

Agricultural Marketing Service, USDA

§ 52.38a

²When a standard sample size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Groups 1, 2, and 3—1 container and its entire contents. A smaller sample unit may be substituted in Group 3 at the inspector's discretion. Group 4—approximately 16 ounces of product. When determined by the inspector that a 16 ounce sample unit is inadequate, a larger sample unit may be substituted.

TABLE IV—DEHYDRATED (LOW-MOISTURE) FRUITS, AND VEGETABLES

Container size group	Lot size (number of containers) ¹				
Group 1: Any type of container of 1 lb. or less	1,800 or less	1,801 to 7,200	7,201 to 23,400	23,401 to 50,400	50,401 to 87,000
Group 2: Any type of container over 1 lb. but not over 6 lbs. net weight.	600 or less	601 to 2,400	2,401 to 7,800	7,801 to 16,800	16,801 to 29,000
Group 3: Any type of container over 6 lbs..	Convert to equivalent number of 5 lb. containers and use group 2				
Lot inspection sample size (no. of sample units) ²	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) ²	3	6	6	13	21
Acceptance number	0	1	1	2	3

¹ Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

²When a standard sample unit size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Group 1—1 container and its entire contents. Groups 2 and 3—1 container and its entire contents or a smaller sample unit when determined by the inspector to be adequate.

TABLE V—DATES

Container size group	Lot size (number of containers) ¹				
Group 1: Any type of container of 1 lb. or less net weight	2,400 or less	2,401 to 9,600	9,601 to 31,200	31,201 to 67,000	67,001 to 116,000
Group 2: Any type of container over 1 lb. but not over 5 lbs. net weight.	800 or less	801 to 3,200	3,201 to 10,400	10,401 to 22,400	22,401 to 33,667
Group 3: Any type of container over 5 lbs..	Convert to equivalent number of 5 lb. containers and use group 2				
Lot inspection sample size (no. of sample units) ²	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) ²	3	6	6	13	21
Acceptance number	0	1	1	2	3

¹ Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

²When a standard sample size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Groups 1 and 2—1 container and its entire contents. Group 3 containers up to 10 pounds—1 container and its entire contents. Group 3 containers over 10 pounds—approximately three pounds of product. When determined by the inspector that a 3-pound sample unit is inadequate, a larger sample unit or 1 or more containers and their entire contents may be substituted for 1 or more sample units of 3 pounds.

[38 FR 25166, Sept. 12, 1973; 38 FR 26903, Sept. 27, 1973. Redesignated at 42 FR 32514, June 27, 1977 and further redesignated at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 20439, June 5, 1986; 63 FR 50747, Sept. 23, 1998]

§ 52.38a Definitions of terms applicable to statistical sampling.

(a) Terms applicable to both on-line inspection and lot inspection.

(1) *Acceptable Quality Level (AQL)*. The maximum percent of defective units of product or the maximum number of defects per hundred units of product which are acceptable as a proc-

ess average. At the AQL's contained in the statistical sampling plans of this subpart, production has a probability of acceptance ("Pa") of approximately 95 percent.

(2) *Acceptance sampling*. Sampling inspection in which decisions are made to accept or reject product.

(3) *Attributes*. A method of measurement whereby units of product are examined for the presence or absence of specified characteristics in each unit in the sample.

(4) *Defect*. Any nonconformance of a unit of product from specified requirements of a single quality characteristic. Defects are classed as "minor," "major," "severe" or "critical" depending upon the severity and undesirability of the defect.

(5) *Defective*. A unit of product that has one or more defects.

(6) *Inspection by attributes*. Inspection whereby a unit of product is classified as defective or nondefective or the number or defects in the unit of product is counted.

(7) *Standard sample unit size*. A specified amount of product to be used for inspection.

(b) Terms applicable to on-line inspection only.

(1) *Basic inspection period*. A specified period of consecutive production designated for on-line inspection.

(2) *Cumulative Sum Sampling (CuSum) Plan*. An on-line sampling plan that accumulates the number of defects (or defectives), which exceed the sample unit tolerance ("T"), in a series of consecutive samples. Terms specific to the CuSum sampling plan are:

(i) *Acceptance limit ("L')*. The maximum accumulation of defects (or defectives) allowed to exceed the sample unit tolerance ("T") in any sample unit or consecutive group of sample units.

(ii) *CuSum value*. The accumulated number of defects (or defectives) that exceed the sample unit tolerance ("T").

(iii) *Sample unit tolerance ("T')*. The allowable number of defects (or defectives) in any sample unit.

(iv) *Starting value ("S')*. The initial CuSum value used to begin a CuSum sampling plan.

(3) *On-line sampling inspection*. The random selection and subsequent inspection of sample units from a production line.

(4) *Probability of acceptance ("Pa')*. The probability that a portion of production, with a given level of quality, will be accepted. In on-line sampling inspection, the probability of accept-

ance of any portion of production depends on the sample results obtained from the preceding portions. The probability of acceptance values associated with these procedures are the values which would be expected if a large number of sample units are to be inspected. For the CuSum plans referenced in these procedures, the probability of acceptance at the Acceptable Quality Level (AQL) is approximately 95 percent. The starting value ("S") associated with each CuSum plan helps to make the probability of acceptance of the first portions of production of a basic inspection period as close as possible to 95 percent.

(c) Terms applicable to lot inspection only.

(1) *Acceptance number*. The largest number of defects (or defectives) in the sample that will permit acceptance of the inspection lot.

(2) *Inspection lot*. Any number of containers of the same size and type which contain a processed product of the same type and style, manufactured or processed under essentially the same conditions, offered for inspection and acceptance at one time.

(3) *Probability of acceptance ("Pa')*. The probability that an inspection lot, with a given level of quality, will be accepted.

[43 FR 10540, Mar. 14, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.38b Statistical sampling procedures for on-line inspection by attributes of processed fruits and vegetables.

(a) *General*. The Cumulative Sum Sampling Plan, hereinafter referred to as "CuSum," shall be used as the on-line sampling plan for attributes standards under the following conditions.

(1) The producer has designated the intended grade for the basic inspection period prior to the start of production.

(2) Inspection of the product shall be made during the basic inspection period at a point after which all product characteristics, subject to inspection, are fixed and will not be subject to change during final packaging.

(3) A shift to CuSum sampling plans from lot sampling plans during a basic inspection period is not permitted (or vice versa).