985, *Fruit and vegetable products — Determination of formic acid content — Part 1: Gravimetric method*

— ISO 6638-2:1984, *Fruit and vegetable products — Determination of formic acid content — Part 2: Routine method*

10.6 Determination of benzoic acid

According to ISO 6560:1983, *Fruit and vegetable products — Determination of benzoic acid content (benzoic acid contents greater than 200 mg per litre or per kilogram) — Molecular absorption spectrometric method*

10.7 Determination of ethanol

According to ISO 2448:1998, *Fruit and vegetable products — Determination of ethanol content*.

10.8 Determination of added salt

According to ISO 3634:1979, *Vegetable products — Determination of chloride content*. The determination of sodium is not necessary. Results are expressed as % m/m NaCl.

10.9 Determination of soluble solids and sugars

According to the following standards:

— ISO 2172:1983, *Fruit juice — Determination of soluble solids content — Pycnometric method*

— EAS 41-10 [ISO 2173:2003], *Fruit and vegetable products — Determination of soluble solids — Refractometric method*

10.10 Determination of essential oils

According to ISO 1955:1982, *Citrus fruits and derived products — Determination of essential oils content (Reference method)*

10.11 Determination of total titrable acidity

According to EAS 41-2 [ISO 750:1998], *Fruit and vegetable products — Determination of titratable acidity*

10.12 Determination of volatile acidity

According to ISO 6632:1981, *Fruits, vegetables and derived products — Determination of volatile acidity*

10.13 Determination of insoluble content

According:

ISO 751:1998, *Fruit and vegetable products — Determination of water-insoluble solids*

ISO 763:2003, *Fruit and vegetable products — Determination of ash insoluble in hydrochloric acid*

10.14 Determination of arsenic

According to following standards:

— ISO 6634:1982, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*.

— ISO 17239:2004, *Fruits, vegetables and derived products — Determination of arsenic content — Method using hydride generation atomic absorption spectrometry*.

10.15 Determination of copper

According to ISO 7952:1994, *Fruits, vegetables and derived products — Determination of copper content — Method using flame atomic absorption spectrometry*. Results are expressed as mg copper/kg

10.16 Determination of iron

According to following standards:

— EAS 41-7 [ISO 5517:1978], *Fruits, vegetables and derived products -- Determination of iron content — 1,10- Phenanthroline photometric method*

— ISO 9526:1990, *Fruits, vegetables and derived products — Determination of iron content by flame atomic absorption spectrometry*. Results are expressed as mg iron/kg.

10.17 Determination of lead

According to ISO 6633:1984, *Fruits, vegetables and derived products — Determination of lead content — Flameless atomic absorption spectrometric method*. Results are expressed as mg lead/kg.

10.18 Determination of sulphur dioxide

According to EAS 41-11 [ISO 5523:1981], *Liquid fruit and vegetable products — Determination of sulphur dioxide content (Routine method)*. Results are expressed as mg SO_2/kg.

10.19 Determination of tin

According to EAS 41-6 [ISO 2447:1998], *Fruit and vegetable products — Determination of tin content*

10.20 Determination of zinc

According to the following standards:

— ISO 6636-1:1986, *Fruits, vegetables and derived products — Determination of zinc content — Part 1: Polarographic method*

— ISO 6636-2:1981, *Fruits, vegetables and derived products — Determination of zinc content — Part 2: Atomic absorption spectrometric method*

— ISO 6636-3:1983, *Fruit and vegetable products — Determination of zinc content — Part 3: Dithizone spectrometric method*

Annex A
(normative)

Sampling and compliance

A.1 Compliance means the following: Unless otherwise provided in a standard, a lot of canned fruits shall be deemed in compliance for the following factors, to be determined by the sampling and acceptance procedure as provided in A.2, namely:

A.1.1 Packing medium density

A lot shall be deemed to be in compliance for packing medium density based on the average sucrose value for all samples analyzed according to the sampling plans, but no container may have a sucrose value lower than that of the next lower category or 2 percent by weight sucrose (degrees Brix) lower if no lower category exists.

A.1.2 Quality

The quality of a lot shall be considered acceptable when the number of defectives does not exceed the acceptance number in the sampling plans.

A.1.3 Fill of container

A lot shall be deemed to be in compliance for fill of container (packing medium and fruit ingredient) when the number of defectives does not exceed the acceptance number (*c*) in the sampling plans.

A.1.4 Drained weight

A lot shall be deemed to be in compliance for drained weight based on the average value of all samples analyzed according to the sampling plans. The sample unit shall be the entire contents of the container.

A.2 The sampling and acceptance procedure means the following:

A.2.1 Definitions

(i) Lot
A collection of primary containers or units of the same size, type, and style manufactured or packed under similar conditions and handled as a single unit of trade.

(ii) Lot size
The number of primary containers or units in the lot.

(iii) Sample size
The total number of sample units drawn for examination from a lot.

(iv) Sample unit
A container, a portion of the contents of a container, or a composite mixture of product from small containers that is sufficient for the examination or testing as a single unit.

(v) Defective
Any sample unit shall be regarded as defective when the sample unit does not meet the criteria set forth in the standards.

(vi) Acceptance number (*c*)
The maximum number of defective sample units permitted in the sample in order to consider the lot as meeting the specified requirements.

(vii) Acceptable quality level (AQL)
The maximum percent of defective sample units permitted in a lot that will be accepted approximately 95 percent of the time.

A.2.2 Sampling plans

Lot size (primary containers)	Size in container	
	n[1]	c[2]
net weight equal to or less than 1 kg (2.2 lb)		
4,800 or less	13	2
4,801 to 24,000	21	3
24,001 to 48,000	29	4
48,001 to 84,000	48	6
84,001 to 144,000	84	9
144,001 to 240,000	126	13
Over 240,000	200	19
net weight greater than 1 kg (2.2 lb) but not more than 4.5 kg (10 lb)		
2,400 or less	13	2
2,401 to 15,000	21	3
15,001 to 24,000	29	4
24,001 to 42,000	48	6
42,001 to 72,000	84	9
72,001 to 120,000	126	13
Over 120,000	200	19
net weight greater than 4.5 kg (10 lb)		
600 or less	13	2
601 to 2,000	21	3
2,001 to 7,200	29	4
7,201 to 15,000	48	6
15,001 to 24,000	84	9
24,001 to 42,000	126	13
Over 42,000	200	19

[1] n = number of primary containers in sample.
[2] c = acceptance number.

Annex E
(informative)

Pineapple — Codex, EU and USA pesticide residue limits

Users are advised that international regulations and permissible Maximum Residue Levels (MRL) frequently change. Although this International MRL Database is updated frequently, the information in it may not be completely up-to-date or error free. Additionally, commodity nomenclature and residue definitions vary between countries, and country policies regarding deferral to international standards are not always transparent. This database is intended to be an initial reference source only, and users must verify any information obtained from it with knowledgeable parties in the market of interest prior to the sale or shipment of any products. The developers of this database are not liable for any damages, in whole or in part, caused by or arising in any way from user's use of the database.

Results Key

MRL values in *{Italics}* are more restrictive than US
--- indicates no MRL value is established.
Cod, EU, etc. indicates the source of the MRL and EXP means the market defers to the exporting market.
All numeric values listed are in parts per million (ppm), unless otherwise noted

	US	Cod	EU *1*
1-Naphthaleneacetic acid	0.05	---	0.05
	1. European Union does not maintain a specific MRL for the 1-Naphthaleneacetic acid/Pineapple combination, but does maintain an MRL of 0.05 PPM for its "Miscellaneous fruit" group.		
	US	**Cod**	**EU**
Ametryn	0.05	---	---
	US	**Cod**	**EU**
Bromacil	0.1	---	---
	US	**Cod**	**EU**
Carbaryl	2	---	*{0.05}*
	US	**Cod**	**EU**
Diazinon	0.5	*{0.1}*	*{0.3}*
	US	**Cod**	**EU *2***
Diuron	0.1	---	0.1
	2. European Union does not maintain a specific MRL for the Diuron/Pineapple combination, but does maintain an MRL of 0.1 PPM for its "Inedible peel, large" group.		
	US	**Cod**	**EU *3***
Endosulfan	1	---	*{0.05}*
	3. European Union does not maintain a specific MRL for the Endosulfan/Pineapple combination, but does maintain an MRL of 0.05 PPM for its "Miscellaneous fruit" group.		
	US	**Cod**	**EU *4***
EPTC	0.1	---	*{0.05}*
	4. European Union does not maintain a specific MRL for the EPTC/Pineapple combination, but does maintain an MRL of 0.05 PPM for its "Fruit Fresh or Frozen; Nuts" group.		
	US	**Cod**	**EU**
Ethephon	2	2	2
	US	**Cod**	**EU *5***
Ethoprop	0.02	---	0.02
	5. European Union does not maintain a specific MRL for the Ethoprop/Pineapple combination, but does maintain an MRL of 0.02 PPM for its "Fruit Fresh or Frozen; Nuts" group.		
	US	**Cod**	**EU**
Fosetyl-Al	0.1	---	50
	US	**Cod**	**EU *6***
Glyphosate	0.1	---	0.1
	6. European Union does not maintain a specific MRL for the Glyphosate/Pineapple combination, but does maintain an MRL of 0.1 PPM for its "Inedible peel, large" group.		
	US	**Cod**	**EU**

Hexazinone	0.6	---	---
	US	**Cod**	**EU**
Hydramethylnon	0.05	---	---
	US	**Cod *7***	**EU**
Inorganic bromide resulting from fumigation	20	20	50
	7. Codex does not maintain a specific MRL for the Inorganic bromide resulting from fumigation/Pineapple combination, but does maintain an MRL of 20 PPM for its "Fruits (except as otherwise listed)" group.		
	US	**Cod**	**EU *8***
Malathion	8	---	*{0.02}*
	8. European Union does not maintain a specific MRL for the Malathion/Pineapple combination, but does maintain an MRL of 0.02 PPM for its "Miscellaneous fruit" group.		
	US	**Cod**	**EU *9***
Metalaxyl	0.1	---	*{0.05}*
	9. European Union does not maintain a specific MRL for the Metalaxyl/Pineapple combination, but does maintain an MRL of 0.05 PPM for its "Miscellaneous fruit" group.		
	US	**Cod**	**EU**
O-phenylphenol	10	---	---
	US	**Cod**	**EU *10***
Oxamyl	1	---	*{0.01}*
	10. European Union does not maintain a specific MRL for the Oxamyl/Pineapple combination, but does maintain an MRL of 0.01 PPM for its "Miscellaneous fruit" group.		
	US	**Cod *11***	**EU *12***
Paraquat dichloride	0.05	*{0.01}*	*{0.02}*
	11. Codex does not maintain a specific MRL for the Paraquat dichloride/Pineapple combination, but does maintain an MRL of 0.01 PPM for its "Assorted tropical and sub-tropical fruits - inedible peel" group.		
	12. European Union does not maintain a specific MRL for the Paraquat dichloride/Pineapple combination, but does maintain an MRL of 0.02 PPM for its "Fruit Fresh or Frozen; Nuts" group.		
	US	**Cod**	**EU**
Piperonyl Butoxide	8	---	---
	US	**Cod**	**EU**
Propiconazole	4.5	*{0.02}*	*{0.05}*
	US	**Cod**	**EU *13***
Pyrethrins	1	---	1
	13. European Union does not maintain a specific MRL for the Pyrethrins/Pineapple combination, but does maintain an MRL of 1 PPM for its "Fruit Fresh or Frozen; Nuts" group.		
	US	**Cod**	**EU *14***
Pyriproxyfen	0.3	---	*{0.05}*
	14. European Union does not maintain a specific MRL for the Pyriproxyfen/Pineapple combination, but does maintain an MRL of 0.05 PPM for its "Miscellaneous fruit" group.		
	US	**Cod**	**EU**
Spinosad	0.02	---	0.02
	US	**Cod *15***	**EU**
Triadimefon	2	5	3
	15. The MRL accommodates post-harvest treatment of the commodity.		
	US	**Cod**	**EU *16***
Triflumizole	4	---	*{0.1}*
	16. European Union does not maintain a specific MRL for the Triflumizole/Pineapple combination, but does maintain an MRL of 0.1 PPM for its "Miscellaneous fruit" group.		