

## **Standards of purity for food products.**

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# STANDARDS OF PURITY FOR FOOD PRODUCTS

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UNITED STATES DEPARTMENT OF AGRICULTURE

CIRCULAR 136

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## DEFINITIONS AND STANDARDS FOR FOOD PRODUCTS.

Superseding Circulars 13, 17, and 19.

The following definitions and standards for food products have been adopted as a guide for the officials of this department in enforcing the Food and Drugs Act. These definitions and standards include those published in the form of Food Inspection Decisions<sup>1</sup> and those originally published in Circular 19 which have not been superseded by such decisions.

D. F. HOUSTON,  
*Secretary of Agriculture.*

WASHINGTON, D. C., May 14, 1919.

<sup>1</sup> Food Inspection Decisions 158, 160, 161, 162, 165, 169, 170, 171, 172, 173, 174, 176, 177, 178.

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# FOOD STANDARDS.

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## I. ANIMAL PRODUCTS.

### A. MEATS AND THE PRINCIPAL MEAT PRODUCTS.

#### a. MEATS.

1. Meat, flesh, is any clean, sound, dressed, and properly prepared edible part of animals in good health at the time of slaughter, and if it bears a name descriptive of its kind, composition, or origin, it corresponds thereto. The term "animals," as herein used, includes not only mammals, but fish, fowl, crustaceans, mollusks, and all other animals used as food.

2. Fresh meat is meat from animals recently slaughtered and properly cooled until delivered to the consumer.

3. Cold-storage meat is meat from animals recently slaughtered and preserved by refrigeration until delivered to the consumer.<sup>1</sup>

4. Salted, pickled, and smoked meats are unmixed meats preserved by salt, sugar, vinegar, spices, or smoke, singly or in combination, whether in bulk or in suitable containers.<sup>2</sup>

#### b. MANUFACTURED MEATS.

1. Manufactured meats are meats not included in paragraphs 2, 3, and 4, whether simple or mixed, whole or comminuted, in bulk or in suitable containers,<sup>2</sup> with or without the addition of salt, sugar, vinegar, spices, smoke, oils, or rendered fat. If they bear names descriptive of kind, composition, or origin, they correspond thereto, and when bearing such descriptive names, if force or flavoring meats are used, the kind and quantity thereof are made known.

#### c. MEAT EXTRACTS, MEAT PEPTONES, ETC.

(Schedule in preparation.)

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<sup>1</sup> The establishment of proper periods of time for cold storage is reserved for future consideration, when the investigations on this subject, authorized by Congress, are completed.

<sup>2</sup> Suitable containers for keeping moist food products, such as sirups, honeys, condensed milk, soups, meat extracts, meats, manufactured meats, and undried fruits and vegetables, and wrappers in contact with food products contain on their surfaces, in contact with the food product, no lead, antimony, arsenic, zinc or copper, or any compounds thereof, or any other poisonous or injurious substance. If the containers are made of tin plate they are outside-soldered and the plate in no place contains less than one hundred and thirteen (113) milligrams of tin on a piece five (5) centimeters square or one and eight-tenths (1.8) grains on a piece two (2) inches square. The inner coating of the containers is free from pin holes, blisters, and cracks. If the tin plate is lacquered, the lacquer completely covers the tinned surface within the container, and yields to the contents of the container no lead, antimony, arsenic, zinc or copper, or any compounds thereof, or any other poisonous or injurious substance.



## d. LARD.

1. Lard is the rendered fresh fat from hogs in good health at the time of slaughter, is clean, free from rancidity, and contains, necessarily incorporated in the process of rendering, not more than one per cent (1%) of substances, other than fatty acids and fat.

2. Leaf lard is lard rendered at moderately high temperatures from the internal fat of the abdomen of the hog, excluding that adherent to the intestines, and has an iodine number not greater than sixty (60).

3. Neutral lard is lard rendered at low temperatures.

## B. MILK AND ITS PRODUCTS.

## a. MILKS.

1. Milk is the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk practically colostrum-free.

2. Blended milk is milk modified in its composition so as to have a definite and stated percentage of one or more of its constituents.

3. Pasteurized milk is milk that has been subjected to a temperature not lower than 145 degrees Fahrenheit for not less than thirty minutes. Unless it is bottled hot, it is promptly cooled to 50 degrees Fahrenheit, or lower.

4. Sterilized milk is milk that has been heated at the temperature of boiling water or higher for a length of time sufficient to kill all organisms present.

5. Homogenized milk is milk that has been mechanically treated in such a manner as to alter its physical properties with particular reference to the condition and appearance of the fat globules.

6. Skimmed milk is milk from which substantially all of the milk fat has been removed.

7. Buttermilk is the product that remains when fat is removed from milk or cream, sweet or sour, in the process of churning. It contains not less than eight and five-tenths per cent (8.5%) of milk solids not fat.

8. Goat's milk, ewe's milk, et cetera, are the fresh, clean, lacteal secretions, free from colostrum, obtained by the complete milking of healthy animals other than cows, properly fed and kept, and conform in name to the species of animal from which they are obtained.

9. Condensed milk, evaporated milk, concentrated milk, is the product resulting from the evaporation of a considerable portion of the water from the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and ten days after calving, and contains, all tolerances being allowed for, not less than twenty-five and five-tenths per cent (25.5%) of total solids and not less than seven and eight-tenths per cent (7.8%) of milk fat.

10. Sweetened condensed milk, sweetened evaporated milk, sweetened concentrated milk, is the product resulting from the evaporation of a considerable portion of the water from the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and ten days after calving, to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28.0%) of total milk solids, and not less than eight per cent (8.0%) of milk fat.

11. Condensed skimmed milk, evaporated skimmed milk, concentrated skimmed milk, is the product resulting from the evaporation of a considerable portion



of the water from skimmed milk, and contains, all tolerances being allowed for, not less than twenty per cent (20.0%) of milk solids.

12. Sweetened condensed skimmed milk, sweetened evaporated skimmed milk, sweetened concentrated skimmed milk, is the product resulting from the evaporation of a considerable portion of the water from skimmed milk to which sugar (sucrose) has been added. It contains, all tolerances being allowed for, not less than twenty-eight per cent (28.0%) of milk solids.

13. Dried milk is the product resulting from the removal of water from milk, and contains, all tolerances being allowed for, not less than twenty-six per cent (26.0%) of milk fat, and not more than five per cent (5.0%) of moisture.

14. Dried skimmed milk is the product resulting from the removal of water from skimmed milk, and contains, all tolerances being allowed for, not more than five per cent (5.0%) of moisture.

15. Malted milk is the product made by combining whole milk with the liquid separated from a mash of ground barley malt and wheat flour, with or without the addition of sodium chlorid, sodium bicarbonate, and potassium bicarbonate in such a manner as to secure the full enzymic action of the malt extract and by removing water. The resulting product contains not less than seven and one-half per cent (7.5%) of butter fat and not more than three and one-half per cent (3.5%) of moisture.

#### b. CREAM.

1. Cream, sweet cream, is that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or if separated from it by centrifugal force. It is fresh and clean. It contains not less than eighteen per cent (18.0%) of milk fat and not more than two-tenths per cent (0.2%) of acid-reacting substances, calculated in terms of lactic acid.

2. Whipping cream is cream which contains not less than thirty per cent (30.0%) of milk fat.

3. Homogenized cream is cream that has been mechanically treated in such a manner as to alter its physical properties, with particular reference to the conditions and appearance of the fat globules.

4. Evaporated cream, clotted cream, is cream from which a considerable portion of water has been evaporated.

#### c. MILK FAT OR BUTTER FAT.

1. Milk fat, butter fat, is the fat of milk, and has a Reichert-Meissl number not less than twenty-four (24) and a specific gravity not less than 0.905  $\left(\frac{40^{\circ} \text{C.}}{40^{\circ} \text{C.}}\right)$ .

#### d. BUTTER.

1. Butter is the clean, nonrancid product made by gathering in any manner the fat of fresh or ripened milk or cream into a mass, which also contains a small portion of the other milk constituents, with or without salt, and contains not less than eighty-two and five-tenths per cent (82.5%) of milk fat. By acts of Congress approved August 2, 1886, and May 9, 1902, butter may also contain added coloring matter.

2. Renovated butter, process butter, is the product made by melting butter and reworking, without the addition or use of chemicals or any substances except milk, cream, or salt, and contains not more than sixteen per cent (16.0%) of water and at least eighty-two and five-tenths per cent (82.5%) of milk fat.

#### e. CHEESE.

1. Cheese is the sound, solid, and ripened product made from milk or cream by coagulating the casein thereof with rennet or lactic acid, with or without



the addition of ripening ferments and seasoning, and contains, in the water-free substance, not less than fifty per cent (50.0%) of milk fat. By act of Congress, approved June 6, 1896, cheese may also contain added coloring matter.

2. Skim-milk cheese is the sound, solid, and ripened product, made from skim milk by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning.

3. Goat's milk cheese, ewe's milk cheese, et cetera, are the sound, ripened products made from the milks of the animals specified, by coagulating the casein thereof with rennet or lactic acid, with or without the addition of ripening ferments and seasoning.

#### f. ICE CREAMS.

1. Ice cream is a frozen product made from cream and sugar, with or without a natural flavoring, and contains not less than fourteen per cent (14%) of milk fat.

2. Fruit ice cream is a frozen product made from cream, sugar, and sound, clean, mature fruits, and contains not less than twelve per cent (12%) of milk fat.

3. Nut ice cream is a frozen product made from cream, sugar, and sound, nonrancid nuts, and contains not less than twelve per cent (12%) of milk fat.

#### g. MISCELLANEOUS MILK PRODUCTS.

1. Whey is the product remaining after the removal of fat and casein from milk in the process of cheese-making.

2. Kumiss is the product made by the alcoholic fermentation of mare's or cow's milk.

## II. VEGETABLE PRODUCTS.

### A. GRAIN PRODUCTS.

#### a. GRAINS AND MEALS.

1. Grain is the fully matured, clean, sound, air-dry seed of wheat, maize, rice, oats, rye, buckwheat, barley, sorghum, millet, or spelt.

2. Meal is the clean, sound product made by grinding grain.

3. Flour is the fine, clean, sound product made by bolting wheat meal, and contains not more than thirteen and one-half per cent (13.5%) of moisture, not less than one and twenty-five hundredths per cent (1.25%) of nitrogen, not more than one per cent (1%) of ash, and not more than fifty hundredths per cent (0.50%) of fiber.

4. Graham flour is unbolted wheat meal.

5. Ground gluten is the clean, sound product made from wheat flour by the almost complete removal of starch, and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than fourteen and two-tenths per cent (14.2%) of nitrogen, not more than fifteen per cent (15%) of nitrogen-free extract (using the protein factor 5.7), and not more than five and five-tenths per cent (5.5%) of starch (as determined by the diastase method).

6. Gluten flour is the clean, sound product made from wheat flour by the removal of a large part of the starch, and contains not more than ten per cent (10%) of moisture, and, calculated on the water-free basis, not less than seven and one-tenth per cent (7.1%) of nitrogen, not more than fifty-six per cent (56%) of nitrogen-free extract (using the protein factor 5.7), and not more than forty-four per cent (44%) of starch (as determined by the diastase method).



7. Gluten flour, self-raising, is a gluten flour containing not more than ten per cent (10%) of moisture, and leavening agents with or without salt.

8. "Diabetic" food.—Although most foods may be suitable under certain conditions for the use of persons suffering from diabetes, the term "diabetic" as applied to food indicates a considerable lessening of the carbohydrates found in ordinary products of the same class, and this belief is fostered by many manufacturers on their labels and in their advertising literature.

A "diabetic" food contains not more than half as much glycogenic carbohydrates as the normal food of the same class. Any statement on the label which gives the impression that any single food in unlimited quantity is suitable for the diabetic patient is false and misleading.

9. Maize meal, corn meal, Indian corn meal, is meal made from sound maize grain, and contains not more than fourteen per cent (14%) of moisture, not less than one and twelve hundredths per cent (1.12%) of nitrogen, and not more than one and six-tenths per cent (1.6%) of ash.

10. Rice is the hulled, or hulled and polished grain of *Oryza sativa*.

11. Oatmeal is meal made from hulled oats, and contains not more than twelve per cent (12%) of moisture, not more than one and five-tenths per cent (1.5%) of crude fiber, not less than two and twenty-four hundredths per cent (2.24%) of nitrogen, and not more than two and two-tenths per cent (2.2%) of ash.

12. Rye flour is the fine, clean, sound product made by bolting rye meal, and contains not more than thirteen and one-half per cent (13.5%) of moisture, not less than one and thirty-six hundredths per cent (1.36%) of nitrogen, and not more than one and twenty-five hundredths per cent (1.25%) of ash.

13. Buckwheat flour is bolted buckwheat meal, and contains not more than twelve per cent (12%) of moisture, not less than one and twenty-eight hundredths per cent (1.28%) of nitrogen, and not more than one and seventy-five hundredths per cent (1.75%) of ash.

#### b. ALIMENTARY PASTES.

1. Macaroni, spaghetti, vermicelli, are dried pastes made of the semolina of hard wheat. They contain not more than thirteen and one-half per cent (13.5%) of moisture.

2. Flour macaroni, flour spaghetti, flour vermicelli, are dried pastes made of flour or of a mixture of flour and semolina. They contain not more than thirteen and one-half per cent (13.5%) of moisture.

3. Noodles, egg noodles, are dried alimentary pastes made from wheat flour and egg. They contain not less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell.

4. Plain noodles, water noodles, are dried alimentary pastes made from wheat flour without egg, or with less than five per cent (5%) by weight of the solids of whole, sound egg exclusive of the shell.

(Standards for moisture in these last 2 classes of products are under consideration.)

### B. FRUIT AND VEGETABLES.

#### a. FRUIT AND FRUIT PRODUCTS.

(Except fruit juices, fresh, sweet, and fermented, and vinegars.)

1. Fruits are the clean, sound, edible, fleshy fructifications of plants, distinguished by their sweet, acid, and ethereal flavors.

2. Dried fruit<sup>1</sup> is the clean, sound product made by drying mature, properly prepared, fresh fruit in such a way as to take up no harmful substance, and con-

<sup>1</sup> The subject of sulphurous acid in dried fruits is reserved for consideration in connection with the schedule "Preservatives and Coloring Matters."



forms in name to the fruit used in its preparation; sun-dried fruit is dried fruit made by drying without the use of artificial means; evaporated fruit is dried fruit made by drying with the use of artificial means.

3. Evaporated apples are evaporated fruit made from peeled, cored, and sliced apples, and contain not more than twenty-four per cent (24%) of moisture, as determined by the official method of the Association of Official Agricultural Chemists.

(Standards for other dried fruits are in preparation.)

4. Canned fruit is the sound product made by sterilizing clean, sound, properly matured and prepared fresh fruit, by heating, with or without sugar (sucrose) and spices, and keeping in suitable, clean, hermetically-sealed containers, and conforms in name to the fruit used in its preparation.

5. Preserve<sup>1</sup> is the sound product made from clean, sound, properly matured and prepared fresh fruit and sugar (sucrose) sirup, with or without spices or vinegar, and conforms in name to that of the fruit used, and in its preparation not less than forty-five (45) pounds of fruit are used to each fifty-five (55) pounds of sugar.

6. Honey preserve<sup>1</sup> is preserve in which honey is used in place of sugar (sucrose) sirup.

7. Glucose preserve<sup>1</sup> is preserve in which a glucose product is used in place of sugar (sucrose) sirup.

8. Jam, marmalade,<sup>1</sup> is the sound product made from clean, sound, properly matured and prepared fresh fruit and sugar (sucrose), with or without spices or vinegar, by boiling to a pulpy or semisolid consistence, and conforms in name to the fruit used, and in its preparation not less than forty-five (45) pounds of fruit are used to each fifty-five (55) pounds of sugar.

9. Glucose jam, glucose marmalade,<sup>1</sup> is jam in which a glucose product is used in place of sugar (sucrose).

10. Fruit butter<sup>1</sup> is the sound product made from fruit juice and clean, sound, properly matured and prepared fruit, evaporated to a semisolid mass of homogeneous consistence, with or without the addition of sugar and spices or vinegar, and conforms in name to the fruit used in its preparation.

11. Glucose fruit butter<sup>1</sup> is fruit butter in which a glucose product is used in place of sugar (sucrose).

12. Jelly<sup>1</sup> is the sound, semisolid, gelatinous product made by boiling clean, sound, properly matured and prepared fresh fruit with water, concentrating the expressed and strained juice, to which sugar (sucrose) is added, and conforms in name to the fruit used in its preparation.

13. Glucose jelly<sup>1</sup> is jelly in which a glucose product is used in place of sugar (sucrose).

#### b. VEGETABLES AND VEGETABLE PRODUCTS.

1. Vegetables are the succulent, clean, sound, edible parts of herbaceous plants used for culinary purposes.

2. Dried vegetables are the clean, sound products made by drying properly matured and prepared vegetables in such a way as to take up no harmful substance, and conform in name to the vegetables used in their preparation; sun-dried vegetables are dried vegetables made by drying without the use of artificial means; evaporated vegetables are dried vegetables made by drying with the use of artificial means.

<sup>1</sup> Products made with mixtures of sugar, glucose, and honey, or any two thereof, are reserved for future consideration.



3. Canned vegetables are properly matured and prepared fresh vegetables, with or without the addition of potable water, salt, and sugar, as specified in the separate definitions for the several kinds of canned vegetables, sterilized by heat, with or without previous cooking, in vessels from which they take up no injurious substance, and kept in suitable, clean, hermetically-sealed containers.

4. Canned peas are the canned vegetables prepared from the well developed but still tender seeds of the common or garden pea (*Pisum sativum*) by shelling, winnowing, and thorough washing, with or without grading and with or without precooking (blanching), and by the addition, before sterilization, of the necessary amount of potable water, with or without sugar and salt.

5. Canned pea varieties.—*Early peas* are peas of early maturing sorts having a smooth skin.

*Sugar peas, sweet peas*, are peas of later maturing varieties having a wrinkled skin and sweet flavor.

6. Canned pea grades.—*Fancy peas* are young, succulent peas of fairly uniform size and color, unless declared to be ungraded for size, with reasonably clear liquor, and free from flavor defects due to imperfect processing.

*Standard peas* are less succulent peas than the "fancy" grade, but green and of mellow consistence, of uniform size and color, unless declared to be ungraded for size, with reasonably clear liquor, though not necessarily free from sediment, and reasonably free from flavor defects due to imperfect processing.

*Substandard peas* are peas that are overmature, though not fully ripened, or that lack in other respects the qualifications for the standard grade.

7. Canned pea sizes.—*No. 1 peas* are peas which were, before precooking (blanching), small enough to pass through a screen of 9/32-inch (7 mm.) mesh.

*No. 2 peas* are peas which were, before precooking (blanching), small enough to pass through a screen of 10/32-inch (8 mm.) mesh.

*No. 3 peas* are peas which were, before precooking (blanching), small enough to pass through a screen of 11/32-inch (8.7 mm.) mesh.

*No. 4 peas* are peas which were, before precooking (blanching), small enough to pass through a screen of 12/32-inch (9.5 mm.) mesh.

*No. 5 peas* are peas which were, before precooking (blanching), small enough to pass through a screen of 13/32-inch (10.3 mm.) mesh.

*No. 6 peas* are peas not all of which were, before precooking (blanching), small enough to pass through a screen of 13/32-inch (10.3 mm.) mesh.

8. Pickles are clean, sound, immature cucumbers, properly prepared, without taking up any metallic compound other than salt, and preserved in any kind of vinegar, with or without spices; pickled onions, pickled beets, pickled beans, and other pickled vegetables are vegetables prepared as described above, and conform in name to the vegetables used.

9. Salt pickles are clean, sound, immature cucumbers, preserved in a solution of common salt, with or without spices.

10. Sweet pickles are pickled cucumbers or other vegetables in the preparation of which sugar (sucrose) is used.

11. Sauerkraut is clean, sound, properly prepared cabbage, mixed with salt, and subjected to fermentation.

12. Catchup (ketchup, catsup) is the clean, sound product made from the properly prepared pulp of clean, sound, fresh, ripe tomatoes, with spices and with or without sugar and vinegar; mushroom catchup, walnut catchup, et cetera, are catchups made as above described, and conform in name to the substances used in their preparation.



## C. SUGARS AND RELATED SUBSTANCES.

## a. SUGAR AND SUGAR PRODUCTS.

## 1. Sugars.

1. Sugar is the product chemically known as sucrose (saccharose), chiefly obtained from sugar cane, sugar beets, sorghum, maple, and palm.

2. Granulated, loaf, cut, milled, and powdered sugars are different forms of sugar, and contain at least ninety-nine and five-tenths per cent (99.5%) of sucrose.

3. Maple sugar, maple concrete, is the solid product resulting from the evaporation of maple sap or maple sirup.

4. Masseccuite, melada, mush sugar, and concrete are products made by evaporating the purified juice of a sugar-producing plant, or a solution of sugar, to a solid or semisolid consistence, and in which the sugar chiefly exists in a crystalline state.

## 2. Molasses and refiners' sirup.

1. Molasses is the product left after separating the sugar from masseccuite, melada, mush sugar, or concrete, and contains not more than twenty-five per cent (25%) of water and not more than five per cent (5%) of ash.

2. Refiners' sirup, treacle, is the residual liquid product obtained in the process of refining raw sugars, and contains not more than twenty-five per cent (25%) of water and not more than eight per cent (8%) of ash.

## 3. Sirups.

1. Sirup is the sound product made by purifying and evaporating the juice of a sugar-producing plant without removing any of the sugar.

2. Sugar-cane sirup is sirup made by the evaporation of the juice of the sugar-cane or by the solution of sugar-cane concrete, and contains not more than thirty per cent (30%) of water and not more than two and five-tenths per cent (2.5%) of ash.

3. Sorghum sirup is sirup made by the evaporation of sorghum juice or by the solution of sorghum concrete, and contains not more than thirty per cent (30%) of water and not more than two and five-tenths per cent (2.5%) of ash.

4. Maple sirup is sirup made by the evaporation of maple sap or by the solution of maple concrete, and contains not more than thirty-five per cent (35%) of water, and weighs not less than eleven (11) pounds to the gallon (231 cu. in.).

5. Sugar sirup is the product made by dissolving sugar to the consistence of a sirup, and contains not more than thirty-five per cent (35%) of water.

## b. GLUCOSE PRODUCTS.

1. Starch sugar is the solid product made by hydrolyzing starch or a starch-containing substance until the greater part of the starch is converted into dextrose. Starch sugar appears in commerce in two forms, anhydrous starch sugar and hydrous starch sugar. The former, crystallized without water of crystallization, contains not less than ninety-five per cent (95%) of dextrose and not more than eight-tenths per cent (0.8%) of ash. The latter, crystallized with water of crystallization, is of two varieties: 70 sugar, also known as brewers' sugar, contains not less than seventy per cent (70%) of dextrose and not more than eight-tenths per cent (0.8%) of ash; 80 sugar, climax or acme sugar, contains not less than eighty per cent (80%) of dextrose and not more than one and one-half per cent (1.5%) of ash.



The ash of all these products consists almost entirely of chlorids and sulphates.

2. Glucose, mixing glucose, confectioner's glucose, is a thick, sirupy, colorless product made by incompletely hydrolyzing starch, or a starch-containing substance, and decolorizing and evaporating the product. It varies in density from forty-one (41) to forty-five (45) degrees Baumé at a temperature of 100° F. (37.7° C), and conforms in density, within these limits, to the degree Baumé it is claimed to show, and for a density of forty-one (41) degrees Baumé contains not more than twenty-one per cent (21%) and for a density of forty-five (45) degrees not more than fourteen per cent (14%) of water. It contains on a basis of forty-one (41) degrees Baumé not more than one per cent (1%) of ash, consisting chiefly of chlorids and sulphates.

#### c. CANDY.

1. Candy is a product made from a saccharine substance or substances, with or without the addition of harmless coloring, flavoring, or filling materials, and contains no terra alba, barytes, talc, chrome yellow, or other mineral substances, or poisonous colors or flavors, or other ingredients deleterious or detrimental to health, or any vinous, malt, or spirituous liquor or compound, or narcotic drug.

#### d. HONEY.

1. Honey is the nectar and saccharine exudations of plants gathered, modified, and stored in the comb by honey bees (*Aphis mellifica* and *A. dorsata*); is lævoro-rotatory, contains not more than twenty-five per cent (25%) of water, not more than twenty-five hundredths per cent (0.25%) of ash, and not more than eight per cent (8%) of sucrose.

2. Comb honey is honey contained in the cells of comb.

3. Extracted honey is honey which has been separated from the uncrushed comb by centrifugal force or gravity.

4. Strained honey is honey removed from the crushed comb by straining or other means.

### D. CONDIMENTS (OTHER THAN VINEGAR AND SALT).

#### a. SPICES.

The term "dried" as used in this schedule refers to the air-dried product. The term "starch" as used in this schedule refers to starch as determined by the official diastase method. In the examination of the products listed in this schedule the methods of analysis of the Association of Official Agricultural Chemists should be followed, except where otherwise specified.

1. Spices are aromatic vegetable substances used for the seasoning of food. They are clean, sound, and true to name, and from them no portion of any volatile oil or other flavoring principle has been removed.

2. Allspice, pimento, is the dried, nearly ripe fruit of *Pimenta officinalis* (L.) Karst. It contains not less than eight per cent (8%) of quercitannic acid (calculated from the total oxygen absorbed by the aqueous extract), not more than twenty-five per cent (25%) of crude fiber, not more than six per cent (6%) of total ash, nor more than four-tenths per cent (0.4%) of ash insoluble in hydrochloric acid.

3. Anise, aniseed, is the dried fruit of *Pimpinella anisum* L. It contains not more than nine per cent (9%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.



4. Bay leaves are the dried leaves of *Laurus nobilis* L.
5. Capers are the flower buds of *Capparis spinosa* L.
6. Caraway, caraway seed, is the dried fruit of *Carum carvi* L. It contains not more than eight per cent (8%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.
7. Cardamom is the dried, nearly ripe fruit of *Elettaria cardamomum* White & Maton.
8. Cardamom seed is the dried seed of cardamom. It contains not more than eight per cent (8%) of total ash, nor more than three per cent (3%) of ash insoluble in hydrochloric acid.
9. Red pepper is the red, dried, ripe fruit of any species of *Capsicum*. It contains not more than eight per cent (8%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid.
10. Cayenne pepper, cayenne, is the dried, ripe fruit of *Capsicum frutescens* L., *Capsicum baccatum* L., or some other small-fruited species of *Capsicum*. It contains not less than fifteen per cent (15%) of nonvolatile ether extract, not more than one and five-tenths per cent (1.5%) of starch, not more than twenty-eight per cent (28%) of crude fiber, not more than seven per cent (7%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid.
11. Paprika is the dried, ripe fruit of *Capsicum annuum* L. It contains not more than eight and five-tenths per cent (8.5%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid. The iodine number of its extracted oil is not less than 125, nor more than 136.
12. Hungarian paprika is paprika having the pungency and flavor characteristic of that grown in Hungary.
  - (a) Rosenpaprika, rozsapaprika, rose paprika, is Hungarian paprika prepared by grinding specially selected pods of paprika, from which the placenta, stalks, and stems have been removed. It contains no more seeds than the normal pods, not more than eighteen per cent (18%) of nonvolatile ether extract, not more than twenty-three per cent (23%) of crude fiber, not more than six per cent (6%) of total ash, nor more than four-tenths per cent (0.4%) of ash insoluble in hydrochloric acid.
  - (b) Koenigspaprika, king's paprika, is Hungarian paprika prepared by grinding whole pods of paprika without selection, and includes the seeds and stems naturally occurring with the pods. It contains not more than eighteen per cent (18%) of nonvolatile ether extract, not more than twenty-three per cent (23%) of crude fiber, not more than six and five-tenths per cent (6.5%) of total ash, nor more than five-tenths per cent (0.5%) of ash insoluble in hydrochloric acid.
13. Pimenton, pimiento, Spanish paprika, is paprika having the characteristics of that grown in Spain. It contains not more than eighteen per cent (18%) of nonvolatile ether extract, not more than twenty-one per cent (21%) of crude fiber, not more than eight and five-tenths per cent (8.5%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid.
14. Celery seed is the dried fruit of *Apium graveolens* L. It contains not more than 10 per cent (10%) of total ash, nor more than two per cent (2%) of ash insoluble in hydrochloric acid.
15. Cinnamon is the dried bark of cultivated varieties of *Cinnamomum zeylanicum* Breyne or of *Cinnamomum cassia* (Nees) Blume, from which the outer layers may or may not have been removed.
16. Ceylon cinnamon is the dried inner bark of cultivated varieties of *Cinnamomum zeylanicum* Breyne.
17. Saigon cinnamon, cassia, is the dried bark of cultivated varieties of *Cinnamomum cassia* (Nees) Blume.



18. Ground cinnamon,<sup>1</sup> ground cassia, is the powder made from cinnamon. It contains not more than five per cent (5%) of total ash, nor more than two per cent (2%) of ash insoluble in hydrochloric acid.

19. Cloves are the dried flower buds of *Caryophyllus aromaticus* L. They contain not more than five per cent (5%) of clove stems, not less than fifteen per cent (15%) of volatile ether extract, not less than twelve per cent (12%) of quercitannic acid (calculated from the total oxygen absorbed by the aqueous extract), not more than ten per cent (10%) of crude fiber, not more than seven per cent (7%) of total ash, nor more than five-tenths per cent (0.5%) of ash insoluble in hydrochloric acid.

20. Coriander seed is the dried fruit of *Coriandrum sativum* L. It contains not more than seven per cent (7%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.

21. Cumin seed is the dried fruit of *Cuminum cyminum* L. It contains not more than eight and five-tenths per cent (8.5%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.

22. Curcuma, turmeric, is the dried rhizome or bulbous roots of *Curcuma longa* L.

23. Dill seed is the dried fruit of *Anethum graveolens* L. It contains not more than ten per cent (10%) of total ash, nor more than three per cent (3%) of ash insoluble in hydrochloric acid.

24. Fennel seed is the dried fruit of cultivated varieties of *Foeniculum vulgare* Hill. It contains not more than nine per cent (9%) of total ash, nor more than two per cent (2%) of ash insoluble in hydrochloric acid.

25. Ginger is the washed and dried, or decorticated and dried, rhizome of *Zingiber officinale* Roscoe. It contains not less than forty-two per cent (42%) of starch, not more than eight per cent (8%) of crude fiber, not more than one per cent (1%) of lime (CaO), not less than twelve per cent (12%) of cold water extract, not more than seven per cent (7%) of total ash, not more than two per cent (2%) of ash insoluble in hydrochloric acid, nor less than two per cent (2%) of ash soluble in cold water.

26. Jamaica ginger is ginger grown in Jamaica. It contains not less than fifteen per cent (15%) of cold water extract, and conforms in other respects to the standards for ginger.

27. Limed ginger, bleached ginger, is whole ginger coated with carbonate of calcium. It contains not more than four per cent (4%) of carbonate of calcium, nor more than ten per cent (10%) of total ash, and conforms in other respects to the standards for ginger.

28. Horse-radish is the root of *Radicula armoracia* (L.) Robinson.

29. Prepared horse-radish is comminuted horse-radish, with or without a vinegar.

30. Mace is the dried arillus of *Myristica fragrans* Houtt. It contains not less than twenty per cent (20%) nor more than thirty per cent (30%) of non-volatile ether extract, not more than ten per cent (10%) of crude fiber, not more than three per cent (3%) of total ash, nor more than five-tenths per cent (0.5%) of ash insoluble in hydrochloric acid.

31. Macassar mace, papua mace, is the dried arillus of *Myristica argentea* Warb.

32. Marjoram is the dried leaves, with or without a small proportion of the flowering tops, of the *Majorana hortensis* Moench.

33. Mustard seed is the seed of *Sinapis alba* L. (white mustard), *Brassica nigra* (L.) Koch (black mustard), *Brassica juncea* Hook f. et Th., or varieties or closely related species of the types of *Brassica nigra* and *Brassica juncea*.

<sup>1</sup> The question of the use of cassia buds in ground cinnamon is under consideration.



*Sinapis alba* (white mustard) contains no appreciable amount of volatile oil. It contains not more than five per cent (5%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.

*Brassica nigra* (black mustard) and *Brassica juncea* yield six-tenths per cent (0.6%) of volatile mustard oil (calculated as allylisothiocyanate and determined by the method given in Service and Regulatory Announcements, Chemistry 20). The varieties and species closely related to the types of *Brassica nigra* and *Brassica juncea* yield not less than six-tenths per cent (0.6%) of volatile mustard oil, similar in character and composition to the volatile oils yielded by *Brassica nigra* and *Brassica juncea*. These mustard seeds contain not more than five per cent (5%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.

34. Ground mustard is the powder made from mustard seed, and conforms to the standards for mustard seed.

35. Mustard flour is the powder made from mustard seed with the hulls largely removed and with or without the removal of a portion of the fixed oil. It contains not more than one and five-tenths per cent (1.5%) of starch, nor more than six per cent (6%) of total ash.

36. Prepared mustard, German mustard, French mustard, mustard paste, is a paste composed of a mixture of ground mustard or mustard flour, with salt, a vinegar, and with or without spices or other condiments which do not simulate the color of yellow ground mustard. Calculated free from water, fat, and salt, it contains not more than twenty-four per cent (24%) of carbohydrates (calculated as starch), not more than twelve per cent (12%) of crude fiber, nor less than five and six-tenths per cent (5.6%) of nitrogen derived solely from the materials herein named.

37. Nutmeg is the dried seed of *Myristica fragrans* Houtt., deprived of its testa, with or without a thin coating of lime (CaO). It contains not less than twenty-five per cent (25%) of nonvolatile ether extract, not more than ten per cent (10%) of crude fiber, not more than five per cent (5%) of total ash, nor more than five-tenths per cent (0.5%) of ash insoluble in hydrochloric acid.

38. Macassar nutmeg, papua nutmeg, male nutmeg, long nutmeg, is the dried seed of *Myristica argentea* Warb., deprived of its testa.

39. Paradise seed, grains of paradise, Guinea grains, melegueta pepper, is the seed of *Anomum melegueta* Roscoe.

40. Parsley leaves are the leaves of *Petroselinum sativum* Hoffm.

41. Black pepper is the dried immature berry of *Piper nigrum* L. It contains not less than six and seventy-five hundredths per cent (6.75%) of nonvolatile ether extract, not less than thirty per cent (30%) of starch, not more than seven per cent (7%) of total ash, nor more than one and five-tenths per cent (1.5%) of ash insoluble in hydrochloric acid.

42. Ground black pepper is the product made by grinding the entire berry of *Piper nigrum* L. It contains the several parts of the berry in their normal proportions.

43. Long pepper is the dried fruit of *Piper longum* L.

44. White pepper is the dried mature berry of *Piper nigrum* L., from which the outer coating, or the outer and inner coatings have been removed. It contains not less than seven per cent (7%) of nonvolatile ether extract, not less than fifty-two per cent (52%) of starch, not more than five per cent (5%) of crude fiber, not more than three and five-tenths per cent (3.5%) of total ash, nor more than three-tenths per cent (0.3%) of ash insoluble in hydrochloric acid.

45. Saffron is the dried stigma of *Crocus sativus* L. It contains not more than ten per cent (10%) of yellow styles and other foreign matter, not more than fourteen per cent (14%) of volatile matter when dried at 100° C., not more



than six per cent (6%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid.

46. Sage is the dried leaf of *Salvia officinalis* L. It contains not less than one per cent (1%) of volatile ether extract, not more than twenty-five per cent (25%) of crude fiber, not more than ten per cent (10%) of total ash, nor more than one per cent (1%) of ash insoluble in hydrochloric acid.

47. Savory, summer savory, is the dried leaf and flowering tops of *Satureja hortensis* L.

48. Star aniseed is the dried fruit of *Illicium verum* Hook. It contains not more than five per cent (5%) of total ash.

49. Tarragon is the dried leaves and flowering tops of *Artemisia dracunculus* L.

50. Thyme is the dried leaves and flowering tops of *Thymus vulgaris* L. It contains not more than fourteen per cent (14%) of total ash, nor more than four per cent (4%) of ash insoluble in hydrochloric acid.

#### b. FLAVORING EXTRACTS.

1. A flavoring extract<sup>1</sup> is a solution in ethyl alcohol of proper strength of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and conforms in name to the plant used in its preparation.

2. Almond extract is the flavoring extract prepared from oil of bitter almonds, free from hydrocyanic acid, and contains not less than one per cent (1%) by volume of oil of bitter almonds.

2a. Oil of bitter almonds, commercial, is the volatile oil obtained from the seed of the bitter almond (*Amygdalus communis* L.), the apricot (*Prunus armeniaca* L.), or the peach (*Amygdalus persica* L.).

3. Anise extract is the flavoring extract prepared from oil of anise, and contains not less than three per cent (3%) by volume of oil of anise.

3a. Oil of anise is the volatile oil obtained from the anise seed.

4. Celery seed extract is the flavoring extract prepared from celery seed or the oil of celery seed, or both, and contains not less than three-tenths per cent (0.3%) by volume of oil of celery seed.

4a. Oil of celery seed is the volatile oil obtained from celery seed.

5. Cassia extract is the flavoring extract prepared from oil of cassia, and contains not less than two per cent (2%) by volume of oil of cassia.

5a. Oil of cassia is the lead-free volatile oil obtained from the leaves or bark of *Cinnamomum cassia* Bl., and contains not less than seventy-five per cent (75%) by weight of cinnamic aldehyde.

6. Cinnamon extract is the flavoring extract prepared from oil of cinnamon, and contains not less than two per cent (2%) by volume of oil of cinnamon.

6a. Oil of cinnamon is the lead-free volatile oil obtained from the bark of the Ceylon cinnamon (*Cinnamomum zeylanicum* Breyne), and contains not less than sixty-five per cent (65%) by weight of cinnamic aldehyde and not more than ten per cent (10%) by weight of eugenol.

7. Clove extract is the flavoring extract prepared from oil of cloves, and contains not less than two per cent (2%) by volume of oil of cloves.

7a. Oil of cloves is the lead-free, volatile oil obtained from cloves.

8. Ginger extract is the flavoring extract prepared from ginger, and contains in each one hundred (100) cubic centimeters the alcohol-soluble matters from not less than twenty (20) grams of ginger.

<sup>1</sup>The flavoring extracts herein described are intended solely for food purposes and are not to be confounded with similar preparations described in the Pharmacopœia for medicinal purposes.



9. Lemon extract is the flavoring extract prepared from oil of lemon, or from lemon peel, or both, and contains not less than five per cent (5%) by volume of oil of lemon.

9a. Oil of lemon is the volatile oil obtained, by expression or alcoholic solution, from the fresh peel of the lemon (*Citrus limonum* L.), has an optical rotation (25° C.) of not less than +60° in a 100-millimeter tube, and contains not less than four per cent (4%) by weight of citral.

10. Terpeneless extract of lemon is the flavoring extract prepared by shaking oil of lemon with dilute alcohol, or by dissolving terpeneless oil of lemon in dilute alcohol, and contains not less than two-tenths per cent (0.2%) by weight of citral derived from oil of lemon.

10a. Terpeneless oil of lemon is oil of lemon from which all or nearly all of the terpenes have been removed.

11. Nutmeg extract is the flavoring extract prepared from oil of nutmeg, and contains not less than two per cent (2%) by volume of oil of nutmeg.

11a. Oil of nutmeg is the volatile oil obtained from nutmegs.

12. Orange extract is the flavoring extract prepared from oil of orange, or from orange peel, or both, and contains not less than five per cent (5%) by volume of oil of orange.

12a. Oil of orange is the volatile oil obtained, by expression or alcoholic solution, from the fresh peel of the orange (*Citrus aurantium* L.), and has an optical rotation (25° C.) of not less than +95° in a 100-millimeter tube.

13. Terpeneless extract of orange is the flavoring extract prepared by shaking oil of orange with dilute alcohol, or by dissolving terpeneless oil of orange in dilute alcohol, and corresponds in flavoring strength to orange extract.

13a. Terpeneless oil of orange is oil of orange from which all or nearly all of the terpenes have been removed.

14. Peppermint extract is the flavoring extract prepared from oil of peppermint, or from peppermint, or both, and contains not less than three per cent (3%) by volume of oil of peppermint.

14a. Peppermint is the leaves and flowering tops of *Mentha piperita* L.

14b. Oil of peppermint is the volatile oil obtained from peppermint, and contains not less than fifty per cent (50%) by weight of menthol.

15. Rose extract is the flavoring extract prepared from otto of roses, with or without red rose petals, and contains not less than four-tenths per cent (0.4%) by volume of otto of roses.

15a. Otto of roses is the volatile oil obtained from the petals of *Rosa damascena* Mill., *R. centifolia* L., or *R. moschata* Herrm.

16. Savory extract is the flavoring extract prepared from oil of savory, or from savory, or both, and contains not less than thirty-five hundredths per cent (0.35%) by volume of oil of savory.

16a. Oil of savory is the volatile oil obtained from savory.

17. Spearmint extract is the flavoring extract prepared from oil of spearmint, or from spearmint, or both, and contains not less than three per cent (3%) by volume of oil of spearmint.

17a. Spearmint is the leaves and flowering tops of *Mentha spicata* L.

17b. Oil of spearmint is the volatile oil obtained from spearmint.

18. Star anise extract is the flavoring extract prepared from oil of star anise, and contains not less than three per cent (3%) by volume of oil of star anise.

18a. Oil of star anise is the volatile oil distilled from the fruit of the star anise (*Illicium verum* Hook).

19. Sweet basil extract is the flavoring extract prepared from oil of sweet basil, or from sweet basil, or both, and contains not less than one-tenth per cent (0.1%) by volume of oil of sweet basil.



- 19a. Sweet basil, basil, is the leaves and tops of *Ocimum basilicum* L.
- 19b. Oil of sweet basil is the volatile oil obtained from basil.
20. Sweet marjoram extract, marjoram extract, is the flavoring extract prepared from the oil of marjoram, or from marjoram, or both, and contains not less than one per cent (1%) by volume of oil of marjoram.
- 20a. Oil of marjoram is the volatile oil obtained from marjoram.
21. Thyme extract is the flavoring extract prepared from oil of thyme, or from thyme, or both, and contains not less than two-tenths per cent (0.2%) by volume of oil of thyme.
- 21a. Oil of thyme is the volatile oil obtained from thyme.
22. Tonka extract is the flavoring extract prepared from tonka bean, with or without sugar or glycerin, and contains not less than one-tenth per cent (0.1%) by weight of coumarin extracted from the tonka bean, together with a corresponding proportion of the other soluble matters thereof.
- 22a. Tonka bean is the seed of *Coumarouna odorata* Aublet (*Dipteryx odorata* (Aubl.) Willd.).
23. Vanilla extract is the flavoring extract prepared from vanilla bean, with or without sugar or glycerin, and contains in one hundred (100) cubic centimeters the soluble matters from not less than ten (10) grams of the vanilla bean.
- 23a. Vanilla bean is the dried, cured fruit of *Vanilla planifolia* Andrews.
24. Wintergreen extract is the flavoring extract prepared from oil of wintergreen, and contains not less than three per cent (3%) by volume of oil of wintergreen.
- 24a. Oil of wintergreen is the volatile oil distilled from the leaves of the *Gaultheria procumbens* L.

#### c. EDIBLE VEGETABLE OILS AND FATS.

1. Edible fats and edible oils are such glycerids of the fatty acids as are recognized to be wholesome foods. They are dry and sweet in flavor and odor.
2. Cacao butter, cocoa butter, is the edible fat obtained from sound cacao beans (*Theobroma cacao* L.), either before or after roasting.
3. Coconut oil, copra oil, is the edible oil obtained from the kernels of the coconut (*Cocos nucifera* L. or *Cocos butyracea* L.).
4. Cochin oil is coconut oil prepared in Cochin (Malabar).
5. Ceylon oil is coconut oil prepared in Ceylon.
6. Corn oil, maize oil, is the edible oil obtained from the germ of Indian corn, maize (*Zea mays* L.).
7. Cottonseed oil is the edible oil obtained from the seed of the cotton plant (*Gossypium herbaceum* L.), or from the seed of other species of *Gossypium*.
8. Olive oil, sweet oil, is the edible oil obtained from the sound, mature fruit of the olive tree (*Olea europaea* L.).
9. Palm kernel oil is the edible oil obtained from the kernels of the fruit of the palm tree (*Elaeis guineensis* L., or *Elaeis melanococca* Gärt.).
10. Peanut oil, arachis oil, earthnut oil, is the edible oil obtained from the peanut (*Arachis hypogaea* L.).
11. Poppy seed oil is the edible oil obtained from the seeds of the poppy (*Papaver somniferum* L.).
12. Rapeseed oil, rape oil, colza oil, is the edible oil obtained from the seed of the rape plant (*Brassica napus* L.), or from the seed of closely related *Brassica* species, which yield oils similar in composition and character to the oil obtained from the seed of *Brassica napus* L.



13. Soy bean oil, soy oil, soja oil, is the edible oil obtained from the seed of the soy bean plant (*Glycine soja* L.; *Soja hispida*, Sieb et Zucc.; *Soja max.* (L.) Piper).

14. Sesame oil, gingili oil, teel oil, benne oil, is the edible oil obtained from the seed of the sesame plant (*Sesamum indicum*, De Candolle; *Sesamum radiatum*, Schum and Thonn; *Sesamum orientale* L.).

15. Sunflower oil is the edible oil obtained from the seed of the sunflower (*Helianthus annuus* L.).

## E. TEA, COFFEE, AND CACAO PRODUCTS.

### a. TEA.

1. Tea is the leaves and leaf buds of different species of *Thea*, prepared by the usual trade processes of fermenting, drying, and firing; meets the provisions of the act of Congress approved March 2, 1897, and the regulations made in conformity therewith (Treasury Department Circular 16, February 6, 1905); conforms in variety and place of production to the name it bears; and contains not less than four per cent (4%) nor more than seven per cent (7%) of ash.

### b. COFFEE.

1. Coffee is the seed of *Coffea arabica* L. or *Coffea liberica* Bull., freed from all but a small portion of its spermoderm, and conforms in variety and place of production to the name it bears.

2. Roasted coffee is coffee which by the action of heat has become brown and developed its characteristic aroma, and contains not less than ten per cent (10%) of fat and not less than three per cent (3%) of ash.

### c. CACAO PRODUCTS.

1. Cacao beans, cocoa beans, are the seeds of the cacao tree, *Theobroma cacao* L.

2. Cacao nibs, cocoa nibs, cracked cocoa, is the roasted, broken cacao bean freed from its shell or husk.

3. Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, is the solid or plastic mass obtained by grinding cacao nibs without the removal of fat or other constituents except the germ.

4. Chocolate, plain chocolate, bitter chocolate, chocolate liquor, chocolate paste, bitter chocolate coatings, contains not more than three per cent (3%) of ash insoluble in water, three and fifty hundredths per cent (3.50%) of crude fiber, nine per cent (9%) of cacao starch, and not less than forty-five per cent (45%) of cacao fat.

5. Sweet chocolate, sweet chocolate coatings, is chocolate mixed with sugar (sucrose), with or without the addition of cocoa butter, spices, or other flavoring materials.

6. Sweet chocolate, sweet chocolate coatings, contains in the sugar and fat-free residue no higher percentage of ash, fiber or starch than is found in the sugar and fat-free residue of chocolate.

7. Cocoa, powdered cocoa, is cacao nibs, with or without the germ, deprived of a portion of its fat and finely pulverized.

8. Cocoa, powdered cocoa, contains percentages of ash, crude fiber, and starch corresponding to those in chocolate after correction for fat removed.

9. Sweet cocoa, sweetened cocoa, is cocoa mixed with not more than sixty per cent (60%) of sugar (sucrose).



10. Sweet cocoa, sweetened cocoa, contains in the sugar and fat-free residue no higher percentage of ash, crude fiber or starch than is found in the sugar- and fat-free residue of chocolate.

11. Milk chocolate, milk cocoa, sweet milk chocolate, or sweet milk cocoa, respectively, is chocolate, cocoa, sweet chocolate, or sweet cocoa which contains not less than twelve per cent (12%) of whole milk solids in the finished product.

## F. BEVERAGES.

### a. FRUIT JUICES—FRESH, SWEET, AND FERMENTED.

#### 1. Fresh and 2. Sweet.

(Schedules in preparation.)

#### 3. Fermented Fruit Juices.

1. Wine is the product made by the normal alcoholic fermentation of the juice of sound, ripe grapes, and the usual cellar treatment,<sup>1</sup> and contains not less than seven per cent (7%) nor more than sixteen per cent (16%) of alcohol, by volume, and, in one hundred (100) cubic centimeters (20° C.), not more than one-tenth (0.1) gram of sodium chlorid nor more than two-tenths (0.2) gram of potassium sulphate; and for red wine not more than fourteen hundredths (0.14) gram, and for white wine not more than twelve hundredths (0.12) gram of volatile acids produced by fermentation and calculated as acetic acid. Red wine is wine containing the red coloring matter of the skins of grapes. White wine is wine made from white grapes or the expressed fresh juice of other grapes.

2. Dry wine is wine in which the fermentation of the sugars is practically complete, and which contains, in one hundred (100) cubic centimeters (20° C.), less than one (1) gram of sugars and for dry red wine not less than sixteen hundredths (0.16) gram of grape ash and not less than one and six-tenths (1.6) grams of sugar-free grape solids, and for dry white wine not less than thirteen hundredths (0.13) gram of grape ash and not less than one and four-tenths (1.4) grams of sugar-free grape solids.

3. Fortified dry wine is dry wine to which brandy has been added but which conforms in all other particulars to the standard of dry wine.

4. Sweet wine is wine in which the alcoholic fermentation has been arrested, and which contains, in one hundred (100) cubic centimeters (20° C.), not less than one (1) gram of sugar, and for sweet red wine not less than sixteen hundredths (0.16) gram of grape ash, and for sweet white wine not less than thirteen hundredths (0.13) gram of grape ash.

5. Fortified sweet wine is sweet wine to which wine spirits have been added. By act of Congress, "sweet wine" used for making fortified sweet wine and "wine spirits" used for such fortification are defined as follows (sec. 43, act of October 1, 1890, 26 Stat., 567, as amended by section 68, act of August 27, 1894, 28 Stat., 509, and further amended by act of Congress approved June 7, 1906): "That the wine spirits mentioned in section 42 of this act is the product resulting from the distillation of fermented grape juice to which water may have been added prior to, during, or after fermentation, for the sole purpose of facilitating the fermentation and economical distillation thereof, and shall be held to include the products from grapes or their residues, commonly known as grape brandy; and the pure sweet wine, which may be fortified free of tax,

<sup>1</sup> The subject of sulphurous acid in wine is reserved for consideration in connection with the schedule, "Preservatives and Coloring Matters."



as provided in said section, is fermented grape juice only, and shall contain no other substance whatever introduced before, at the time of, or after fermentation, except as herein expressly provided; and such sweet wine shall contain not less than four per centum of saccharine matter, which saccharine strength may be determined by testing with Balling's saccharometer or must scale, such sweet wine, after the evaporation of the spirits contained therein, and restoring the sample tested to original volume by addition of water: *Provided*, That the addition of pure boiled or condensed grape must or pure crystallized cane or beet sugar or pure anhydrous sugar to the pure grape juice aforesaid, or the fermented product of such grape juice prior to the fortification provided by this act for the sole purpose of perfecting sweet wine according to commercial standard, or the addition of water in such quantities only as may be necessary in the mechanical operation of grape conveyers, crushers, and pipes leading to fermenting tanks, shall not be excluded by the definition of pure sweet wine aforesaid: *Provided, however*, That the cane or beet sugar, or pure anhydrous sugar, or water, so used shall not in either case be in excess of ten (10) per centum of the weight of the wine to be fortified under this act: *And provided further*, That the addition of water herein authorized shall be under such regulations and limitations as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, may from time to time prescribe; but in no case shall such wines to which water has been added be eligible for fortification under the provisions of this act where the same, after fermentation and before fortification, have an alcoholic strength of less than five per centum of their volume."

6. Sparkling wine is wine in which the after part of the fermentation is completed in the bottle, the sediment being disgorged and its place supplied by wine or sugar liquor, and which contains, in one hundred (100) cubic centimeters (20° C.), not less than twelve hundredths (0.12) gram of grape ash.

7. Modified wine, ameliorated wine, corrected wine, is the product made by the alcoholic fermentation, with the usual cellar treatment, of a mixture of the juice of sound, ripe grapes with sugar (sucrose), or a sirup containing not less than sixty-five per cent (65%) of sugar (sucrose), and in quantity not more than enough to raise the alcoholic strength after fermentation, to eleven per cent (11%) by volume.

8. Raisin wine is the product made by the alcoholic fermentation of an infusion of dried or evaporated grapes, or of a mixture of such infusion or of raisins with grape juice.

#### b. SODA WATER FLAVORS AND SODA, SODA WATER.

1. Ginger ale flavor is the water-soluble product obtained from ginger, with or without flavoring substances which do not simulate the flavor or pungent effect of ginger. The predominating flavor of the product is that of ginger.

2. Ginger ale with capsicum flavor is the water-soluble product obtained from ginger and capsicum, with or without other flavoring substances. The predominating flavor of the product is that of ginger.

3. Sarsaparilla flavor is the water-soluble product prepared with oil of sassafras and methyl salicylate or oil of wintergreen or oil of sweet birch and with or without other essential oils or extract of sarsaparilla.

4. Ginger ale is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose) sirup, and ginger ale flavor.

5. Ginger ale with capsicum is the carbonated or artificially carbonated beverage prepared with potable water, acidulated sugar (sucrose) sirup, and ginger ale with capsicum flavor.



6. Sarsaparilla is the carbonated or artificially carbonated beverage prepared with potable water, sugar (sucrose) sirup, and sarsaparilla flavor. It may or may not be acidulated.

(Additional definitions and standards for soda water flavors, soda, soda water, under consideration.)

### G. VINEGAR.

1. Vinegar, cider vinegar, apple vinegar, is the product made by the alcoholic and subsequent acetous fermentations of the juice of apples, is levorotatory, and contains not less than four (4) grams of acetic acid, not less than one and six-tenths (1.6) grams of apple solids, of which not more than fifty per cent (50%) are reducing sugars, and not less than twenty-five hundredths (0.25) gram of apple ash in one hundred (100) cubic centimeters (20° C.); and the water-soluble ash from one hundred (100) cubic centimeters (20° C.) of the vinegar contains not less than ten (10) milligrams of phosphoric acid ( $P_2O_5$ ), and requires not less than thirty (30) cubic centimeters of decinormal acid to neutralize its alkalinity.

2. Wine vinegar, grape vinegar, is the product made by the alcoholic and subsequent acetous fermentations of the juice of grapes, and contains, in one hundred (100) cubic centimeters (20° C.), not less than four (4) grams of acetic acid, not less than one (1.0) gram of grape solids, and not less than thirteen hundredths (0.13) gram of grape ash.

3. Malt vinegar is the product made by the alcoholic and subsequent acetous fermentations, without distillation, of an infusion of barley malt or cereals whose starch has been converted by malt, is dextrorotatory, and contains, in one hundred (100) cubic centimeters (20° C.), not less than four (4) grams of acetic acid, not less than two (2) grams of solids, and not less than two-tenths (0.2) gram of ash; and the water-soluble ash from one hundred (100) cubic centimeters (20° C.) of the vinegar contains not less than nine (9) milligrams of phosphoric acid ( $P_2O_5$ ), and requires not less than four (4) cubic centimeters of decinormal acid to neutralize its alkalinity.

4. Sugar vinegar is the product made by the alcoholic and subsequent acetous fermentations of solutions of sugar, sirup, molasses, or refiners' sirup, and contains, in one hundred (100) cubic centimeters (20° C.), not less than four (4) grams of acetic acid.

5. Glucose vinegar is the product made by the alcoholic and subsequent acetous fermentations of solutions of starch sugar or glucose, is dextrorotatory, and contains, in one hundred (100) cubic centimeters (20° C.), not less than four (4) grams of acetic acid.

6. Spirit vinegar, distilled vinegar, grain vinegar, is the product made by the acetous fermentation of dilute distilled alcohol, and contains, in one hundred (100) cubic centimeters (20° C.), not less than four (4) grams of acetic acid.

### III. SALT.

1. Table salt, dairy salt, is fine-grained crystalline salt containing, on a water-free basis, not more than one and four-tenths per cent (1.4%) of calcium sulphate ( $CaSO_4$ ), nor more than five-tenths per cent (0.5%) of calcium and magnesium chlorids ( $CaCl_2$  and  $MgCl_2$ ), nor more than one-tenth per cent (0.1%) of matters insoluble in water.



## IV. PRESERVATIVES AND COLORING MATTERS.

(Schedules in preparation.)

## V. BAKING POWDER.

Baking powder is the leavening agent produced by the mixing of an acid-reacting material<sup>1</sup> and sodium bicarbonate, with or without starch or flour.

It yields not less than twelve per cent (12%) of available carbon dioxide.

The acid-reacting materials in baking powder are: (1) Tartaric acid or its acid salts, (2) acid salts of phosphoric acid, (3) compounds of aluminium, or (4) any combination in substantial proportions of the foregoing.

<sup>1</sup> The announcement of the amount of calcium sulphate which reacts as an acid-reacting material in baking powder is reserved pending further investigation.

The announcement of the amount of other salts of phosphoric acid which react in baking powder is reserved pending further investigation.

Baking powder materials should be as free from metallic impurities as it is feasible for a manufacturer to make them. The announcement of the limits for arsenic, lead, zinc, and fluorids is reserved pending further investigation.









