

HAWAII ADMINISTRATIVE RULES

TITLE 4

DEPARTMENT OF AGRICULTURE

SUBTITLE 4 DIVISION OF MARKETING AND CONSUMER SERVICES

CHAPTER 44

STANDARDS FOR PROCESSED PRODUCTS

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Historical Note: Chapter 4-44 is based substantially upon "Regulation 4. Relating to Standards for Grades and Minimum Export Requirements of Processed Products," of the Division of Marketing and Consumer Services, Department of Agriculture. [Eff 8/24/68; R 5/29/81]

§4-44-1 Definitions. As used in this chapter and unless otherwise defined:

"Absence of defects" means the degree of freedom from seeds or portions of seeds, harmless extraneous material, objectionable material, and other defects not specifically mentioned that affect the appearance or drinking quality of the product.

"Acceptance number" means the number in a sampling plan that indicates a maximum number of deviants permitted in a sample of a lot that meets a specific requirement.

"Acid" means grams of acid, calculated as anhydrous citric acid, per one hundred milliliter (hereafter ml) of the product as determined by titration with sodium hydroxide solution using phenolphthalein as an indicator.

"Brix" means the refractometric sucrose value obtained in accordance with the refractometric method for sugars and sugar products outlined in the Official Methods of Analysis of the Association of Official Analytical Chemists 1984, which is made part of this chapter, without correction for acidity.

"Brix-acid ratio" means the quotient of the degrees brix divided by grams acid.

"Consistency" means the viscosity of the product, the tendency of the insoluble solids to separate, and the percentage of the centrifuged solids present.

"Deviant" means a sample unit affected by one or more deviations, or a sample unit that varies in a specifically defined manner from the requirements of a standard or specification.

"Deviation" means any specifically defined variation from a particular requirement.

"Filtrate" means the fluid portion of the product that has passed through a standard bolting cloth.

"Half kernel" means an approximate half of the separated half of a whole kernel with not more than one-eighth of its mass chipped off or missing.

"Harmless extraneous material" means, but is not limited to, those portions of the peel and placenta that will pass through round perforations not exceeding 0.03125 inch in diameter and particles of seeds that will pass through round perforations not exceeding 0.020 inch in diameter.

"Lot" means any number of containers of the same size and type which contain a processed product of the same type and style located in the same warehouse or conveyance; or which, under in-plant inspection, results from consecutive production within a plant and is available for inspection at any one time.

"Rejection number" means the number in a sampling plan that indicates the minimum number of deviants in a sample that will cause a lot to fail a specific requirement.

"Sample" means any number of sample units to be used for inspection.

"Sample unit" means a container and its entire content; a portion of the content of a container or other unit of commodity; or a composite mixture of a product to be used for inspection.

"Seeds or portions of seeds" means any intact seed or any portion of a seed that will not pass through a round perforation 0.020 inch in diameter.

"Soluble solids value" means the refractometric sucrose value of the filtrate obtained in accordance with the refractometric method for sugars and sugar products outlined in the Official Methods of Analysis of the Association of Official Analytical Chemists 1984, which is made part of this chapter, without correction for acidity.

"Whole kernel" means a kernel that is not split or broken into separate halves; that has a general contour not materially affected by missing portion or portions; and that does not have more than one-fourth of its mass chipped off or missing. [Eff 5/29/81; am and comp 3/24/86; am and comp 3/24/86] (Auth: HRS§147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-2 Standard requirements and procedures.

(a) Compliance with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

(b) The grade of a lot of a processed product covered by this chapter is determined by the procedures set forth in the United States Department of Agriculture Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products, May 1983, which is made a part of this chapter.

(c) Methods of analysis to ascertain the requirements of this chapter shall be as provided in subsections (d) through (g).

(d) The viscosity reading in seconds shall be determined by using a viscometer similar to that shown in "Figure 1, Capillary CPC Viscometer, 8/24/68" which is located at the end of this chapter and made a part of this chapter, which has been calibrated to give a flow time of thirteen seconds at twenty-five degrees celsius with distilled water. Corrections can be made for other temperatures by using the formula  $Y$  equals  $19.12$  minus  $0.32T$  plus  $0.003T^2$ , where  $T$  is temperature in degrees celsius and  $Y$  is time of flow in seconds. Procedure for measurement of viscosity shall be as follows:

- (1) Clamp viscometer in a vertical position;
- (2) Close tip of capillary tube with a finger;
- (3) Fill reservoir well above the gauge line with well-mixed sample;
- (4) Obtain temperature reading in celsius;
- (5) Allow a small amount of sample to flow to fill the capillary tube;
- (6) Reclose tip and refill the reservoir to near

- overflowing and level off with a straight-edged spatula; and
- (7) Release finger from tip and simultaneously with a stop watch, time the free flow of the sample until the upper edge of the liquid meniscus reaches the gauge line of the reservoir. The flow time, expressed in seconds with temperature correction applied, is the viscosity reading of the sample.
- (e) The percentage of centrifuged solids shall be determined as follows:
- (1) Measure at about twenty-five degrees celsius, fifty ml of thoroughly stirred prepared sample into a cone shaped graduated fifty ml centrifuge tube which measures approximately four and three-fourths inches from the tip to the top calibration and has a capacity of fifty ml, or any centrifuge tube that will give equivalent results;
  - (2) Place the tube in a suitable centrifuge, the approximate speed of which is related to the diameter of swing in accordance with "Table I, Approximate Revolution Of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter;
  - (3) Centrifuge at the indicated speed for ten minutes and allow the centrifuge to coast to a stop; and
  - (4) Immediately after the centrifuge stops, take the ml reading at the top of the layer of solid material in the bottom of the tube and multiply by two to obtain the percentage of centrifuged solids.
- (f) The general procedure for mold count, using standard equipment and standard measurements, described in the Official Methods of Analysis of the Association of Official Analytical Chemist 1984 shall be employed in determining stone cell count. Procedure for stone cell count shall be as follows:
- (1) Use a well-mixed sample;
  - (2) The microscope used should have an eyepiece micrometer ruled into squares, each of which is equal to one-sixth of the diameter of the eyepiece diaphragm opening;
  - (3) Estimate the area covered by the stone cells on the basis of what part or how many squares on the eyepiece are covered by stone cells and total the results to arrive at the stone cell count (e.g., if the areas covered in four fields are one-fourth square, one-half square, two and three-fourths squares, and

one and one-half squares, respectively, the stone cell count would total five for these four fields); and

- (4) For the final count examine one hundred fields, with the count being the number of squares in the one hundred fields that are covered.

(g) The mold count shall be determined by the Howard method as described in the 1984 edition of the Official Methods of Analysis of the Association of Official Analytical Chemists. [Eff 5/29/81; am and comp 3/24/86: am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-3 Standards for canned guava nectar. (a)

As used in this section:

"Acid" means grams of acid, calculated as anhydrous citric acid, per one hundred ml of canned guava nectar determined by titration with sodium hydroxide solution using phenolphthalein and methylene blue as indicators.

"Canned guava nectar" means the diluted, unfermented juice and pulp obtained from the sound, mature, fresh fruit of the *Psidium guajava* or *Psidium cattleianum* guava plant, which fruit has been properly washed and properly comminuted; is packed with the addition of potable water, with or without the addition of nutritive sweetening ingredients or other suitable sweeteners for dietetic packs, fruit acids, ascorbic acid, stabilizers, certified food colors, or preservatives, provided that at least one-fourth, by weight, of the nectar consists of guava juice and pulp in natural proportions; and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

"Dietetic product" means canned guava nectar that is packed to meet the requirements of a special diet.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance of the nectar are not seriously affected by the presence of grittiness, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed seventy when centrifuged solids do not exceed thirty-five per cent and does not exceed seventy by more than two per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the mold count does not exceed fifteen per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging

does not exceed the area of a circle three-sixteenths inch in diameter.

"Fairly good consistency" means the nectar flows readily; is not excessively thick; shows no more than slight coagulation; has a viscometer reading of not less than eighteen seconds at twenty-five degrees celsius; and contains not less than twenty-five per cent centrifuged solids.

"Good color" means the color of the canned guava nectar is typical of nectar prepared from freshly extracted guava juice and pulp, or typical of artificially colored guava nectar, and is free from browning or other abnormal color by any cause.

"Good consistency" means the nectar flows readily; shows very little or no tendency to separate; shows no coagulation; has a viscometer reading of not less than twenty-three seconds at twenty-five degrees celsius; and contains not less than thirty per cent centrifuged solids.

"Good flavor" means the product has a fine, distinct canned guava nectar flavor which is free from fermented, immature, or other off-flavor of any kind and the brix reading is not less than ten and one-half degrees nor more than fourteen degrees; the acid reading is not less than three-tenths gram nor more than one-half gram per one hundred ml of nectar; and the brix to acid ratio is not less than twenty-eight to one nor more than forty to one. There shall be no brix and no brix to acid ratio requirements for dietetic products.

"Practically free from defects" means the nectar contains no seeds or portions of seeds; the drinking quality and appearance of the nectar is not more than slightly affected by the presence of grittiness, harmless extraneous material, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed forty when centrifuged solids do not exceed thirty-five per cent and does not exceed forty by more than one per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the mold count does not exceed fifteen per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter.

"Reasonably good color" means the color of the canned guava nectar is fairly typical of nectar prepared from freshly extracted guava juice and pulp, or fairly typical of artificially colored guava nectar, and is not excessively dull or brown colored or seriously off-colored from any cause.

"Reasonably good flavor" means the product has a fairly typical canned guava nectar flavor which is practically free from fermented, immature, or other off-flavor of any kind and the brix reading is not less than ten degrees nor more than fifteen and one-half degrees; the acid reading is not less than one-fourth gram nor more than six-tenths gram per one hundred ml of nectar; and the brix to acid ratio is not less than twenty to one nor more than fifty-five to one. There shall be no brix and no brix to acid ratio requirements for dietetic products.

(b) Hawaii Grade A or Hawaii Fancy canned guava nectar is the quality of canned guava nectar that possesses a good color, good flavor, and good consistency; is practically free from defects; and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade C or Hawaii Standard canned guava nectar is the quality of canned guava nectar that possesses a reasonably good color, reasonably good flavor, and fairly good consistency; is fairly free from defects; and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard canned guava nectar is the quality of canned guava nectar that fails to meet the requirements of subsections (b) and (c).

(e) The grade of canned guava nectar shall be ascertained by considering the factors of quality. The importance of each quality factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be fifteen points for color; twenty-five points for consistency; twenty-five points for absence of defects; and thirty-five points for flavor. Canned guava nectar which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to canned guava nectar:

- (1) Color classifications shall be as follows:
  - (A) Canned guava nectar that possesses good color may be given a score of thirteen to fifteen points and shall be classified as fancy;
  - (B) Canned guava nectar that possesses reasonably good color may be given a score of eleven or twelve points and shall be classified as standard; and
  - (C) Canned guava nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to

- ten points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
    - (A) Canned guava nectar that possesses good consistency may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
    - (B) Canned guava nectar that possesses fairly good consistency may be given a score of seventeen to twenty points and shall be classified as standard; and
    - (C) Canned guava nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard;
  - (3) Absence of defects classifications shall be as follows:
    - (A) Canned guava nectar that is practically free from defects may be given a score of twenty-one to twenty-five points and shall be scored as fancy;
    - (B) Canned guava nectar that is fairly free from defects may be given a score of seventeen to twenty points and shall be scored as standard; and
    - (C) Canned guava nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard; and
  - (4) Flavor classifications shall be as follows:
    - (A) Canned guava nectar that possesses good flavor may be given a score of thirty to thirty-five points and shall be classified as fancy;
    - (B) Canned guava nectar that possesses reasonably good flavor may be given a score of twenty-five to twenty-nine points and shall be classified as standard; and
    - (C) Canned guava nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.



(g) When canned guava nectar is packaged as a dietetic product, this fact shall be stated in connection with the grade assigned to the product.

Example: Hawaii Fancy, Dietetic Product or Hawaii Grade C, Dietetic Product.

(h) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that each container be as full of guava nectar as practicable and that the product occupy not less than ninety per cent of the volume capacity of the container. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-4 Standards for frozen guava nectar base.

(a) As used in this section:

"Absence of defects" means the degree of freedom from seeds or portions of seeds, harmless extraneous material, grittiness caused by stone cells, objectionable material, and other defects not specifically mentioned that affect the appearance or drinking quality of the product.

"Acid" means grams of acid, calculated as anhydrous citric acid, per one hundred ml of nectar determined by titration with sodium hydroxide solution using phenolphthalein and methylene blue as indicators.

"Common guava nectar base" means nectar base made from the fruit of the *Psidium guajava* tree, or from a mixture of fruits from the *Psidium guajava* and *Psidium cattleianum* plants of which mixture not less than seventy-five per cent shall be the fruit from the *Psidium guajava* plant.

"Consistency" means the viscosity, the tendency of insoluble solids to separate, and the percentage of centrifuged solids of the guava nectar prepared from the frozen guava nectar base.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance of the nectar are not seriously affected by the presence of grittiness, objectionable material, dark specks, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed seventy when centrifuged solids do not exceed thirty-five per cent and does not exceed seventy by more than two per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the

mold count does not exceed fifteen per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle three-sixteenths inch in diameter.

"Fairly good consistency" means the nectar flows readily; is not excessively thick; has a viscometer reading of not less than sixteen seconds at twenty-five degrees celsius; and contains not less than eighteen per cent centrifuged solids.

"Frozen guava nectar base" means the undiluted, unconcentrated, unfermented juice and pulp obtained from sound, mature, fresh, and properly washed fruit of the *Psidium guajava* or *Psidium cattleianum* guava plant, packed with the addition of non-liquid sweetening ingredients and with or without the addition of a certified food coloring, fruit acids, or ascorbic acid; processed in accordance with good commercial practice; and frozen and maintained at temperatures sufficient for the preservation of the product.

"Good color" means the color is typical of nectar prepared from freshly extracted guava puree, or typical of artificially colored guava nectar, and is free from browning or other abnormal color by any cause.

"Good consistency" means the prepared nectar flows readily; shows very little or no tendency to separate; has a viscometer reading of not less than twenty seconds at twenty-five degrees celsius; and contains not less than twenty-two per cent centrifuged solids.

"Good flavor" means the product has a fine, distinct, and substantially typical flavor of guava nectar prepared from freshly expressed guava puree and the flavor is free from bitter, oxidized, immature fruit, or other off-flavors; the brix reading is not less than ten and one-half degrees nor more than fourteen degrees; the acid reading is not less than three-tenths gram nor more than one-half gram per one hundred ml of nectar; and the brix to acid ratio is not less than twenty-eight to one nor more than forty to one.

"Practically free from defects" means the nectar contains no seeds or portions of seeds; the drinking quality and appearance of the nectar is not more than slightly affected by the presence of dark specks, objectionable material, grittiness, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed forty when centrifuged solids do not exceed thirty-five per cent and does not exceed forty by more than one per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the mold count does not exceed fifteen per cent;

and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter.

"Prepared guava nectar" means the nectar prepared by diluting the guava nectar base with water based on the manufacturer's directions or label specifications, or by the addition of two and one-half volumes of water to one volume of nectar base.

"Reasonably good color" means the color is fairly typical of nectar prepared from freshly extracted guava puree, or fairly typical of artificially colored guava nectar, and is free from browning or other abnormal color by any cause.

"Reasonably good flavor" means the prepared guava nectar has a flavor fairly typical of guava nectar prepared from freshly expressed guava puree and the flavor is practically free from bitter, oxidized, immature fruit, or other off-flavors and free from abnormal flavors of any kind; the brix reading is not less than ten degrees nor more than fifteen and one-half degrees; the acid reading is not less than one-fourth gram nor more than six-tenths gram per one hundred ml of nectar; and the brix to acid ratio is not less than twenty to one nor more than fifty-five to one.

"Strawberry guava nectar base" means the nectar base made from the fruit of *Psidium cattleianum* guava plant.

(b) Types of frozen guava nectar base are:

- (1) Common guava nectar base; and
- (2) Strawberry guava nectar base.

(c) Hawaii Grade A or Hawaii Fancy frozen guava nectar base is the quality of frozen guava nectar base which mixes readily into a guava nectar that possesses the amount of pulp and cloud necessary to substantially reflect the appearance of guava nectar prepared from freshly expressed guava puree; that has good color, good consistency, and good flavor; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (f).

(d) Hawaii Grade B or Hawaii Choice frozen guava nectar base is the quality of frozen guava nectar base which mixes readily into a guava nectar that possesses the amount of pulp and cloud necessary to reasonably reflect the appearance of guava nectar prepared from freshly expressed guava puree; that has reasonably good color, fairly good consistency, and reasonably good flavor; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (f).

(e) Substandard frozen guava nectar base is the quality of frozen guava nectar base that fails to meet the requirements of subsections (c) and (d).

(f) The grade of frozen guava nectar base shall be ascertained by considering both the factor of quality which is not scored (ease of mixing into guava nectar) and those factors which are scored. The importance of each quality factor scored shall be expressed numerically on the scale of one hundred. The maximum number of points given to a specific quality factor which is scored shall be twenty points for color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor. The points score for each quality factor shall be determined immediately after the frozen guava nectar base has been converted into prepared guava nectar. The prepared guava nectar which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to frozen guava nectar base:

- (1) Color classifications shall be as follows:
  - (A) Frozen guava nectar base that possesses a good color when prepared as guava nectar may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen guava nectar base that possesses a reasonably good color when prepared as guava nectar may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen guava nectar base that fails to meet the requirements of subparagraphs (A) and (B) when prepared as guava nectar may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Frozen guava nectar base that possesses good consistency when prepared as guava nectar may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Frozen guava nectar base that possesses a fairly good consistency when prepared as guava nectar may be given a score of seventeen to twenty points and shall be classified as choice; and
  - (C) Frozen guava nectar base that fails to

meet the requirements of subparagraphs (A) and (B) when prepared as guava nectar may be given a score of zero to sixteen points and shall be classified as substandard;

- (3) Absence of defects classifications shall be as follows:
  - (A) Frozen guava nectar base that is practically free from defects when prepared as guava nectar may be given a score of seventeen to twenty points and shall be scored as fancy;
  - (B) Frozen guava nectar base that is fairly free from defects when prepared as guava nectar may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen guava nectar base that fails to meet the requirements of subparagraphs (A) and (B) when prepared as guava nectar may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
  - (A) Frozen guava nectar base that possesses a good flavor when prepared as guava nectar may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Frozen guava nectar base that possesses a reasonably good flavor when prepared as guava nectar may be given a score of twenty-five to twenty-nine points and shall be classified as choice; and
  - (C) Frozen guava nectar base that fails to meet the requirements of subparagraphs (A) and (B) when prepared as guava nectar may be given a score of zero to twenty-four points and shall be classified as substandard.

(g) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(h) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that each container be filled as full as practicable with frozen guava nectar base. [Eff5/29/81; am and comp

3/24/86] (Auth: HRS §147-57) (Imp:HRS §§147-52 and 147-53)

§4-44-5 Standards for frozen guava puree. (a)

As used in this section:

"Absence of defects" means the degree of freedom from seeds or portions of seeds, harmless extraneous material, grittiness caused by stone cells, objectionable material, and other defects not specifically mentioned that affect the appearance or drinking quality of the product.

"Acid" means grams of acid, calculated as anhydrous citric acid, per one hundred ml of the prepared drink as determined by titration with sodium hydroxide solution using phenolphthalein and methylene blue as indicators.

"Common guava puree" means puree made from the fruit of the *Psidium guajava* plant, or a mixture of fruits from the *Psidium guajava* and *Psidium cattleianum* plants of which mixture not less than seventy-five per cent shall be the fruit from the *Psidium guajava* plant.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance of the guava drink is not seriously affected by the presence of grittiness, dark specks, other objectionable material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed seventy when centrifuged solids do not exceed thirty-five per cent and does not exceed seventy by more than two per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the mold count does not exceed fifteen per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle three-sixteenths inch in diameter.

"Fairly good consistency" means the drink flows readily; is not excessively thick; unless specified as cultivated variety, has sufficient viscosity so that the viscometer reading is not less than twenty-eight seconds at twenty-five degrees celsius; and contains not less than twenty-seven per cent centrifuged solids.

For a cultivated variety, the viscometer reading shall be not less than twenty-five seconds at twenty-five degrees celsius and centrifuged solids not less than twenty-three per cent.

"Frozen guava puree" is the undiluted, unconcentrated, unfermented juice and pulp in natural proportions obtained from the sound, mature, fresh, and properly washed fruit of the *Psidium guajava* or *Psidium*

cattleianum guava plant, packed with or without the addition of certified food coloring, fruit acids, or ascorbic acid; processed in accordance with good commercial practice; and frozen and maintained at temperatures sufficient for the preservation of the product.

"Good color" means the color is typical of a drink prepared from freshly extracted guava puree, or typical of artificially colored guava drink, and free from browning or other abnormal color by any cause.

"Good consistency" means the prepared drink flows readily; shows very little or no tendency to separate; unless specified as cultivated variety, has sufficient viscosity so that the viscometer reading is not less than thirty seconds at twenty-five degrees celsius; and contains not less than thirty-two per cent centrifuged solids. For a cultivated variety, the viscosity reading shall be not less than twenty-eight seconds at twenty-five degrees celsius and centrifuged solids not less than twenty-six per cent.

"Good flavor" means the prepared guava drink has a fine, distinct flavor substantially typical of a guava drink prepared from freshly expressed guava puree and the flavor is free from bitter, oxidized, immature fruit, or other off-flavors; the soluble solids reading is not less than seven degrees for the filtrate; and the acid reading is not less than two-tenths gram nor more than forty-five one-hundredth gram per one hundred grams of prepared guava drink. For a cultivated variety, the guava puree shall have a soluble solids reading of not less than six degrees for the filtrate.

"Practically free from defects" means the prepared guava drink contains no seeds or portions of seeds; the drinking quality and appearance of the prepared drink is not more than slightly affected by the presence of grittiness, dark specks, harmless extraneous material, other objectionable material, any other defect not specifically mentioned, or any combination of these defects; the stone cell count does not exceed forty-five when centrifuged solids do not exceed thirty-five per cent and does not exceed forty-five by more than one per cent for each one per cent that the centrifuged solids exceed thirty-five per cent; the mold count does not exceed fifteen per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter.

"Prepared guava drink" means the drink prepared by diluting guava puree with water based on the manufacturer's directions or label specifications, or by the addition of two and one-half volumes of water to one volume of puree.

"Reasonably good color" means the color is fairly typical of a drink prepared from freshly extracted guava puree, or fairly typical of an artificially colored guava drink, and free from browning or other abnormal color by any cause.

"Reasonably good flavor" means the prepared guava drink has a flavor fairly typical of a guava drink prepared from freshly expressed guava puree and the flavor is practically free from bitter, oxidized, immature fruit, or other off-flavors and free from abnormal flavors of any kind; the soluble solids reading is not less than six and one-half degrees for the filtrate; and the acid reading is not less than two-tenths gram nor more than fifty-five one-hundredth gram per one hundred grams of prepared guava drink. For a cultivated variety, the guava puree shall meet a soluble solids reading of not less than five and five-tenths degrees for the filtrate.

"Strawberry guava puree" means puree made from the fruit of the *Psidium cattleianum* guava tree.

(b) Types of frozen guava puree are:

(1) Common guava puree; and

(2) Strawberry guava puree.

(c) Hawaii Grade A or Hawaii Fancy frozen guava puree is the quality of frozen guava puree which mixes readily into a guava drink that possesses the amount of pulp and cloud necessary to substantially reflect the appearance of a guava drink prepared from freshly expressed guava puree; that possesses a good color, good consistency, and good flavor; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (f).

(d) Hawaii Grade B or Hawaii Choice frozen guava puree is the quality of frozen guava puree which mixes readily into a guava drink that possesses the amount of pulp and cloud necessary to reasonably reflect the appearance of a guava drink prepared from freshly expressed guava puree; that possesses a reasonably good color, fairly good consistency, and reasonably good flavor; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (f).

(e) Substandard frozen guava puree is the quality of frozen guava puree that fails to meet the requirements of subsections (c) and (d).

(f) The grade of frozen guava puree shall be ascertained by considering both the factor of quality which is not scored (ease of mixing into a guava drink) and the factors which are scored. The importance of each quality factor scored shall be expressed numerically on the scale of one hundred. The maximum



number of points given to a specific quality factor which is scored shall be twenty points for color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor.

The points score for each quality factor shall be determined immediately after the product has been prepared as a guava drink. The prepared guava drink which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to frozen guava puree:

- (1) Color classifications shall be as follows:
  - (A) Frozen guava puree that possesses a good color when prepared as a guava drink may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen guava puree that possesses a reasonably good color when prepared as a guava drink may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen guava puree that fails to meet the requirements of subparagraphs (A) and (B) when prepared as a guava drink may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Frozen guava puree that possesses a good consistency when prepared as a guava drink may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Frozen guava puree that possesses a fairly good consistency when prepared as a guava drink may be given a score of seventeen to twenty points and shall be classified as choice; and
  - (C) Frozen guava puree that fails to meet the requirements of subparagraphs (A) and (B) when prepared as a guava drink may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Frozen guava puree that is practically free from defects when prepared as a guava drink may be given a score of seventeen to twenty points and shall be

- classified as fancy;
  - (B) Frozen guava puree that is fairly free from defects when prepared as a guava drink may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen guava puree that fails to meet the requirements of subparagraphs (A) and (B) when prepared as a guava drink may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
- (A) Frozen guava puree that possesses a good flavor when prepared as a guava drink may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Frozen guava puree that possesses a reasonably good flavor when prepared as a guava drink may be given a score of twenty-five to twenty-nine points and shall be classified as choice; and
  - (C) Frozen guava puree that fails to meet the requirements of subparagraphs (A) and (B) when prepared as a guava drink may be given a score of zero to twenty-four points and shall be classified as substandard.

(g) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(h) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that each container be filled as full as practicable with frozen guava puree. [Eff5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-6 Standards for canned papaya nectar. (a) As used in this section:

"Canned papaya nectar" is the diluted, unfermented juice and pulp obtained from the sound, mature, fresh fruit of the Carica papaya tree which juice and pulp may have been preserved by freezing or chilling; the fruit has been properly washed, prepared, and comminuted; is packed with the addition of potable

water, with or without the addition of nutritive sweetening ingredients or other suitable sweeteners for dietetic packs, with or without the addition of fruit acids, ascorbic acid, or stabilizers or preservatives, provided that at least one-third by weight of the nectar consists of papaya juice and pulp in natural proportions; and provided further that no more than ten per cent, by weight, of the nectar consists of the juice and pulp of another fruit; and is sufficiently processed by heat or other approved method to assure preservation of the product in hermetically sealed containers.

"Dietetic product" means canned papaya nectar that is packed to meet the requirements of a special diet.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance are not seriously affected by the presence of harmless extraneous material, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle seven thirty-seconds inch in diameter; and the mold count does not exceed fifteen per cent.

"Fairly good consistency" means the nectar flows readily; is not excessively thick; shows no more than slight coagulation; has a viscometer reading of not less than twenty-five seconds at twenty-five degrees celsius; and contains not less than twenty-six per cent centrifuged solids.

"Fairly good flavor" means a flavor fairly typical of canned papaya nectar which is free from putrefactive, fermented, or other off-flavors and the brix reading is not less than nine and one-half degrees nor more than eighteen degrees; the acid reading is not less than one-tenth gram nor more than six-tenths gram per one hundred ml of nectar; and the brix to acid ratio is not less than twenty-five to one nor more than eighty to one. There shall be no brix or brix to acid ratio requirement for dietetic products.

"Good color" means the color of the canned papaya nectar is fairly bright and fairly typical of nectar prepared from freshly extracted papaya juice and pulp, and is not dull or brown colored or off-color from any cause.

"Good consistency" means that the nectar flows readily; shows very little or no tendency to separate; shows no coagulation; has a viscometer reading of not less than twenty-eight seconds at twenty-five degrees celsius; and contains not less than thirty-one per cent centrifuged solids.

"Good flavor" means the product has a fine, distinct canned papaya nectar flavor which is free from putrefactive, fermented, or off-flavors of any kind and the brix reading is not less than ten degrees nor more than sixteen degrees; the acid reading is not less than fifteen hundredths gram nor more than one-half gram per one hundred ml of nectar; and the brix to acid ratio is not less than thirty to one nor more than seventy to one. There shall be no brix or brix to acid ratio requirement for dietetic products.

"Harmless extraneous material" includes, but is not limited to, particles of seeds, peel, or placenta that will pass through round perforations not exceeding 0.03125 inch in diameter.

"Practically free from defects" means the nectar does not contain any seeds or portions of seeds; the drinking quality and appearance of the nectar is not more than slightly affected by the presence of harmless extraneous material, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle five thirty-seconds inch in diameter; and the mold count does not exceed fifteen per cent.

"Seeds or portions of seeds" means any intact seed or any portion of a seed that will not pass through a round perforation 0.03125 inch in diameter.

"Very good color" means the color of the canned papaya nectar is bright and typical of nectar prepared from freshly extracted papaya juice and pulp, and is free from browning or other abnormal color by any cause.

(b) Hawaii Grade A or Hawaii Fancy canned papaya nectar is the quality of canned papaya nectar that possesses a very good color, good consistency, and good flavor; is practically free from defects; and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade C or Hawaii Standard canned papaya nectar is the quality of canned papaya nectar that possesses a good color, fairly good consistency, and fairly good flavor; is fairly free from defects; and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard canned papaya nectar is the quality of canned papaya nectar that fails to meet the requirements of subsections (b) and (c).

(e) The grade of canned papaya nectar shall be ascertained by considering the factors of quality. The relative importance of each factor shall be expressed numerically on the scale of one hundred. The maximum

number of points that may be given to specific quality factors shall be twenty points for color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor. Canned papaya nectar which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to canned papaya nectar:

- (1) Color classifications shall be as follows:
  - (A) Canned papaya nectar that possesses a very good color may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Canned papaya nectar that possesses a good color may be given a score of fourteen to sixteen points and shall be classified as standard; and
  - (C) Canned papaya nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Canned papaya nectar that possesses a good consistency may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Canned papaya nectar that possesses a fairly good consistency may be given a score of seventeen to twenty points and shall be classified as standard; and
  - (C) Canned papaya nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Canned papaya nectar that is practically free from defects may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Canned papaya nectar that is fairly free from defects may be given a score of fourteen to sixteen points and shall be classified as standard; and
  - (C) Canned papaya nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to

thirteen points and shall be classified as substandard; and

- (4) Flavor classifications shall be as follows:
  - (A) Canned papaya nectar that possesses a good flavor may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Canned papaya nectar that possesses a fairly good flavor may be given a score of twenty-five to twenty-nine points and shall be classified as standard; and
  - (C) Canned papaya nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine shall be from column B in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(g) When canned papaya nectar is packaged as a dietetic product, this fact shall be stated in connection with the grade assigned to the product.

Example: Hawaii Fancy, Dietetic Product or Hawaii Grade C, Dietetic product.

(h) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that the container be as full of papaya nectar as practicable and that the product occupy not less than ninety per cent of the volume capacity of the container. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-7 Standards for canned papaya-passion fruit nectar blend. (a) As used in this section: "Canned papaya-passion fruit nectar blend", which in these standards is also considered a nectar, means the diluted, unfermented juice and pulp obtained from the sound, mature, fresh fruit of the papaya tree (*Carica papaya*) and from the sound, fresh, mature fruit of the passion fruit vine (*Passiflora edulis* or *Passiflora edulis* f. *flavicarpa* or hybrids of these species), which juice and pulp may have been preserved by freezing or chilling, which fruits have been properly washed and comminuted; are packed with the addition of potable water, with or without the addition

of nutritive sweetening ingredients or other suitable sweeteners for dietetic packs, fruit acids, ascorbic acid, stabilizers, or preservatives, provided that at least twelve per cent, by weight, of the nectar blend consists of papaya juice and pulp in natural proportions, and not more than twenty-five per cent and not less than twelve per cent, by weight, of the nectar blend consists of passion fruit juice and pulp in natural proportions; and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

"Dietetic product" means canned papaya-passion fruit nectar blends that are packed to meet the requirements of a special diet.

"Fairly good consistency" means the nectar blend flows readily; is not excessively thick; shows no more than slight coagulation; has a viscometer reading of not less than twenty seconds at twenty-five degrees celsius; and contains not less than seventeen per cent centrifuged solids.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance is not seriously affected by the presence of harmless extraneous material, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle three-sixteenths inch in diameter; and the mold count does not exceed ten per cent.

"Good color" means the color of the canned papaya-passion fruit nectar blend is fairly bright and fairly typical of nectar blend prepared from freshly extracted papaya and passion fruit juice and pulp, and is not dull or brown colored or off-color from any cause.

"Good consistency" means the nectar blend flows readily; shows very little or no tendency to separate; shows no coagulation; has a viscometer reading of not less than twenty-three seconds at twenty-five degrees celsius; and contains not less than twenty-two per cent centrifuged solids.

"Good flavor" means the product has a fairly typical canned papaya-passion fruit nectar blend flavor which is free from putrefactive, fermented, or other off-flavors and the brix reading is not less than nine and one-half degrees nor more than sixteen degrees; the acid reading is not less than two-tenths gram nor more than three-fourths gram per one hundred ml of nectar blend; and the brix to acid ratio is not less than twenty to one nor more than sixty to one. There shall be no brix or brix to acid ratio requirement for dietetic products.

"Harmless extraneous material" includes, but is not limited to, particles of seeds, peel, or placenta that will pass through round perforations not exceeding 0.03125 inch in diameter.

"Practically free from defects" means the nectar blend does not contain any seeds or portions of seeds; the drinking quality and appearance of the nectar blend are not more than slightly affected by the presence of extraneous material, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed an area of a circle two-sixteenths inch in diameter; and the mold count does not exceed ten per cent.

"Seeds or portions of seeds" means any intact seed or any portion of a seed that will not pass through a round perforation 0.03125 inch in diameter.

"Very good color" means the color of the canned papaya-passion fruit nectar blend is bright and typical of nectar blend prepared from freshly extracted papaya and passion fruit juice and pulp, and is free from browning or other abnormal color by any cause.

"Very good flavor" means the product has a fine, distinct canned papaya-passion fruit nectar blend flavor which is free from putrefactive, fermented, immature, or other off-flavors of any kind and the brix reading is not less than ten and one-half degrees nor more than fifteen degrees; the acid reading is not less than one-fourth gram nor more than seven-tenths gram per one hundred ml of nectar blend; and the brix to acid ratio is not less than twenty-five to one nor more than fifty-five to one. There shall be no acid or brix to acid ratio requirement for dietetic products.

(b) Hawaii Grade A or Hawaii Fancy canned papaya-passion fruit nectar blend is the quality of canned papaya-passion fruit nectar blend that possesses a very good color, good consistency, and very good flavor; is practically free from defects; and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade C or Hawaii Standard canned papaya-passion fruit nectar blend is the quality of canned papaya-passion fruit nectar blend that possesses a good color, fairly good consistency, and good flavor; is fairly free from defects; and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard canned papaya-passion fruit nectar blend is the quality of canned papaya-passion fruit nectar blend that fails to meet the requirements of subsections (b) and (c).

(e) The grade of canned papaya-passion fruit



nectar blend shall be ascertained by considering the factors of quality. The importance of each quality factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be twenty points for color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor. Canned papaya-passion fruit nectar blend which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to canned papaya-passion fruit nectar blends:

- (1) Color classifications shall be as follows:
  - (A) Canned papaya-passion fruit nectar blend that possesses a very good color may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Canned papaya-passion fruit nectar blend that possesses a good color may be given a score of fourteen to sixteen points and shall be classified as standard; and
  - (C) Canned papaya-passion fruit nectar blend that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Canned papaya-passion fruit nectar blend that possesses good consistency may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Canned papaya-passion fruit nectar blend that possesses a fairly good consistency may be given a score of seventeen to twenty points and shall be classified as standard; and
  - (C) Canned papaya-passion fruit nectar blend that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Canned papaya-passion fruit nectar blend that is practically free from defects may be given a score of seventeen to twenty points and shall be scored as fancy;

- (B) Canned papaya-passion fruit nectar blend that is fairly free from defects may be given a score of fourteen to sixteen points and shall be scored as standard; and
  - (C) Canned papaya-passion fruit nectar blend that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
- (A) Canned papaya-passion fruit nectar blend that possesses very good flavor may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Canned papaya-passion fruit nectar blend that possesses a good flavor may be given a score of twenty-five to twenty-nine points and shall be classified as standard; and
  - (C) Canned papaya-passion fruit nectar blend that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine shall be from column B in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(g) When canned papaya-passion fruit nectar blend is packaged as a dietetic product, this fact shall be stated in connection with the grade assigned to the product.

Example: Hawaii Fancy, Dietetic Product or Hawaii Grade C, Dietetic Product.

(h) The recommended fill of container shall not be incorporated in grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that the container be as full of papaya-passion fruit nectar blend as practicable and that the product occupy not less than ninety per cent of the volume capacity of the container. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-8 Standards for frozen papaya puree. (a)  
As used in this section:

"Absence of defects" means the degree of freedom

from seeds, portions of seeds, harmless extraneous material, papain, objectionable material, and other defects not specifically mentioned that affect the appearance or drinking quality of the product.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the appearance and drinking quality of the prepared papaya drink are not seriously affected by dark specks, objectionable material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle three-sixteenths inch in diameter; the clotting time of the papaya puree is not less than five minutes when tested according to the method in subsection (f) for determining presence of papain; and the mold count does not exceed fifteen per cent.

"Fairly good consistency" means the prepared papaya drink flows readily; is not excessively thick; has a viscometer reading of not less than twenty-three seconds at twenty-five degrees celsius; and contains not less than twenty per cent centrifuged solids.

"Frozen papaya puree" is the undiluted, unconcentrated, unfermented juice and pulp in natural proportions from the sound, mature, fresh fruit of the papaya tree (*Carica papaya*), which fruit has been properly washed; is packed with or without fruit acids or ascorbic acid; is processed in accordance with good commercial practice; and is frozen and maintained at temperatures sufficient for the preservation of the product.

"Good color" means the color of the prepared papaya drink is fairly typical of a drink prepared from freshly extracted papaya puree, is light yellow to orange, and is free from browning or other abnormal color by any cause.

"Good consistency" means the prepared papaya drink flows readily; shows no tendency to separate; has a viscosity reading of not less than twenty-eight seconds at twenty-five degrees celsius; and contains not less than twenty-five per cent centrifuged solids.

"Good flavor" means the prepared papaya drink has the fine, distinct, and substantially typical flavor of a papaya drink prepared from freshly expressed puree and the flavor is free from bitter, putrefactive, oxidized, immature fruit, or other off-flavors; the soluble solids reading is not less than ten and one-half per cent; and the acid reading is not more than fifteen-hundredths gram per one hundred grams of puree.

"Harmless extraneous material" includes, but is not limited to, portions of seeds, placenta, or peel that will pass through round perforations not exceeding

0.03125 inch in diameter.

"Practically free from defects" means no seeds or portions of seeds are present; the drinking quality and appearance of the prepared drink are not more than slightly affected by the presence of dark specks, objectionable material, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed an area of a circle two-sixteenths inch in diameter; the clotting time of the papaya puree is not less than seven minutes when tested according to the method in subsection (f) for determining presence of papain; and the mold count does not exceed fifteen per cent.

"Prepared papaya drink" means the papaya puree diluted with water based on the manufacturer's directions or label specification, or by the addition of two and one-half volumes of potable water to one volume of puree.

"Reasonably good flavor" means the prepared papaya drink has a flavor fairly typical of a papaya drink prepared from freshly expressed papaya puree and the flavor is practically free from bitter, putrefactive, oxidized, immature fruit, or other off-flavors and free from abnormal flavors of any kind; and the papaya puree has a soluble solids reading of not less than nine and one-half per cent and an acid reading of not less than one-tenth gram per one hundred grams of puree.

"Seeds or portion of seeds" means any intact seed or any portion of a seed that will not pass through a round perforation 0.03125 inch in diameter.

"Very good color" means the color is light yellow to orange, is typical of nectar prepared from freshly extracted papaya puree, and is free from browning or other abnormal color by any cause.

(b) Hawaii Grade A or Hawaii Fancy frozen papaya puree is the quality of frozen papaya puree which mixes readily into a papaya drink that possesses the amount of pulp and cloud necessary to substantially reflect the appearance of a papaya drink prepared from freshly expressed papaya puree; that possesses a very good color, good consistency, and good flavor; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade B or Hawaii Choice frozen papaya puree is the quality of frozen papaya puree which mixes readily into a papaya drink that possesses the amount of pulp and cloud necessary to reasonably reflect the appearance of a papaya drink prepared from freshly expressed papaya puree; that possesses a good color,

fairly good consistency, and reasonably good flavor; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard frozen papaya puree is the quality of frozen papaya puree that fails to meet the requirements of subsections (b) and (c).

(e) The grade of frozen papaya puree shall be ascertained by considering both the factor of quality which is not scored (ease of mixing into a papaya drink) and those factors which are scored. The importance of each factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be twenty points for color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor. The score points for each quality factor shall be determined before or immediately after the product has been prepared as a papaya drink. Frozen papaya puree which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to frozen papaya puree:

- (1) Color classifications shall be as follows:
  - (A) Frozen papaya puree which possesses a very good color when prepared as a papaya drink may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen papaya puree which possesses a good color when prepared as a papaya drink may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen papaya puree which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a papaya drink may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Frozen papaya puree which possesses a good consistency when prepared as a papaya drink may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Frozen papaya puree which possesses a fairly good consistency when prepared as a papaya drink may be given a score of

- seventeen to twenty points and shall be classified as choice; and
- (C) Frozen papaya puree which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a papaya drink may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
- (A) Frozen papaya puree which is practically free from defects when prepared as a papaya drink may be given a score of seventeen to twenty points and shall be classified as fancy;
- (B) Frozen papaya puree which is fairly free from defects when prepared as a papaya drink may be given a score of fourteen to sixteen points and shall be classified as choice; and
- (C) Frozen papaya puree which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a papaya drink may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
- (A) Frozen papaya puree which possesses a good flavor when prepared as a papaya drink may be given a score of thirty to thirty-five points and shall be classified as fancy;
- (B) Frozen papaya puree which possesses a reasonably good flavor when prepared as a papaya drink may be given a score of twenty-five to twenty-nine points and shall be classified as choice; and
- (C) Frozen papaya puree which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a papaya drink may be given a score of zero to twenty-four points and shall be classified as substandard.
- (f) Clotting test for papain shall include:
- (1) Reagents as follows:
- (A) Instant nonfat dry milk;
- (B) Potassium phosphate, monobasic (hereafter  $\text{KH}_2\text{PO}_4$ );
- (C) Rennet powder; and
- (D) Distilled water;
- (2) Apparatus as follows:
- (A) One hundred ml volumetric flask;

- (B) One ml pipette;
  - (C) Five ml pipette;
  - (D) Test tubes with stoppers;
  - (E) Balances;
  - (F) Thermometer;
  - (G) Centrifuge; and
  - (H) pH meter; and
- (3) Procedure as follows:
- (A) Weigh eight grams  $\text{KH}_2\text{PO}_4$  and dilute to one hundred ml with distilled water;
  - (B) Weigh ten grams nonfat dry milk and dilute to one hundred ml with distilled water;
  - (C) Mix together the solutions from paragraphs (A) and (B) and, if necessary, adjust the pH of the mixture to five and three-tenths with  $\text{KH}_2\text{PO}_4$  or sodium hydroxide ( $\text{NaOH}$ ), whichever is necessary (this mixture will be satisfactory for use for almost a week if kept under refrigeration);
  - (D) Prepare a fresh standardizing solution of rennet powder in distilled water using one milligram rennet powder for each ml of standardizing solution;
  - (E) Standardize the phosphate and milk solution by adding one ml of standardizing solution to five ml of the phosphate and milk solution at twenty-five degrees celsius (the time required to clot the phosphate and milk solution should be about thirty seconds, but if the time is more or less than thirty seconds, the minimum time allowed for clotting by the papaya puree should be proportionately longer or shorter than the minimum time stated in the grade, with the adjusted time calculated by utilizing the formula  $X/T$  equals  $S/30$ , where S equals clotting time in seconds using the standardizing solution, T is the minimum clotting time requirement stated in the grade, and X is the minimum clotting time permitted using the prepared milk and phosphate solution); and
  - (F) To determine clotting time of the papaya puree, centrifuge the puree at 942 times gravity for ten minutes, add one ml of the supernatant liquid to five ml of the phosphate and milk solution, and read the time required for the first evidence

of clotting to appear in the phosphate and milk solution as the clotting time.

(g) The speed of the centrifuge machine shall be from column B in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(h) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that the container be filled as full as practicable with frozen puree without impairment of quality. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-9 Standards for canned passion fruit nectar. (a) As used in this section:

"Canned passion fruit nectar" is the diluted, unfermented juice and pulp obtained from the sound, mature, fresh fruit of the passion fruit vine (*Passiflora edulis* or *Passiflora edulis* f. *flavicarpa* or hybrids of these species) which juice and pulp may have been preserved by freezing or chilling, and which fruit has been properly comminuted; is packed with the addition of potable water and of nutritive sweetening ingredients with or without the addition of fruit acids or ascorbic acid, provided that at least one-sixth, by weight, of the nectar consists of passion fruit juice and pulp in natural proportions; and is sufficiently processed by heat or other approved method to assure preservation of the product in hermetically sealed containers.

"Fairly free from defects" means practically no seeds or portions of seeds are present; the drinking quality and appearance of the nectar are not seriously affected by the presence of objectionable material, harmless extraneous materials, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter; and the mold count does not exceed ten per cent.

"Fairly good consistency" means the nectar flows readily; is not excessively thick; shows no more than a slight coagulation; and contains not less than four per cent centrifuged solids.

"Good color" means the color of the nectar is fairly bright and yellow; fairly typical of nectar prepared from freshly extracted passion fruit juice and



pulp; and not excessively dull or brown colored or seriously off-color from any cause.

"Good consistency" means the nectar flows readily; shows very little or no tendency to separate; shows no coagulation; and contains not less than six per cent centrifuged solids.

"Good flavor" means a fine, distinct canned passion fruit nectar flavor which is free from bitter, oxidized, immature fruit, woody, or other off-flavors and the brix reading is not less than ten degrees; the acid reading is not less than four-tenths gram per one hundred ml of nectar; and the brix to acid ratio is not more than thirty-five to one.

"Practically free from defects" means the nectar contains no seeds or portions of seeds; the appearance and drinking quality of the nectar is not materially affected by the presence of objectionable material, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the mold count does not exceed ten per cent; and the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed an area of a circle one-sixteenth inch in diameter.

"Reasonably good flavor" means a fairly typical flavor of canned passion fruit nectar which is practically free from marked bitter, oxidized, immature fruit, woody, or other off-flavors of any kind and the brix reading is not less than nine and one-half degrees; the acid reading is not less than thirty-five hundredths gram per one hundred ml of nectar; and the brix to acid ratio is not more than forty-five to one.

"Very good color" means that the color of the canned passion fruit nectar is typical of nectar prepared from freshly extracted passion fruit juice and pulp; i.e., it is bright, a good yellow in color, and free from browning or other abnormal color by any cause.

(b) Hawaii Grade A or Hawaii Fancy canned passion fruit nectar is the quality of canned passion fruit nectar that possesses a very good color, good flavor, and good consistency; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade C or Hawaii Standard canned passion fruit nectar is the quality of canned passion fruit nectar that possesses a good color, reasonably good flavor, and fairly good consistency; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard canned passion fruit nectar is the quality of canned passion fruit nectar that fails

to meet the requirements of subsections (b) and (c).

(e) The grade of canned passion fruit nectar shall be ascertained by considering the factors of quality. The importance of each quality factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be fifteen points for color; twenty-five points for consistency; twenty-five points for absence of defects; and thirty-five points for flavor. Canned passion fruit nectar which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to canned passion fruit nectar:

- (1) Color classifications shall be as follows:
  - (A) Canned passion fruit nectar that possesses very good color may be given a score of thirteen to fifteen points and shall be classified as fancy;
  - (B) Canned passion fruit nectar that possesses good color may be given a score of eleven or twelve points and shall be classified as standard; and
  - (C) Canned passion fruit nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to ten points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Canned passion fruit nectar that possesses good consistency may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Canned passion fruit nectar that possesses a fairly good consistency may be given a score of seventeen to twenty points and shall be classified as standard; and
  - (C) Canned passion fruit nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Canned passion fruit nectar that is practically free from defects may be given a score of twenty-one to twenty-five points and shall be scored as

- fancy;
- (B) Canned passion fruit nectar that is fairly free from defects may be given a score of seventeen to twenty points and shall be scored as standard; and
  - (C) Canned passion fruit nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to sixteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
- (A) Canned passion fruit nectar that possesses good flavor may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Canned passion fruit nectar that possesses reasonably good flavor may be given a score of twenty-five to twenty-nine points and shall be classified as standard; and
  - (C) Canned passion fruit nectar that fails to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(g) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that the container be as full of passion fruit nectar as practicable, and that the product occupy not less than ninety per cent of the volume capacity of the container. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS§147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-10 Standards for frozen passion fruit juice. (a) As used in this section:

"Fairly free from defects" means no seeds or portions of seeds are present; the appearance and drinking quality of the passion fruit drink are not seriously affected by the presence of dark specks, other objectionable material, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the

centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter; and the mold count does not exceed ten per cent.

"Fairly good consistency" means the drink flows readily; is not excessively thick; and contains not less than four per cent centrifuged solids.

"Frozen passion fruit juice" is the undiluted, unconcentrated, unfermented juice and pulp obtained from the sound, mature, fresh fruits of the passion fruit vine (*Passiflora edulis* or *Passiflora edulis* f. *flavicarpa* or hybrids of these species) which fruit has been properly washed and prepared; is packed with or without the addition of ascorbic acid or fruit acids, provided not less than seventy-five per cent, by weight, of the acidity in the frozen fruit juice is derived from the pulp and juice of the passion fruit; is processed in accordance with good commercial practice; and is frozen and maintained at temperatures sufficient for the preservation of the product.

"Good color" means the color is fairly typical of a drink prepared from freshly extracted passion fruit juice; not dark or discolored; and free from browning or other abnormal color by any cause.

"Good consistency" means the prepared drink flows readily; shows very little or no tendency to separate; and contains not less than six per cent centrifuged solids.

"Good flavor" means a fine, distinct, and substantially typical flavor of a passion fruit drink prepared from freshly expressed passion fruit juice and the flavor is free from bitter, oxidized, immature fruit, or other off-flavors; the brix reading is not less than twelve degrees; and the acid reading is not less than three and two-tenths gram per one hundred grams of juice.

"Passion fruit drink" means the passion fruit juice is diluted with water based on the manufacturer's directions or label specifications, or by the addition of four volumes of potable water to one volume of passion fruit juice.

"Practically free from defects" means no seeds or portions of seeds are present; the drinking quality and appearance of the prepared drink are not more than slightly affected by the presence of dark specks, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed an area of a circle one-sixteenth inch in diameter; and the mold count does not exceed ten per cent.

"Reasonably good flavor" means fairly typical

flavor of a passion fruit drink prepared from freshly expressed passion fruit juice and the flavor is practically free from bitter, oxidized, immature fruit, or other off-flavors and free from abnormal flavors of any kind; the brix reading is not less than eleven degrees; and the acid reading is not less than three grams per one hundred grams of juice.

"Very good color" means a good, bright, characteristic color that reflects the appearance of a passion fruit drink prepared from freshly expressed passion fruit juice and that is free from browning or other abnormal color by any cause.

(b) Hawaii Grade A or Hawaii Fancy frozen passion fruit juice is the quality of frozen passion fruit juice which mixes readily into a passion fruit drink that possesses the amount of pulp and cloud necessary to substantially reflect the appearance of a passion fruit drink prepared from freshly expressed passion fruit juice; that possesses a very good color, good consistency, and good flavor; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade B or Hawaii Choice frozen passion fruit juice is the quality of frozen passion fruit juice which mixes readily into a passion fruit drink that possesses the amount of pulp and cloud necessary to reasonably reflect the appearance of a passion fruit drink prepared from freshly expressed passion fruit juice; that possesses a good color, fairly good consistency, and reasonably good flavor; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard frozen passion fruit juice is the quality of frozen passion fruit juice that fails to meet the requirements of subsections (b) and (c).

(e) The grade of frozen passion fruit juice shall be ascertained by considering both the factor of quality which is not scored (ease of mixing into passion fruit nectar) and the quality factors which are scored. The importance of each quality factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be twenty points for color; twenty-five points for consistency; twenty points for defects; and thirty-five points for flavor. The points score for each quality factor shall be determined before or immediately after the product has been prepared as a passion fruit drink. Frozen passion fruit juice which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification

regardless of the total score for the product. The following quality classifications shall apply to frozen passion fruit juice:

- (1) Color classifications shall be as follows:
  - (A) Frozen passion fruit juice which possesses a very good color when prepared as a passion fruit drink may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen passion fruit juice which possesses a good color when prepared as a passion fruit drink may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen passion fruit juice which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit drink may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Frozen passion fruit juice which possesses a good consistency when prepared as a passion fruit drink may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Frozen passion fruit juice which possesses a fairly good consistency when prepared as a passion fruit drink may be given a score of seventeen to twenty points and shall be classified as choice; and
  - (C) Frozen passion fruit juice which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit drink may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Frozen passion fruit juice which is practically free from defects when prepared as a passion fruit drink may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen passion fruit juice which is fairly free from defects when prepared as a passion fruit drink may be given a score of fourteen to sixteen points and shall be classified as choice; and

- (C) Frozen passion fruit juice which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit drink may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
  - (A) Frozen passion fruit juice which possesses a good flavor when prepared as a passion fruit drink may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Frozen passion fruit juice which possesses a reasonably good flavor when prepared as a passion fruit drink may be given a score of twenty-five to twenty-nine points and shall be classified as choice; and
  - (C) Frozen passion fruit juice which fails to meet the requirements of subparagraphs (A) or (B) when prepared as a passion fruit drink may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(g) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that each container be filled as full as practicable with frozen passion fruit juice without impairment of quality. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-11 Standards for frozen passion fruit nectar base. (a) As used in this section:

"Fairly free from defects" means practically no seed or portions of seeds are present; the drinking quality and appearance of the passion fruit nectar are not seriously affected by the presence of objectionable material, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed the area of a circle two-sixteenths inch in diameter; and the mold count

does not exceed ten per cent.

"Fairly good consistency" means the nectar flows readily; is not excessively thick; and contains not less than four per cent centrifuged solids.

"Frozen passion fruit nectar base" is the undiluted, unconcentrated, unfermented juice and pulp in natural proportions obtained from the sound, mature, fresh fruit of the passion fruit vine (*Passiflora edulis* or *Passiflora edulis* f. *flavicarpa* or hybrids of these species), which fruit has been properly washed and properly prepared; is packed with the addition of non-liquid nutritive sweetening ingredients with or without the addition of ascorbic acid or fruit acids, provided that not less than seventy-five per cent, by weight, of the acidity of the frozen passion fruit nectar base is derived from the pulp and juice of the passion fruit; is processed in accordance with good commercial practice; and is frozen and maintained at temperatures sufficient for the preservation of the product.

"Good color" means the color is fairly typical of nectar prepared from freshly extracted passion fruit juice; not dark or discolored; and free from browning or other abnormal color by any cause.

"Good consistency" means the prepared nectar flows readily; shows very little or no tendency to separate; and contains not less than six per cent centrifuged solids.

"Good flavor" means a fine, distinct, and substantially typical flavor of passion fruit nectar prepared from freshly expressed passion fruit juice and the flavor is free from bitter, oxidized, immature fruit, or other off-flavors; the brix reading is not less than ten and one-half degrees nor more than fourteen degrees; the acid reading is not less than thirty-five hundredths gram nor more than six-tenths gram per one hundred ml of prepared nectar; and the brix to acid ratio is not less than nineteen to one nor more than thirty-five to one.

"Practically free from defects" means no seeds or portions of seeds are present; the drinking quality and appearance of the nectar are not more than slightly affected by the presence of objectionable material, harmless extraneous material, any other defect not specifically mentioned, or any combination of these defects; the aggregate area of any black or brown deposit at the bottom of the centrifuge tube after centrifuging does not exceed an area of a circle one-sixteenth inch in diameter; and the mold count does not exceed ten per cent.

"Prepared passion fruit nectar" means the passion fruit nectar base is diluted with water based on the



manufacturer's directions or label specifications, or by the addition of four volumes of potable water to one volume of frozen passion fruit nectar base.

"Reasonably good flavor" means a fairly typical flavor of passion fruit nectar prepared from freshly expressed passion fruit juice and the flavor is practically free from bitter, oxidized, immature fruit, or other off-flavors and free from abnormal flavors of any kind; the brix reading is not less than nine and one-half degrees nor more than fifteen degrees; the acid reading is not less than three-tenths gram nor more than seven-tenths gram per one hundred ml of prepared nectar; and the brix to acid ratio is not less than seventeen to one nor more than forty to one.

"Very good color" means the color is bright and typical of nectar prepared from freshly extracted passion fruit juice, and free from browning or other abnormal color by any cause.

(b) Hawaii Grade A or Hawaii Fancy frozen passion fruit nectar base is the quality of frozen passion fruit nectar base which mixes readily into a passion fruit nectar that possesses the amount of pulp and cloud necessary to substantially reflect the appearance of a passion fruit nectar prepared from freshly expressed passion fruit juice; that possesses a very good color, good consistency, and good flavor; and that is practically free from defects and scores not less than eighty-five points by the scoring system in subsection (e).

(c) Hawaii Grade B or Hawaii Choice frozen passion fruit nectar base is the quality of frozen passion fruit nectar base which mixes readily into a passion fruit nectar that possesses the amount of pulp and cloud necessary to reasonably reflect the appearance of passion fruit nectar prepared from freshly expressed passion fruit juice; that possesses good color, fairly good consistency, and a reasonably good flavor; and that is fairly free from defects and scores not less than seventy points by the scoring system in subsection (e).

(d) Substandard frozen passion fruit nectar base is the quality of frozen passion fruit nectar base that fails to meet the requirements of subsections (b) and (c).

(e) The grade of frozen passion fruit nectar base shall be ascertained by considering both the factor of quality which is not scored (ease of mixing into passion fruit nectar) and those factors which are scored. The importance of each quality factor scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given such quality factors shall be twenty points for

color; twenty-five points for consistency; twenty points for absence of defects; and thirty-five points for flavor. The points score for each quality factor shall be determined immediately after the product has been prepared as passion fruit nectar. Frozen passion fruit nectar base which falls into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to frozen passion fruit nectar base:

- (1) Color classifications shall be as follows:
  - (A) Frozen passion fruit nectar base which possesses a very good color when prepared as a passion fruit nectar may be given a score of seventeen to twenty points and shall be classified as fancy;
  - (B) Frozen passion fruit nectar base which possesses a good color when prepared as a passion fruit nectar may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen passion fruit nectar base which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit nectar may be given a score of zero to thirteen points and shall be classified as substandard;
- (2) Consistency classifications shall be as follows:
  - (A) Frozen passion fruit nectar base which possesses a good consistency when prepared as a passion fruit nectar may be given a score of twenty-one to twenty-five points and shall be classified as fancy;
  - (B) Frozen passion fruit nectar base which possesses a fairly good consistency when prepared as a passion fruit nectar may be given a score of seventeen to twenty points and shall be classified as choice; and
  - (C) Frozen passion fruit nectar base which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit nectar may be given a score of zero to sixteen points and shall be classified as substandard;
- (3) Absence of defects classifications shall be as follows:
  - (A) Frozen passion fruit nectar base which is practically free from defects when

- prepared as a passion fruit nectar may be given a score of seventeen to twenty points and shall be classified as fancy;
- (B) Frozen passion fruit nectar base which is fairly free from defects when prepared as a passion fruit nectar may be given a score of fourteen to sixteen points and shall be classified as choice; and
  - (C) Frozen passion fruit nectar base which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit nectar may be given a score of zero to thirteen points and shall be classified as substandard; and
- (4) Flavor classifications shall be as follows:
- (A) Frozen passion fruit nectar base which possesses a good flavor when prepared as a passion fruit nectar may be given a score of thirty to thirty-five points and shall be classified as fancy;
  - (B) Frozen passion fruit nectar base which possesses a reasonably good flavor when prepared as a passion fruit nectar may be given a score of twenty-five to twenty-nine points and shall be classified as choice; and
  - (C) Frozen passion fruit nectar base which fails to meet the requirements of subparagraphs (A) and (B) when prepared as a passion fruit nectar may be given a score of zero to twenty-four points and shall be classified as substandard.

(f) The speed of the centrifuge machine for the determination of centrifuged solids shall be from column A in "Table I, Approximate Revolutions of Centrifuge Machine, 8/24/68", which is located at the end of this chapter and made a part of this chapter.

(g) The recommended fill of container shall not be incorporated in the grades of the finished product since fill of container is not a factor of quality for the purpose of this section. It is recommended that each container be filled as full as practicable with frozen passion fruit juice without impairment of quality. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-12 Standards for fruit preserves or jams and fruit jelly. (a) As used in this section: "Fruit jelly" means the jellied foods each of

which is made from a mixture composed of not less than forty-five parts by weight of one of any combination of not more than five varieties of fruit juice ingredients to each fifty-five parts by weight of optional ingredients. Fruit juice and optional ingredients are specified in section 150.140(b) and (c) of Title 21, Part 150, Fruit Butters, Jellies, Preserves, and Related Products, Code of Federal Regulations, as amended April 1, 1984, which is made a part of this section.

"Fruit preserves or jams" means preserve or jam, each of which is made from a mixture composed of not less than forty-five parts by weight of one fruit ingredient to each fifty-five parts by weight of optional ingredients. Fruit and optional ingredients are specified in section 150.160(b) and (c) of Title 21, Part 150, Fruit Butters, Jellies, Preserves, and Related Products, Code of Federal Regulations, as amended April 1, 1984, which is made a part of this section.

(b) The United States Standards for Grades of Fruit Jelly, effective September 3, 1979, and the United States Standards for Grades of Fruit Preserves (or Jams), effective January 4, 1980, are made a part of this section. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-13 Standards for roasted macadamia nuts.

(a) As used in this section:

"Absence of defects" means the degree of freedom from adhering shell, blemish, dark center, shriveling, loose extraneous material, and any other defect which detracts from the appearance or eating quality of the product.

"Blemish" means discolored spot or spots on the kernel surface, including insect scars.

"Crisp" means that practically all of the kernels are firm and crunchy in Styles I, II, III, IV, and V; and for Styles VI and VII, the eating quality is not appreciably affected by kernels which are not firm and crunchy.

"Critical defect" means any defect or combination of defects, such as mold, insect infestation, and foreign material, which seriously detracts from the edibility of the product, or which is not attendant with good commercial practice and can be expected to occur only infrequently.

"Deviants" means sample units that fall into the next grade below the indicated grade but do not score more than four score points below the minimum total

score for the indicated grade.

"Good color" means the kernel color is typical and characteristic of mature macadamia nuts and of the roasting process employed; that any variation in shade of color within the mass or within a unit is not more than slight; and that a discolored ring may be present, provided that the appearance of the product is not materially affected.

"Loose extraneous material" means any salt, kernel pieces, and shell pieces which will pass through a 3/32 inch square opening. This term shall apply to Styles I, II, III, IV, and V only.

"Major defect" means any defect or combination of defects which seriously detracts from the appearance or eating quality of the macadamia nuts. The following defects shall be considered major defects:

- (1) Adhering shell, when any of the following conditions exists on a kernel:
  - (A) Shell specks which seriously affect the appearance or eating quality of the nut;
  - (B) Any shell piece that exceeds an area 1/16 inch in diameter; or
  - (C) Any shell piece that exceeds 3/32 inch in length or width;
- (2) Blemish, when any of the following conditions exists on a kernel:
  - (A) Any dark brown or black spot, or an aggregate of such spots within a one-half inch area, which exceeds an area 1/16 inch in diameter;
  - (B) Any markedly discolored spot, or an aggregate of such spots within a one-half inch area, which exceeds an area one-eighth inch in diameter;
  - (C) Any prominent spot encircled by a reddish brown line, or an aggregate of such spots within a one-half inch area, which exceeds an area 3/16 inch in diameter; or
  - (D) Speckles that seriously affect appearance;
- (3) Dark center, when the naturally exposed kernel center is markedly darker than the remainder of the affected kernel; and
- (4) Shriveling, when the kernel is moderately wrinkled or shriveled.

"Minor defect" means any defect or combination of defects which materially detracts from the appearance or eating quality of the macadamia nuts. The following defects shall be considered minor defects:

- (1) Adhering shell, when any of the following conditions exists on a kernel:

- (A) Shell specks that affect the appearance or eating quality of the nut more than slightly; or
- (B) Any shell piece that exceeds 1/32 inch both in length and width;
- (2) Blemish, when any of the following conditions exists on a kernel:
  - (A) Any spot that is markedly discolored;
  - (B) Any spot that is more than slightly discolored and exceeds an area 3/32 inch in diameter;
  - (C) Any spot that is more than slightly discolored and exceeds one-eighth inch in length or width;
  - (D) A markedly discolored ring; or
  - (E) Speckles that affect appearance more than slightly;
- (3) Dark center, when the naturally exposed kernel center is more than slightly darker than the remainder of the affected kernel; and
- (4) Shriveling, when the kernel is appreciably wrinkled or shriveled.

"Moisture content" means the moisture content of a composite sample of kernels. The moisture content shall be determined with an instrument that has been correlated with the vacuum oven method of determining per cent moisture. The per cent moisture shall be calculated by the formula  $X - Y$  divided by  $X$  and the resulting quotient multiplied by one hundred, with  $X$  representing the weight of the kernels before drying and  $Y$  representing the weight of the kernels after drying.

"Normal flavor and odor" means the kernel has a flavor and odor that are characteristic of well developed, properly roasted macadamia nuts and is free from bitterness, rancidity, and any other objectionable flavor or odor. Occasional units which do not meet the foregoing requirements may be permitted, provided that these units do not appreciably affect the eating quality of the product.

"Practically free from defects" means the following for the respective styles:

- (1) Styles I, II, III, IV, and V shall have not more than eight per cent total defects, including not more than two per cent major defects, not more than two per cent loose extraneous material, and no critical defects; and
- (2) For Styles VI, VII, and VIII, the appearance or eating quality of the product shall not be more than slightly affected by any defect or

combination of defects.

"Reasonably free from defects" means the following for the respective styles:

- (1) Styles I, II, III, IV, and V shall have not more than fifteen per cent major defects, not more than three per cent loose extraneous material, and no critical defects; and
- (2) For Styles VI, VII, and VIII, the appearance or eating quality of the product shall not be more than materially affected by any defect or combination of defects.

"Reasonably good color" means the kernel color is reasonably typical and characteristic of mature macadamia nuts and of the roasting process employed; that any variation in shade of color within the mass or within a unit may be marked; and a discolored ring may be present, provided that the appearance of the product is not seriously affected.

"Reasonably normal flavor and odor" means the kernel has a flavor and odor that are reasonably characteristic of well developed, properly roasted macadamia nuts and is free of bitterness, rancidity, and any other objectionable flavor or odor. Occasional units which do not meet the foregoing requirements may be permitted, provided that these units do not affect the eating quality of the product more than appreciably.

"Reasonably uniform in size and type" means the following for the respective styles:

- (1) Style I (wholes) shall consist of at least eighty per cent whole kernels with the remaining units of such size that not more than two per cent will pass through a one-fourth inch square opening;
- (2) Style II (wholes and halves) shall consist of at least thirty-five per cent whole kernels with the remaining units of such size that not more than five per cent will pass through a 5/16 inch square opening;
- (3) Style III (cocktail) shall consist of at least seventy-five per cent half and larger kernels, included therein at least fifteen per cent whole kernels, with the remaining units of such size that not more than five per cent will pass through a one-fourth inch square opening;
- (4) Style IV (halves and pieces) shall consist of at least thirty-five per cent half kernels with the remaining units of such size that not more than five per cent will pass through a one-fourth inch square opening and not more than ten per cent are larger than half

- kernels;
- (5) Style V (large diced) shall consist of units which are smaller than half kernels but of such size that not more than fifteen per cent will pass through a 5/16 inch by one inch opening, included therein not more than five per cent that will pass through a 3/32 inch square opening;
  - (6) Style VI (chips) shall consist of units of such size that at least eighty per cent will pass through a 5/16 inch by one inch opening but not more than five per cent will pass through a 3/32 inch square opening;
  - (7) Style VII (bits, diced) shall consist of units which are smaller than half kernels and of such size that at least eighty per cent will pass through a 5/16 inch square opening, but not more than fifteen per cent will pass through a 3/32 inch square opening; and
  - (8) Style VIII (fines) shall consist of units of such size that all the units will pass through a one-fourth inch square opening and at least seventy per cent will also pass through a 3/32 inch square opening.

"Roasted macadamia nuts" means the product prepared from the shelled nut of the macadamia tree, which may be roasted plain or in edible oil, either salted or unsalted, and may contain suitable preservatives and other ingredients permitted under the Food, Drug, and Cosmetic Act, Title 21, United States Code.

"Uniform in size and type" means the following for the respective styles:

- (1) Style I (wholes) shall consist of not less than ninety per cent whole kernels with the remaining units of such size that not more than one per cent will pass through a one-fourth inch square opening;
- (2) Style II (wholes and halves) shall consist of at least fifty per cent whole kernels with the remaining units of such size that not more than two per cent will pass through a 5/16 inch square opening;
- (3) Style III (cocktail) shall consist of at least ninety per cent half and larger kernels, included therein at least twenty-five per cent whole kernels, with the remaining units of such size that not more than two per cent will pass through a one-fourth inch square opening;
- (4) Style IV (halves and pieces) shall consist of at least fifty per cent half kernels with the



- remaining units of such size that not more than two per cent will pass through a one-fourth inch square opening and not more than five per cent are larger than half kernels;
- (5) Style V (large diced) shall consist of units which are smaller than half kernels but of such size that not more than five per cent will pass through a 5/16 inch by one inch opening, included therein not more than two per cent that will pass through a 3/32 inch square opening;
  - (6) Style VI (chips) shall consist of units of such size that at least ninety-five per cent will pass through a 5/16 inch by one inch opening but not more than two per cent will pass through a 3/32 inch square opening;
  - (7) Style VII (bits, diced) shall consist of units which are smaller than half kernels and of such size that at least ninety-five per cent will pass through a 5/16 inch square opening but not more than ten per cent will pass through a 3/32 inch square opening; and
  - (8) Style VIII (fines) shall consist of units of such size that all the units will pass through a one-fourth inch square opening and at least eighty per cent will also pass through a 3/32 inch square opening.
- (b) Styles of roasted macadamia nuts shall consist of the following:
- (1) Style I (wholes) shall consist of whole kernels;
  - (2) Style II (wholes and halves) shall consist of whole kernels and half kernels;
  - (3) Style III (cocktail) shall consist of a combination of whole kernels, half kernels, and portions of kernels of such size that the units will not pass through a one-fourth inch square opening;
  - (4) Style IV (halves and pieces) shall consist of half kernels and portions of half kernels of such size that the units will not pass through a one-fourth inch square opening;
  - (5) Style V (large diced) shall consist of units which are smaller than half kernels and of such size that the units will not pass through a 5/16 inch by one inch opening;
  - (6) Style VI (chips) shall consist of portions of kernels of such size that the units will pass through a 5/16 inch by one inch opening but not through a 3/32 inch square opening;
  - (7) Style VII (bits, diced) shall consist of units which are smaller than half kernels and

of such size that the units will pass through a 5/16 inch square opening but not through a 3/32 inch square opening; and

- (8) Style VIII (fines) shall consist of broken, chipped, or chopped kernels of such size that the units will pass through a one-fourth inch square opening and most will also pass through a 3/32 inch square opening.

(c) Hawaii Grade A or Hawaii Fancy roasted macadamia nuts shall consist of roasted macadamia nuts that possess a normal flavor and odor, good color, and a moisture content of not more than one and one-half per cent, by weight; and that are crisp for the applicable style, uniform in size and type, practically free from defects, and score not less than ninety points by the scoring system in subsection (f).

(d) Hawaii Grade B or Hawaii Choice roasted macadamia nuts shall consist of roasted macadamia nuts that possess a reasonably normal flavor and odor, reasonably good color, and a moisture content of not more than one and one-half per cent, by weight; and that are crisp for the applicable style, reasonably uniform in size and type, reasonably free from defects, and score not less than eighty points by the scoring system in subsection (f).

(e) Substandard roasted macadamia nuts shall consist of roasted macadamia nuts which fail to meet the requirements of subsections (c) and (d).

(f) The grade of roasted macadamia nuts shall be ascertained by factors of quality which are not scored (i.e., flavor and odor, crispness, and moisture content) and also by factors which are scored. The importance of each quality factor which is scored shall be expressed numerically on the scale of one hundred. The maximum number of points which may be given to specific quality factors shall be forty points for color, thirty points for uniformity of size and type, and thirty points for absence of defects. Roasted macadamia nuts which fall into a particular classification for any quality factor shall not be assigned a grade indicative of a higher classification regardless of the total score for the product. The following quality classifications shall apply to roasted macadamia nuts:

- (1) Color classifications shall be as follows:
  - (A) Roasted macadamia nuts that possess a good color may be given a score of thirty-six to forty points and shall be classified as fancy;
  - (B) Roasted macadamia nuts that possess a reasonably good color may be given a score of thirty to thirty-five points

- and shall be classified as choice; and
    - (C) Roasted macadamia nuts that fail to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-nine points and shall be classified as substandard;
  - (2) Uniformity of size and type classifications shall be as follows:
    - (A) Roasted macadamia nuts that are uniform in size and type may be given a score of twenty-seven to thirty points and shall be classified as fancy;
    - (B) Roasted macadamia nuts that are reasonably uniform in size and type may be given a score of twenty-five or twenty-six points and shall be classified as choice; and
    - (C) Roasted macadamia nuts that fail to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard; and
  - (3) Absence of defects classifications shall be as follows:
    - (A) Roasted macadamia nuts that are practically free from defects may be given a score of twenty-seven to thirty points and shall be classified as fancy;
    - (B) Roasted macadamia nuts that are reasonably free from defects may be given a score of twenty-five or twenty-six points and shall be classified as choice; and
    - (C) Roasted macadamia nuts that fail to meet the requirements of subparagraphs (A) and (B) may be given a score of zero to twenty-four points and shall be classified as substandard.
- (g) Grade determination and lot compliance procedures shall be as follows:
  - (1) Compliance with grade standards for roasted macadamia nuts shall be determined by evaluating the product, or sample, in accordance with the requirements of those standards; and
  - (2) The grade assigned to a lot shall be the grade indicated by the average of the total scores of the respective sample units, provided:
    - (A) The sample complies with the product description;
    - (B) The sample meets the indicated grade

- with respect to factors of quality which are not rated by score points;
- (C) With respect to those factors of quality rated by score points, each of the following requirements is met:
    - (i) None of the sample units falls more than one grade below the indicated grade because of any quality factor to which a limiting rule applies;
    - (ii) None of the sample units falls more than four score points below the minimum total score for the indicated grade; and
    - (iii) The number of deviants (sample units which fall into the next grade below the indicated grade but do not score more than four score points below the minimum total score for the indicated grade) does not exceed the applicable acceptance number in the sampling plans;
  - (D) If any of the provisions contained in the requirements of subparagraphs (B) and (C) are not met, the grade shall be determined by considering the provisions in connection with succeeding lower grades until the grade of the lot, if assignable, is established; and
  - (E) When it is determined that a portion of a lot bearing a particular identification mark is of lower quality or deficient in other factors, the grade or compliance of the lot shall be no higher than that of the portion bearing the particular identification mark.  
[Eff 5/29/81; am 8/18/83; am and comp 3/42/86] (Auth: HRS §147-57) (Imp: HRS §§147-52 and 147-53)

§4-44-14 Minimum export requirement for processed products. The following minimum requirements shall apply to Hawaii-grown processed fruits and vegetables which are exported, intended for export, or otherwise destined for shipment by commercial exporters to points outside the State:

- (1) Canned guava nectar for export shall meet the requirements of Hawaii Standard;
- (2) Frozen guava nectar base for export shall meet the requirements of Hawaii Choice;

- (3) Frozen guava puree for export shall meet the requirements of Hawaii Choice;
- (4) Canned papaya nectar for export shall meet the requirements of Hawaii Standard;
- (5) Canned papaya-passion fruit nectar blend for export shall meet the requirements of Hawaii Standard;
- (6) Frozen papaya puree for export shall meet the requirements of Hawaii Choice;
- (7) Canned passion fruit nectar for export shall meet the requirements of Hawaii Standard;
- (8) Frozen passion fruit juice for export shall meet the requirements of Hawaii Choice;
- (9) Frozen passion fruit nectar base for export shall meet the requirements for Hawaii Choice;
- (10) Fruit preserves and jelly for export shall meet the requirements of U.S. Grade B or U.S. Choice; and
- (11) Roasted macadamia nuts for export shall meet the requirements of Hawaii Choice. [Eff 5/29/81; am and comp 3/24/86] (Auth: HRS §147-22) (Imp: HRS §147-22)

§4-44-15 Product certification inspection. (a) Any processor, buyer, or other financially interested party may apply for a product certification inspection with the department.

~~(b) The fee for any product certification inspection shall be at the rate established by the Agricultural Marketing Service, United States Department of Agriculture. Additional charges may be assessed for transportation, travel time, per diem, and other actual expenses incurred by the department when an inspection is performed in an area not conveniently located. There shall be no charge for travel time when an inspection point is located not more than ten minutes travel time or seven miles travel distance, whichever is greater, from the office of inspection.~~

~~(c) When payments of inspection fees are by check, a service fee of \$7.50 shall be assessed for each check that is not honored due to insufficient funds. [Eff 5/29/81; am 8/18/83; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §147-57)~~

§4-44-16 Appeal inspection. (a) An application for an appeal inspection may be made by any interested party dissatisfied with the findings of the original inspection.

(b) If the result of the appeal inspection substantiates the result of the original inspection, the fees and charges in section 4-44-15(b) and (c) shall apply to the appeal inspection.

(c) If the result of the appeal inspection discloses that a material error was made in the original inspection, no fees or charges shall be assessed for the appeal inspection. [Eff 8/18/83; am and comp 3/24/86] (Auth: HRS §147-60) (Imp: HRS §147-60)

§4-44-17 Provisions for enforcement. Any authorized inspector of the department may enter any public or private premises during business hours to determine whether any processed product is in compliance with the provisions of this chapter. [Eff 8/18/83; am and comp 3/24/86] (Auth: HRS §147-57) (Imp: HRS §147-57)

§4-44-18 Penalties. Any person who violates any provision of this chapter may be subject to the actions, procedures, and penalties provided in sections 147-25 and 147-63, Hawaii Revised Statutes. [Eff 1/16/84; ren and comp 3/24/86] (Auth: HRS §§147-22 and 147-63) (Imp: HRS §§147-25 and 147-63)

FIGURE 1  
CAPILLARY CPC VISCOMETER  
8/24/68

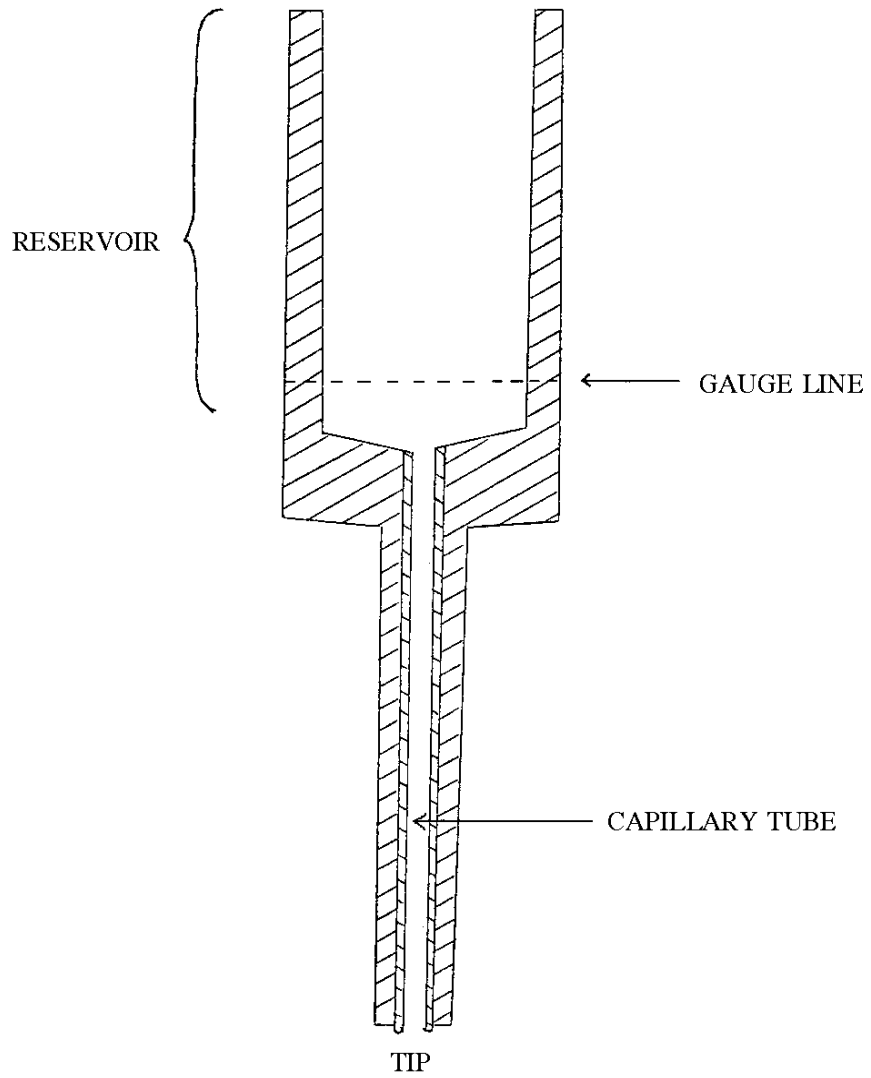


TABLE I 1/

## Approximate Revolutions of Centrifuge Machine-8/24/68

Diameter <u>2</u> /	Approximate Revolutions Per Min.	
	(A)	(B)
10 inches .....	1,609	2,577
10-1/2 inches .....	1,570	2,515
11 inches .....	1,534	2,457
11-1/2 inches .....	1,500	2,403
12 inches .....	1,468	2,353
12-1/2 inches .....	1,438	2,305
13 inches .....	1,410	2,260
13-1/2 inches .....	1,384	2,218
14 inches .....	1,359	2,178
14-1/2 inches .....	1,336	2,140
15 inches .....	1,313	2,104
15-1/2 inches .....	1,292	2,070
16 inches .....	1,271	2,037
16-1/2 inches .....	1,252	2,006
17 inches .....	1,234	1,977
17-1/2 inches .....	1,216	1,948
18 inches .....	1,199	1,921
18-1/2 inches .....	1,182	1,895
19 inches .....	1,167	1,870
19-1/2 inches .....	1,152	1,846
20 inches .....	1,137	1,822
20-1/2 inches .....	1,125	1,800

1/ This table, calculated from the formula  $R.C.F. = 0.00001118 N^2 r$  provides a Relative Centrifugal Force of 364.6 times gravity for (A) and 942 times gravity for (B).

R.C.F. = Relative centrifugal force (gravities)  
 r = Rotating radius (centimeters)  
 N = Rotating speed (rev. per min.)

2/ The distance between the tips of opposing centrifuge tubes in operating position.



S4-44-15 Product certification inspection. \*\*\*

(b) The fee for any product certification inspection shall be at the rate established by the Agricultural Marketing Service, United States Department of Agriculture. Additional charges may be assessed for transportation, travel time, per diem, and other actual expenses incurred by the department.

(c) When payments of inspection fees are by check, a service fee shall be assessed for each check that is not honored. [Eff 5/29/81; am 8/18/83; am and comp 3/24/86; am **OCT 05 2002** ] (Auth: HRS §147-57)  
(Imp: HRS §147-57)