GRADING MANUAL

CANNED FREESTONE PEACHES

UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND QUALITY SERVICE
FRUIT AND VEGETABLE QUALITY DIVISION
PROCESSED PRODUCTS BRANCH
Washington, DC 20250

This manual is designed for Processed Products Branch personnel of the U.S. Department of Agriculture. Its purpose is to give background information and guidelines to assist in the uniform application and interpretation of U.S. grade standards, other similar specifications and special procedures.

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Washington, DC 20250

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STYLES

A lot of canned yellow freestone peaches is designated as the style that it is offered for with the following exceptions:

1. *Halves and pieces* - To be designated and graded as "pieces" or "irregular pieces" if less than 50%, by weight, is halves (sample average).

2. *Irregular sliced style* - To be designated and graded as "pieces" or "irregular pieces."

   Sub-styles may be identified, such as:

   "_____(chips)"

   or

   "_____(slices)"

   or

   "_____(solid pack)"

CLASSIFICATION OF DEFECTS

Other than the prerequisite quality factors (such as "brightness," "character" and "flavor and odor"), any peach unit which fails to meet a requirement of the standards is classified as a defect. The defects are classified as "minor," "major," "severe," or "critical." "Total all classes" of defects means "critical," plus "severe," plus "major" plus "minor."

The tolerance for each class of defects is set to AQL's (Acceptable Quality Level). Usually, the tolerance is the same as the number of defects that would have been allowed in the old U.S. standards, a purchase specification, or other similar buying guide. But, the old tolerance might have been adjusted slightly to consider newer methods of harvesting and processing peaches.

Defects are either related or unrelated. This is important. If the defects are related, the peach unit is counted against only one of the defects; otherwise, the peach unit may be counted more than once against unrelated defects.

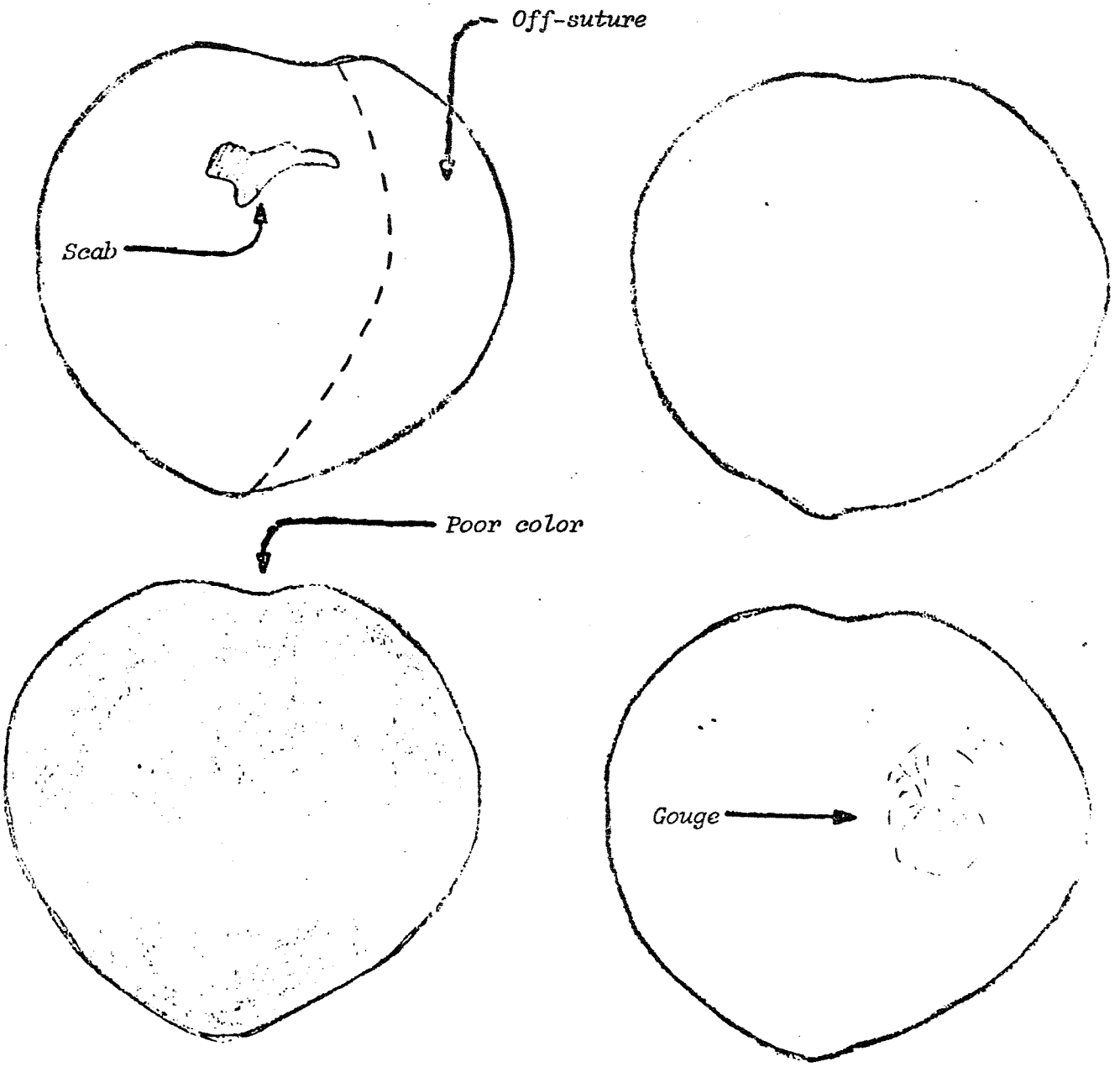
A good example of related defects is a "partially detached piece" and an "off-suture" cut. If a peach half has separated along the suture line with the piece beyond the suture attached, consider the defects ("partially detached piece" and "off-suture") related. Count only the defect which is the most serious. Don't count the other defect.

If the defects are unrelated, count each defect. For example, a peach half might be:

1. Blemished----------1 minor defect
2. Shelly----------1 major defect
3. Off-suture----------1 major defect
4. Poor color----------1 severe defect

4 total all classes of defects on one peach half.

DEFECTS VS DEFECTIVES



4 <u>defects</u> but only 3 <u>defective</u> peach halves in the above example.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES

1. *Select* at random 50 slices *(you may use as an optional plan 100 slices)* from the processing line.

2. *Reassemble* any broken slice. Count each reassembled slice as only one unit.

3. *Arrange* all of the slices in the sample unit by turning the outer surface of each slice (peel side) toward yourself.

4. *Use* your finger tips and feel for peel and pit fragments as you arrange the slices.

5. *Record* the aggregate area of peel (or the letter grade A, B, C or SSTD) in the "uncooked prerequisites" section of the defect tally.

   CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT THE PEEL AS BLEMISHED.

6. *Count* each loose pit fragment and each unit affected by pit fragment (s) as one defect. Record the total number of pit fragments in the "uncooked prerequisites" section of the defect tally. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. (See also the next page).

7. Evaluate the sample unit for uniformity of size as follows:

   a. *Eliminate* slivers, slabs and partial slices. Keep 15 of the least uniform slices (largest and smallest) and ignore the remainder of the sample unit (35 slices will be ignored if you're using the 50 plan; 85 slices will be ignored if you're using the 100 plan).

   b. *Compare* the 15 least uniform slices (largest and smallest) to the photoguide.

   c. If the 15 least uniform slices are at least as uniform as the photoguide, assign the sample unit the letter grade A.

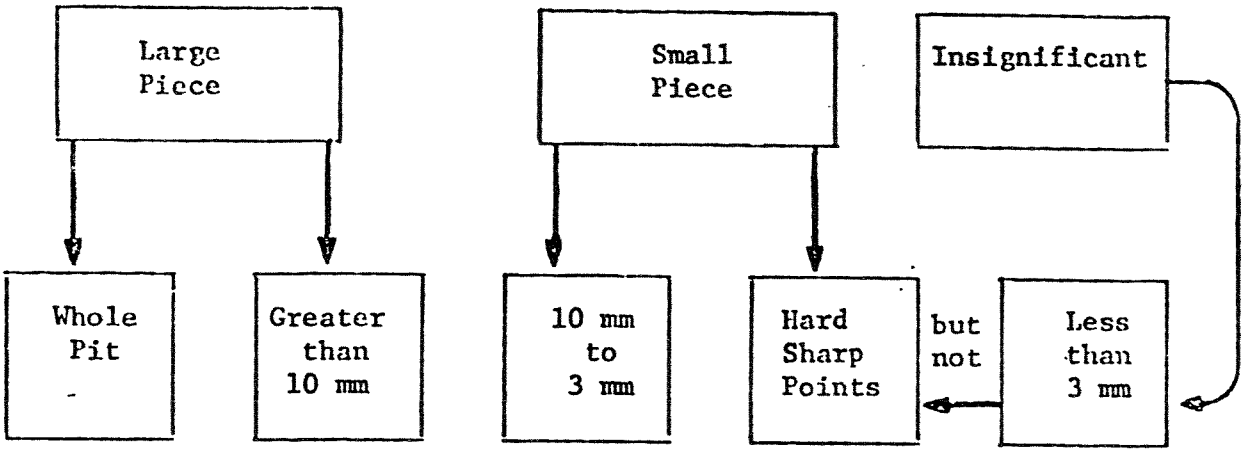
   d. If the 15 least uniform slices are less uniform than the photoguide, assign the sample unit the letter grade C.

   e. *Record* the letter grade, either A or C, in the "uncooked prerequisites" section of the defect tally.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

Pit fragments.



	TOLERANCE	
	SLICED	
	Small Fragments	Large Fragments
AQL 1/	2.5	0.40

1/ AQL expressed as defects per 100 units.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

8. *Count* the number of pieces of EVM and the number of short stems in the sample unit. The small "collar" that may remain on the stem end of the peach is not considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the number of pieces of EVM and short stems as follows:

   a. EVM - critical; and
   b. Short stems - severe.

9. *Evaluate* the color of the individual peach slices. Use the following guidelines to judge the color classification of each peach slice:

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

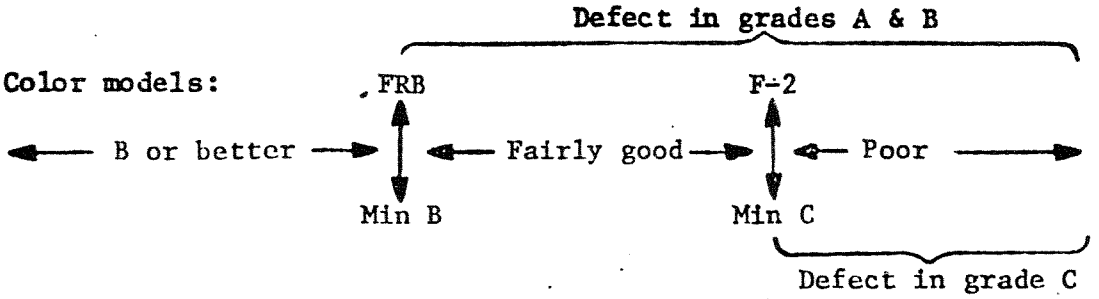
   Record on the defect tally the number of slices that are either "fairly good" color or "poor" color. If the sample unit fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C. Although the peach color models are applicable for cooked peaches only, they may be used as a general index of color to aid color classification of uncooked peaches. (See also the next page).

1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

9. Color of the individual peach slices (continuation).



10. Count and record on the defect tally the number of partial slices. Usually, the partial slices are the broken slices. Reassemble any broken slice. Each reassembled slice is one defect. If the missing part of the broken slice is not present in the sample unit, the part present in the sample unit is one defect.

11. *Count* and record on the defect tally the number of slivers. A weight of three grams or less is the only reason for classifying a sliver as a defect. If a slice is much smaller than the predominant size of the other slices in the sample unit but weighs more than 3 grams, don't count it as a defect.

12. *Count* and record on the defect tally the number of slabs. Usually slabs are of the following descriptions:

    a. Flat-sided slices with a round top; or

    b. Slices resulting from halves that go through the slicer cup-side up; or

    c. Any other condition similar to a or b above.

If a slab and a partial slice result from improper slicing of the same unit, count the reassembled unit only once, against the more severe defect (slab).

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

13. *Count* and record on the defect tally the number of shelly slices. Shelly slices are thin-fleshed units usually caused by repitting. If the sample unit fails grade B, adjust the defect tally. Shelly units are not counted against grade C. You may use the photoguides for shelly halves as an aid for interpreting and classifying thin-fleshed slices.

14. *Count* and record on the defect tally the number of gouged slices. If the slice has been trimmed by gouging defective tissue, count it as "gouged." Otherwise, the slice is not counted. Gouged slices are classified as follows:

    a. Severe; or
    b. Major; or
    c. Minor.

    → Use photoguides.

15. *Count* and record on the defect tally the number of blemished slices. Blemished means that the slice is affected by decay (count this as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. Blemished slices are classified as follows:

    a. Severe (decay); or
    b. Major; or
    c. Minor.

    → Use photoguides.

16. *Total* the classes of defects on the defect tally and compute the CuSum values as outlined in File Code 120-A-6.

17. *Select* at least one standard sample unit size (50 slices or 100 slices) for each production period code. This sample unit is to be selected after the peaches have gone through the cooker and cooler. It may be comprised of one can or multiple cans.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

18. *Cut* the cans (or can) and arrange the slices in random order.

19. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally. Disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack.

20. As the slices are being arranged in step 18 of this procedure, visually scan the sample unit for apparent slices with "fairly good" character and slices with "poor" character. Also, seriously frayed slices can be identified. The final test for checking character is the touch sensation from actually feeling of the slices. Record the number of "seriously frayed", "substantially firm," "very soft," and "mushy" slices. This tally is to be made in the section for "cooked prerequisites." Then, assign the letter grade (A, B, C, or SSTD) for the character of the sample unit.

    a. "Seriously frayed" means that the ragged appearance extends well into the flesh of the slice and that the overall appearance or eating quality may be seriously affected; provided that the normal shape of the slice is not destroyed.

    b. "Fairly good" vs. "poor" character.
    Fairly good - Count each seriously frayed, very soft, or substantially firm slice.

    Poor - Count each mushy, excessively soft, or hard slice.

21. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section of the defect tally for "cooked prerequisites."

22. *Evaluate* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

SLICED PEACHES (continuation).

23. *Resample* the production period in question if any cooked sample unit drawn in step 17 of this procedure fails the designated grade. Any procedure approved by the Branch for reevaluation of "cooked prerequisites" may be used to accept or reject the production period. If the production period is not resampled it may be failed on the basis of one failing "cooked prerequisite" check.

CAUTION: DON'T ADD IN TO THE DEFECT TALLY ANY CLASSIFIED DEFECTS FOUND DURING EXAMINATION OF THE COOKED PREREQUISITE CHECK.

24 Occasionally, *equipment breakdown* (pitters, cookers, etc.) causes product deterioration. If the defective product is isolated, separately identified and set aside, don't count it as a portion of the production code that is being run.

25. *Optionally,* the entire evaluation of the sample unit and the classification of defects may be made on the product directly out of the cooker and cooler. Use CuSum. But bypass the selection of the sample unit from the production line prior to cooking. Omit step 23 of this procedure.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS

1. *Select* at random 25 peach halves or quarters from the processing line.

2. *Count* any crushed or broken units *(not due to ripeness)* and turn all units "cup down." Reassemble any broken units. Count each reassembled peach as one unit. Don't count as crushed or broken any unit which is slightly split from the edge to the pit cavity. Record in the "uncooked prerequisites" section of the tally sheet the number of crushed and broken units.

	TOLERANCE
	GRADE A, B & C
AQL 1/	6.5

1/ AQL expressed as percent defective.

3. *Count* the number of detached and partially detached pieces. Don't count these units again under off-suture. Record on the defect tally the number of detached and partially detached pieces as follows:

   a. Detached pieces - major; and
   b. Partially detached pieces - minor.

4. *Count* the number of pieces of EVM and the number of short stems in the sample unit. The small "collar" that may remain on the stem end of the peach is not considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the number of pieces of EVM and the number of short stems as follows:

   a. EVM - critical; and
   b. Short stems - severe.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

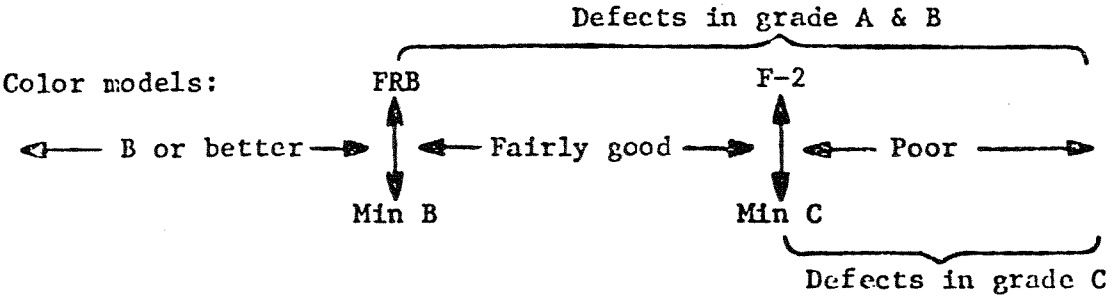
5. *Evaluate* the color of the individual peach units. Use the following guidelines to judge the color classification of each peach unit.

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

   Record on the defect tally the number of units that are either "fairly good" color or "poor" color. If the sample unit fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect against grade C. Disregard the "fairly good" color for grade C. Although the peach color models are applicable for cooked peaches only, they may be used as a general guide to evaluate the color classification of uncooked peaches.



1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

6. *Evaluate* the sample unit for off-suture cuts. Keep in mind that the units must be kept in a "cup down" position and look only at the outside surface. Don't count again under off-suture any units that were previously counted under partially detached pieces or detached pieces. Count and record on the defect tally the number of off-suture cuts that are classified as follows:

   a. Severe (donuts); or
   b. Major; or
   c. Minor.

   → Use photoguides.

7. *Count* the number of gouged units. If the unit has been trimmed by gouging defective tissue, count it as "gouged." Otherwise, the unit is not counted. If the units contain impressions caused by the beaded sidewall of containers (only if the sample unit is drawn after cooking), don't count it as gouged. Record on the defect tally the number of gouged units that are classified as follows:

   a. Severe; or
   b. Major; or
   c. Minor.

   → Use photoguides.

8. *Count* the number of units that are affected by mechanical damage. Classify as mechanical damage only those units with missing outside surface flesh. Don't count under "mechanical damage" any units that were previously counted under "crushed" or "broken." Reassemble the damaged unit and count the reassembled unit as one defect. Don't count each piece, if pieces are present, as a defect. Record mechanical damage on the defect tally as follows:

   a. Severe - total loss of normal shape; or
   b. Major - normal shape seriously affected; or
   c. Minor - normal shape materially affected.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

9. *Count* the number of units that are blemished. Blemished means that the unit is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. Record the number of blemished units on the defect tally as follows:

    a. Severe (decay); or
    b. Major; or
    c. Minor.

    } → Use photoguides.

10. *Use* your finger tips and feel for peel as the units are scanned for blemishes. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel (or the letter grade A, B, C or SSTD).

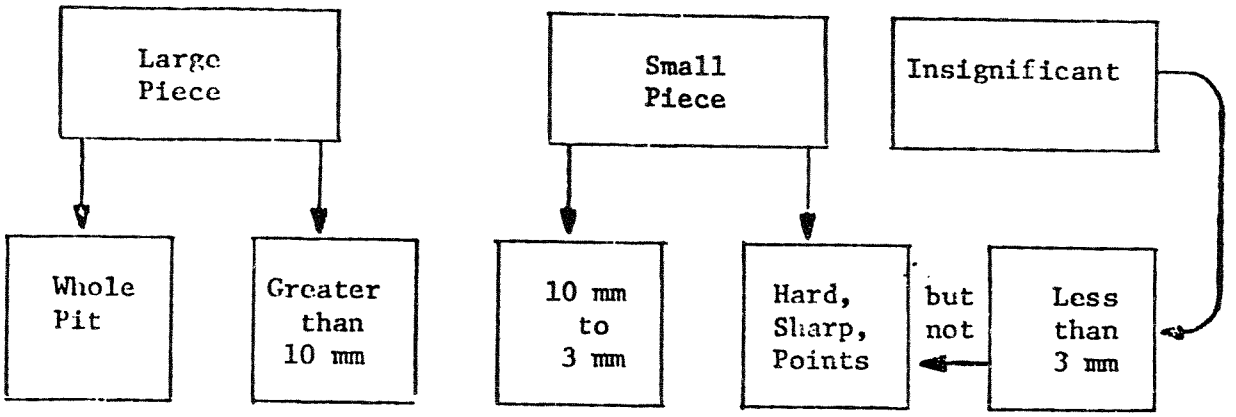
    CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

11. Too, as you check for peel with your finger tips, turn the unit over and feel in the pit cavity for any pit fragments that might be attached to the flesh of the unit. Count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record the total number of pit fragments in the "uncooked prerequisites" section of the defect tally. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

11. Pit fragments (continuation).



	TOLERANCE			
	HALVES		QUARTERS	
	Small fragments	Large fragments	Small fragments	Large fragments
AQL 1/	10.0	1.5	5.0	1.0

1/ AQL expressed as defects per 100 units.

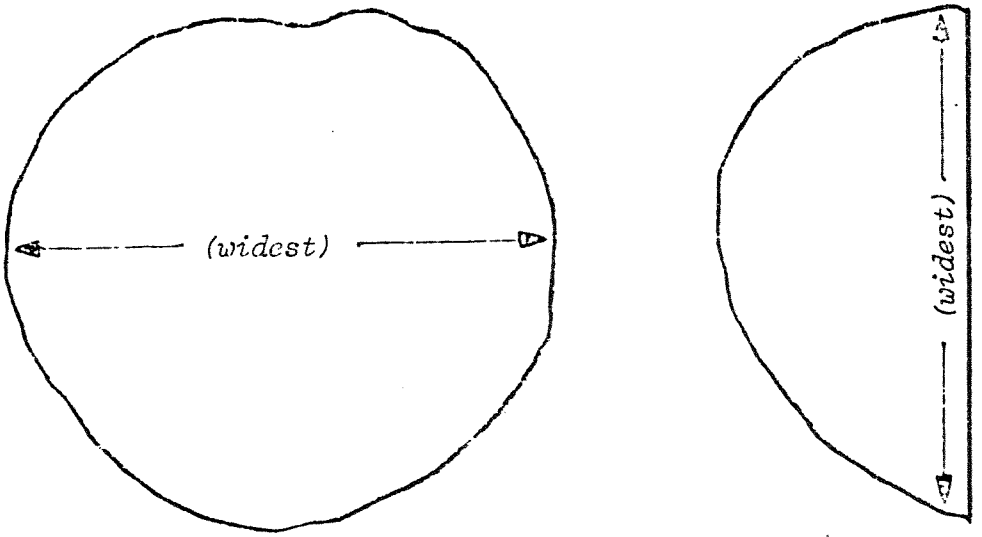
SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

12. *Turn* all of the units "cup side" down.

13. As the units are being turned over, check the *uniformity of size.* It isn't necessary to measure each unit. Measure only the apparent large units or the apparent small units. Use a metric grid similar to Inspection Aid No. 101 if one is available. Each peach unit that varies in diameter more than 1 cm (0.4 in) from the other peach units is counted as one minor defect.

    a. *Measure* the widest diameter of the apparent large units or the apparent small units as follows:



(see also the next page)

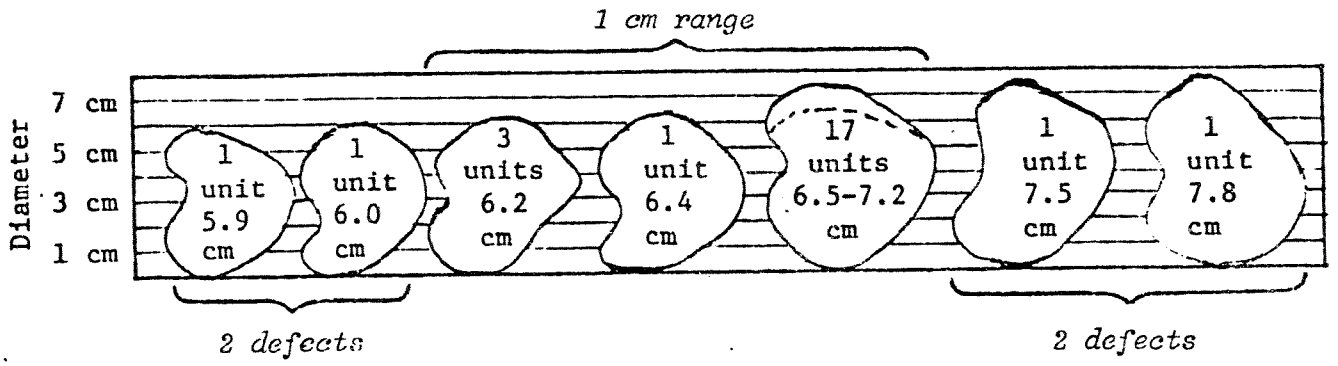
SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

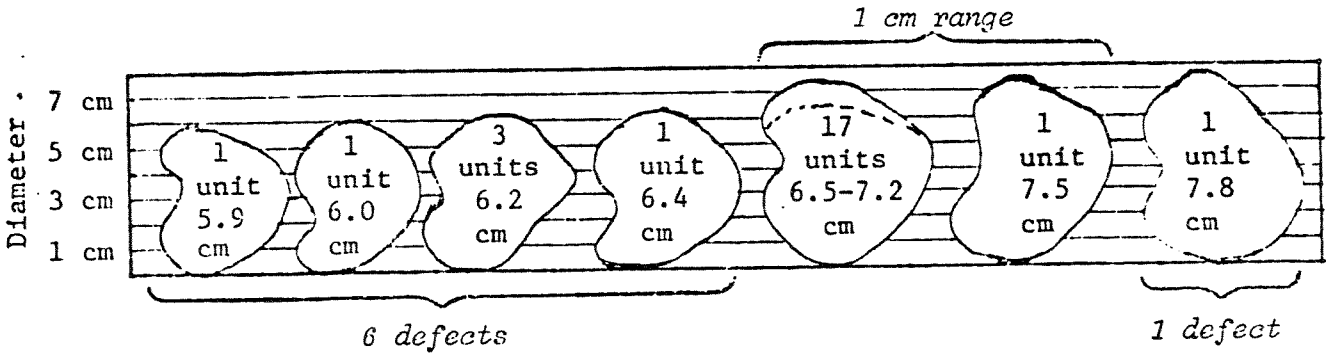
13. Uniformity of size (continuation).

b. *Determine* size variation so that the least number of defects are counted against size.

Example 1: (correct method) - 25 peach units showing 4 defects.



Example 2: (incorrect method) - 25 peach units showing 7 defects.



14. *Count* the number of shelly units. Shelly units are usually the thin-fleshed units caused by repitting. Don't count shelly units twice, under "shelly" and then again under "other mechanical damage." Record on the defect tally the number of shelly units. If the sample unit fails grade B, adjust the defect tally. In grade C, all of the units may be shelly. Use the photoguides for shelly.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation)

15. Total the classes of defects on the defect tally and compute the CuSum values as outlined in File Code 120-A-6.

16. *Select* at least one standard sample unit size (25 units) from each production period code. This sample unit is to be selected after the peaches have gone through the cooker and cooler. It may be comprised of one can or multiple cans.

17. *Cut* the cans (or can) and turn all of the units "cup down."

18. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally. Disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack.

19. As the units are being turned "cup down" in step 17 of this procedure, *visually scan* the sample unit for apparent units with "fairly good" character and units with "poor" character. Also the seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the units. Record the number of "seriously frayed," "substantially firm," "very soft," and "mushy" units. Make this tally in the section for "cooked prerequisites." Then, assign the letter grade (A, B, C, or SSTD) for the character of the sample unit.

    a. "Seriously frayed" means that the ragged appearance extends well into the flesh of the unit and the overall appearance or eating quality may be seriously affected; provided that the normal shape of the unit is not destroyed.

    b. "Fairly good" vs "Poor" character.

        Fairly good - Count each seriously frayed, very soft, or substantially firm unit.

        Poor - Count each mushy, excessively soft, or hard unit.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

HALVES OR QUARTERS (continuation).

20. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites."

21. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

22. *Resample* the production period in question if any cooked sample unit drawn in step 16 of this procedure fails the designated grade. Any procedure approved by the Branch for reevaluation of "cooked prerequisites" may be used to accept or reject the production period. If the production period is not resampled it may be failed on the basis of one failing "cooked prerequisite" check.

CAUTION: DON'T ADD IN TO THE TALLY ANY CLASSIFIED DEFECTS FOUND DURING EXAMINATION OF THE COOKED PREREQUISITE CHECK.

23. Occasionally, *equipment breakdown* (pitters, cookers, etc.) causes product deterioration. If the defective product is isolated, separately identified and set aside, do not count it as a portion of the production code that is being run.

24. *Optionally*, the entire evaluation of the sample unit and the classification of defects may be made on the product directly out of the cooker and cooler. Use CuSum. But bypass the selection of the sample unit from the production line prior to cooking. Omit step 22 of this procedure.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES

1. *Select* at random a 1000 g sample unit (you may also use 2000 g, if you need a larger sample unit) from the production line.

2. *Spread* the sample unit on the grading tray.

3. As you spread the peach units, *count* the number of pieces of EVM and the number of short stems in the sample unit. The small "collar" that may remain on the stem end of the peach is not counted as EVM unless the overall appearance of the peach unit is affected. Record on the defect tally the number of pieces of EVM and the number of short stems as follows:

   a. EVM - critical; and
   b. Short stems - critical.

4. *Evaluate* the color of each individual peach unit. Use the following guidelines to judge the color classification of each peach unit:

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both. (See also the next page).

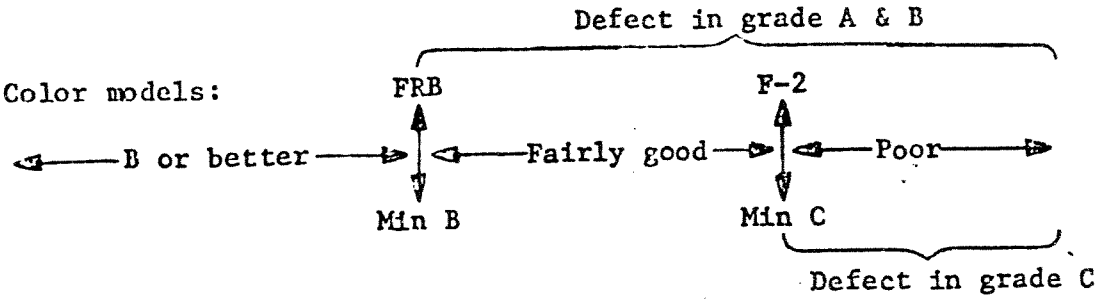
1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

4. Color (continuation).

Although the peach color models are applicable for cooked peaches only, they may be used as a general guide to evaluate the color classification of uncooked peaches.



As a practical method of evaluating the individual unit color of irregular peaches, scan the sample unit and separate into groups the apparent units that are "fairly good" color and the apparent units that are "poor" color. Weigh each group -- "fairly good" color and "poor" color -- separately. Ignore any mushy material as far as individual unit color is concerned. Each 40 g increment of color defects, to the nearest 40 g, is counted as follows:

a. Fairly good color - 1 major defect; and
b. Poor color - 1 severe defect.

Record on the defect tally the number of defects -- the number of 40 g increments — that are either "fairly good" color or "poor" color. If the sample unit fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

5. *Separate* the peach units that are blemished. Blemished means that the peach unit is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal discoloration of the pit cavity (discoloration that has penetrated into the flesh). After you have separated all of the blemished peach units from the sample unit, classify them into three groups as follows:

   a. Severe (decay); or
   b. Major; or
   c. Minor.

   } ⟶ Use photoguides.

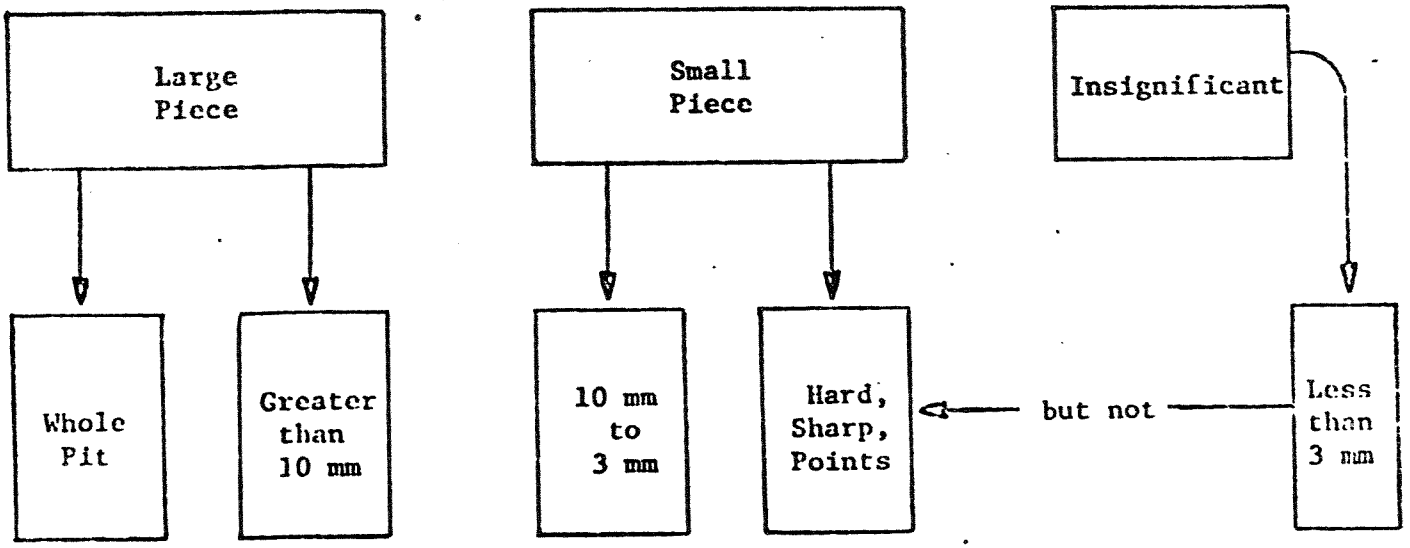
   Weigh each of the three groups, severe, major and minor. Each 40 g increment, to the nearest 40 g, is equal to one defect. Record on the defect tally the number of defects -- the number of 40 g increments — that are either "severe," "major" or "minor."

6. *Turn* the peach units and count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the total number of pit fragments. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

6. Pit fragments (continuation).



	TOLERANCE	
	PIECES OR IRREGULARS	
	1000 g or 2000 g	
	Small Fragments	Large
AQL 1/	6.5	1.0

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

7. *Total* the classes of defects on the defect tally and compute the CuSum values as outlined in File Code 120-A-6. Use the "S," "T" and "L" values which coincide with the sample unit size. The correct sampling plan to use for the sample unit size is as follows:

If you use:	*File Code 109-A-1:*
1000 g ----------use----------	Table VII (25 Plan)
2000 g ----------use----------	Table VIII (50 Plan)

8. *Select* at least one standard sample unit size (1000 g or 2000 g) for each production period code. This sample unit is to be selected after the peaches have gone through the cooker and cooler. It may be comprised of one can or multiple cans.

9. *Cut* the cans (or can).

10. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally. Disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack.

11. *Visually scan* the sample unit for apparent units with "fairly good" character and units with "poor" character. Also, any seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the peach unit. Separate the units that are "fairly good" character into one group and the units that are "poor" character into another group. Weigh each of the two groups, "fairly good" and "poor." Record in the "cooked prerequisites" section of the defect tally the actual weight of "fairly good" character and the actual weight of "poor" character. Then, assign the letter grade (A, B, C or SSTD) for the character of the sample unit. (See also the next page).
"Seriously frayed" means that the ragged appearance extends well into the flesh of the unit and the overall appearance or eating quality may be seriously affected; provided that the normal shape of the unit is not destroyed.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

11. Character (continuation).

Assign the letter grade based on the following tolerances:

		Tolerances (Except Pie-Pack)		Tolerances (Pie-Pack only)	
Sample Unit Size		"Fairly good"	"Poor"	"Fairly good"	"Poor"
A →	1000 g	50 g	0	250 g	125 g
	2000 g	100 g	0	500 g	250 g
B →	1000 g	100 g	0	500 g	250 g
	2000 g	200 g	0	1000 g	500 g
C →	1000 g	All	or 100 g	All	or 500 g
	2000 g	All	or 200 g	All	or 1000 g

a. Fairly good character - Count seriously frayed, very soft, or substantially firm units.
Poor character - Count mushy, excessively soft, or hard units.

b. Time saver. If you are using the 2000 g sample unit size for inspection, you may use 1000 g for evaluation of character. In effect, this procedure would be the equivalent of drawing a subsample. If you use a smaller sample unit size for weighing character, note on the defect tally that you've used 1000 g for character. Otherwise, it's difficult for someone other than the original grader to reevaluate the defect tally.

12. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites."

13. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs such as solid-pack, optional ingredients or nonnutritive sweeteners.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

14. *Resample* the production period in question if any cooked sample unit drawn in step 9 of this procedure fails the designated grade. Any procedure approved by the Branch for reevaluation of "cooked prerequisites" may be used to accept or reject the production period. If the production period isn't resampled it may be failed on the basis of one failing "cooked prerequisite" check.

    CAUTION: DON'T ADD IN TO THE TALLY ANY CLASSIFIED DEFECTS FOUND DURING EXAMINATION OF THE COOKED PREREQUISITE CHECK.

15. Occasionally, *equipment breakdown* (pitters, cookers, etc.) causes product deterioration. If the defective product is isolated, separately identified and set aside, don't count it as a portion of the production code that is being run.

16. *Optionally,* the entire evaluation of the sample unit and the classification of defects may be made on the product directly out of the cooker and cooler. Use CuSum. But bypass the selection of the sample unit from the production line prior to cooking. Omit step 14 of this procedure.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES

1. *Select* at random 200 g of diced peaches (you may use as an optional plan, either 800 g or 1600 g) from the production line.

2. *Spread* the sample unit on the grading tray.

3. As you spread the diced peaches, *count* the number of pieces of EVM and the number of short stems in the sample unit. The small "collar" that may remain on the stem end of the peach isn't counted as EVM unless the overall appearance of the peach unit is affected. Record on the defect tally the number of pieces of EVM and the number of short stems as follows:

   Critical - each piece of EVM and each short stem.

4. *Evaluate* the color of each individual peach dice. Use the following guidelines to judge the color classification of each peach dice:

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

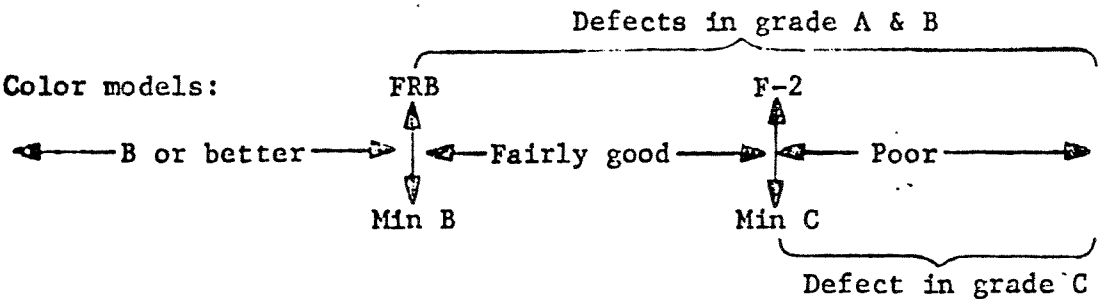
   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

4. Evaluation of individual unit color (continuation). Although the peach color models are applicable for cooked peaches only, they may be used as a general guide to evaluate the color classification of uncooked peaches.



As a practical method of evaluating the individual unit color of diced peaches, *scan* the sample unit and separate into two groups the apparent dice that are "fairly good" color and the apparent dice that are "poor" color. Weigh each group — "fairly good" color and "poor" color — separately. Each 8 g increment to the nearest 8 g is as follows:

Fairly good color - one major defect.
Poor color - one severe defect.

Record on the defect tally the number of defects -- the number of 8 g increments — that are either "fairly good" color or "poor" color. If the sample unit fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

5. *Separate* the dice that are blemished. Blemished means that the dice is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity.
After you have separated all of the blemished dice from the sample unit, classify them into three groups as follows:

   a. Severe (decay); or
   b. Major; or
   c. Insignificant (same as minor in the other styles).

   → Use photoguides.

   Weigh each of the two groups - severe and major. Each 8 g increment, to the nearest 8 g, is one defect. Record on the defect tally the number of defects -- the number of 8 g increments — that are either "severe" blemish or "major" blemish.

6. *Separate* the dice that are more than 20 mm (0.8 in) on one cut edge and those that pass through the meshes of a 5/16 inch (8 mm) sieve. It isn't necessary to separate the large dice from the small dice. Composite the large dice and the small dice and weigh. The sieve method used to determine the size of diced units in Canned Fruit Cocktail is used for Canned Freestone Peaches too.
Each 8 g increment, to the nearest 8 g, is equal to one defect. Record on the defect tally the number of defects -- the composite number of 8 g increments — that are excessively large and excessively small.

7. As you separate the dice for size, use your finger tips and feel for attached peel. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel (or the letter grade A, B, C or SSTD).

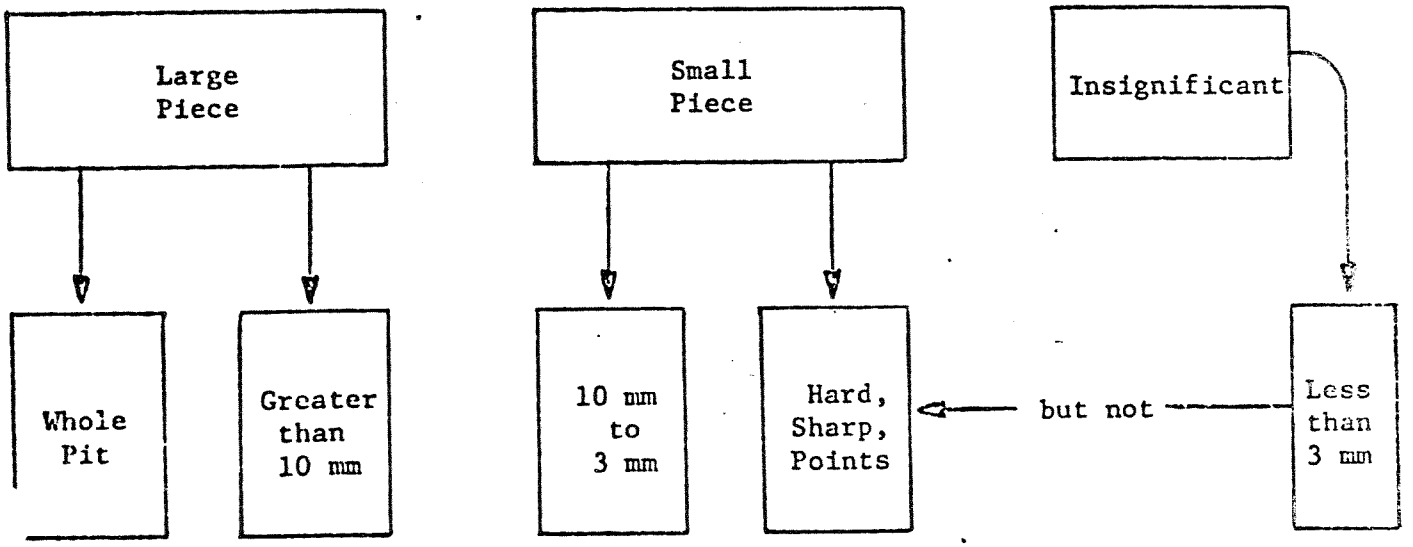
   CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT THE PEEL AS BLEMISHED.

8. *Turn or roll* the diced peaches and count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the total number of pit fragments. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

8. Pit fragments (continuation).



TOLERANCE		
DICED		
200, 800 or 1,600 g		
	Small Fragments	Large
AQL 1/	1.0	0.4

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

9. *Total* the classes of defects on the defect tally and compute the CuSum values as outlined in File Code 120-A-6. Use the "S," "T" and "L" values which coincide with the sample unit size. The correct sampling plan to use for the sample unit size is as follows:

If you use:		*File Code 109-A-1:*
200 g	use	Table VII (25 Plan)
800 g	use	Table IX (100 Plan)
1600 g	use	Table X (200 Plan)

10. *Select* at least one standard sample unit size (200 g, 800 g or 1600 g) for each production period code. This sample unit is to be selected after the peaches have gone through the cooker and cooler. It may be comprised of multiple cans or a single can.

11. *Cut* the cans (or can).

12. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally. Disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack.

13. *Visually scan* the sample unit for apparent units with "fairly good" character and apparent units with "poor" character. Also, any seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the dice. Separate the dice that are "fairly good" character into one group and the dice that are "poor" character into another group. Weigh each group — "fairly good" and "poor." Record in the "cooked prerequisites" section of the defect tally the actual weight of "fairly good" character and the actual weight of "poor" character. (See also the next page).
"Seriously frayed" means that the overall appearance or eating quality of the dice may be seriously affected; provided that the dice are intact.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

13. Character (continuation).

Assign the letter grade (A, B, C or SSTD) for the character of the sample unit based on the following tolerances:

	Sample Unit Size	Tolerances "Fairly good"	Tolerances "Poor"
Grade A	200 g	10 g	0
	800 g	40 g	0
	1600 g	80 g	0
Grade B	200 g	20 g	0
	800 g	80 g	0
	1600 g	160 g	0
Grade C	200 g	All or 20 g	
	800 g	All or 80 g	
	1600 g	All or 160 g	

a. *Fairly good character* - Count seriously frayed, very soft, or substantially firm dice.
Poor character - Count mushy, excessively soft, or hard dice.

b. *Time saver.* If you are using the larger sample unit sizes of 800 g or 1600 g, you may use 200 g for weighing character to save time. In effect, this procedure would be the equivalent of drawing a subsample. If you use a smaller sample size for weighing character, note on the defect tally that you've used 200 g for character. Otherwise, it's difficult for someone other than the original grader to reevaluate the defect tally.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

DICED PEACHES (continuation).

14. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites."

15. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs such as solid-pack, optional ingredients or nonnutritive sweeteners.

16. *Resample* the production period in question if any cooked sample unit drawn in step 10 of this procedure fails the designated grade. Any procedure approved by the Branch for reevaluation of "cooked prerequisites" may be used to accept or reject the production period. If the production period isn't resampled, it may be failed on the basis of one failing "cooked prerequisite" check.

CAUTION: DON'T ADD IN TO THE TALLY ANY CLASSIFIED DEFECTS FOUND DURING EXAMINATION OF THE COOKED PREREQUISITE CHECK.

17. Occasionally, *equipment breakdown* (pitters, cookers, etc.) causes product deterioration. If the defective product is isolated, separately identified and set aside, don't count it as a portion of the production code that is being run.

18. *Optionally,* the entire evaluation of the sample unit and the classification of defects may be made on the product directly out of the cooker and cooler. Use CuSum. But bypass the selection of the sample unit from the production line prior to cooking. Omit step 16 of this procedure.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES

1. *Select* at random 25 whole peaches from the processing line.

2. *Count* any crushed or broken peaches (not due to ripeness). Reassemble any broken peach. Count each reassembled peach as only one unit. Record in the "uncooked prerequisites" section of the defect tally sheet the number of crushed and broken peaches.

	TOLERANCE
	GRADE A, B & C
AQL 1/	6.5

1/ *AQL expressed as percent defective.*

3. *Count* the number of pieces of EVM in the sample unit. The small "collar" that may remain on the stem end of the peach is not considered as EVM unless the overall appearance of the peach is affected. Record on the defect tally the number of pieces of EVM as follows:

Critical - each piece of EVM.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES (continuation).

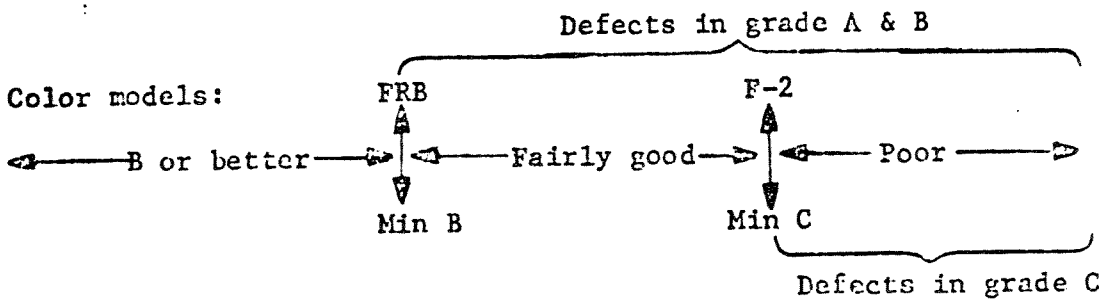
4. *Evaluate* the color of each individual peach. Use the following guidelines to judge the color classification of each peach.

   a. *Good color* - The peach may possess discoloration due to oxidation, pigmentation, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The peach may possess discoloration due to oxidation, pigmentation, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The peach may possess discoloration due to oxidation, pigmentation, or other causes that seriously affects the appearance or eating quality, or both.

   Record on the defect tally the number of units that are either "fairly good" color or "poor" color. If the sample unit fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C. Although the peach color models are applicable for cooked peaches only, they may be used as a general guide to evaluate the color classification of uncooked peaches.



If on-line inspection of whole peaches covers product intended for "spiced peaches," color evaluation would be done at a point ahead of syruping. Thus, discoloration caused by spice(s) or condiment(s) would not be expected to interfere with the color evaluation.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES (continuation).

5. *Count* the number of gouged units. If the peach has been trimmed by gouging defective tissue, count the unit as "gouged." Otherwise, the unit is not counted. If the peach contains impressions caused by the beaded sidewall of the container (only if the sample unit is drawn after cooking), don't count it as gouged. Record on the defect tally the number of gouged peaches that are classified as follows:

   a. Severe; or
   b. Major; or
   c. Minor.

   } ——→ Use photoguides.

6. *Count* the number of units that are affected by mechanical damage. Classify as mechanical damage only those peaches with missing outside surface flesh. Don't count under "mechanical damage" any units that were previously counted under "crushed" and "broken." Record mechanical damage on the defect tally as follows:

   a. Severe - total loss of normal shape; or
   b. Major - normal shape seriously affected; or
   c. Minor - normal shape materially affected.

7. *Count* the number of units that are blemished. Blemished means that the unit is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury. Record the number of blemished peaches on the defect tally as follows:

   a. Severe (decay); or
   b. Major; or
   c. Minor.

   } ——→ Use photoguides.

8. As you scan the peaches for blemishes, use your finger tips and feel for attached peel. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel (or the letter grade A, B, C or SSTD).

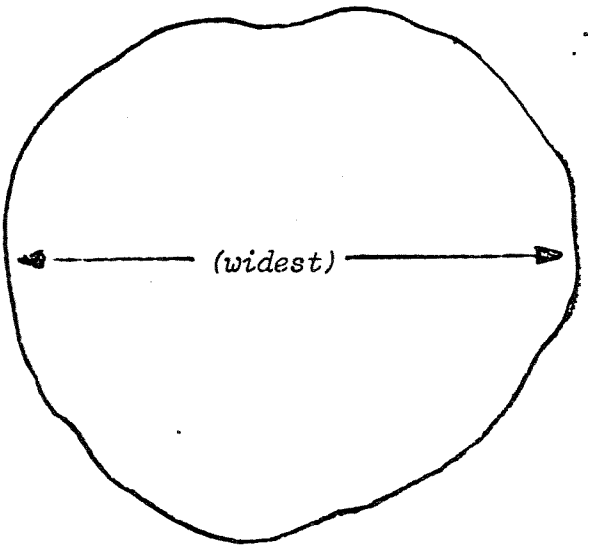
   CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT THE PEEL AS BLEMISHED.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES (continuation).

9. *Check* the peaches for uniformity of size. It isn't necessary to measure each peach. Measure only the apparent large units or the apparent small units. Each peach that varies in diameter more than 1 cm (0.4 in) from the other peaches in the sample unit is counted as one minor defect.

   a. *Measure* the widest diameter of the apparent large peaches or the apparent small peaches as follows:



   b. *Determine* size variation so that the least number of defects are counted. Please refer to step 13 under "halves or quarters" for the correct interpretation of this requirement.

10. Total the classes of defects on the defect tally and compute the CuSum values as outlined in File Code 120-A-6.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES (continuation).

11. *Select* at least one standard sample unit size (25 peaches) from each production period code. This sample unit is to be selected after the peaches have gone through the cooker and cooler. It may be comprised of one can or multiple cans.

12. *Cut* the can (or cans).

13. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally. Consider only abnormal discoloration due to oxidation or other similar causes. "Spiced peaches" are expected to take on the darker coloration caused by the spice(s).

14. *Scan* the sample unit for apparent peaches with "fairly good" character and peaches with "poor" character. Record the number of "substantially hard, " "very soft," and "mushy" peaches. This tally is to be made in the section for "cooked prerequisites." Then, assign the letter grade (A, B, C, or SSTD) for the character of the sample unit.

    Mushy - count each "mushy" peach as "poor" character.

15. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites."

16. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs, or optional packing media, such as spiced peaches, brown sugar and honey, or nonnutritive sweeteners.

17. *Resample* the production period in question if any cooked sample unit drawn in step 11 of this procedure fails the designated grade. Any procedure approved by the Branch for reevaluation of "cooked prerequisites" may be used to accept or reject the production period. If the production period is not resampled it may be failed on the basis of one failing "cooked prerequisite" check.

CAUTION: DON'T ADD IN TO THE TALLY ANY CLASSIFIED DEFECTS FOUND DURING EXAMINATION OF THE COOKED SAMPLE UNIT.

SUGGESTED ORDER OF GRADING A SAMPLE UNIT UNDER ON-LINE INSPECTION

WHOLE PEACHES (continuation).

18. Occasionally, *equipment breakdown* (lines, cookers, etc.) causes product deterioration. If the defective product is isolated, separately identified and set aside, don't count it as a portion of the production code that is being run.

19. *Optionally,* the entire evaluation of the sample unit and the classification of defects may be made on the product directly out of the cooker and cooler. Use CuSum. But bypass the selection of the sample unit from the production line prior to cooking. Omit step 17 of this procedure.

    If the optional plan (after cooking for all evaluations) is chosen and whole spiced peaches are being packed, it would be harder to correctly classify individual color defects. The spice would be expected to discolor the peaches. So, ignore the individual color defects unless you can correctly classify them. Put more emphasis on the prerequisite factor of "brightness."

SPECIAL ON-LINE SAMPLING SITUATIONS

1. CHECKING "COOKED PREREQUISITES."

Several prerequisite quality factors (such as character) should be checked after cooking. If the other quality factors are evaluated from sample units drawn from the processing line (prior to cooking), you should evaluate at least one standard sample unit size (such as 50 slices) for each production period code. A period code would usually cover 2 to 2-1/2 hours. If the "cooked prerequisites" check fails to meet the requirements of the intended grade, the period code in question may be resampled and reevaluated by any procedure approved by the Branch. As might be expected, character could be the most troublesome of the "cooked prerequisites." Because it may be difficult for you to resample the product once it is warehoused, draw enough cans from the cooker-cooler to satisfy the requirements of increased sampling, should you need the additional cans. Any unopened cans could be returned to the warehouse. Your "cooked prerequisites" check might be done as follows:

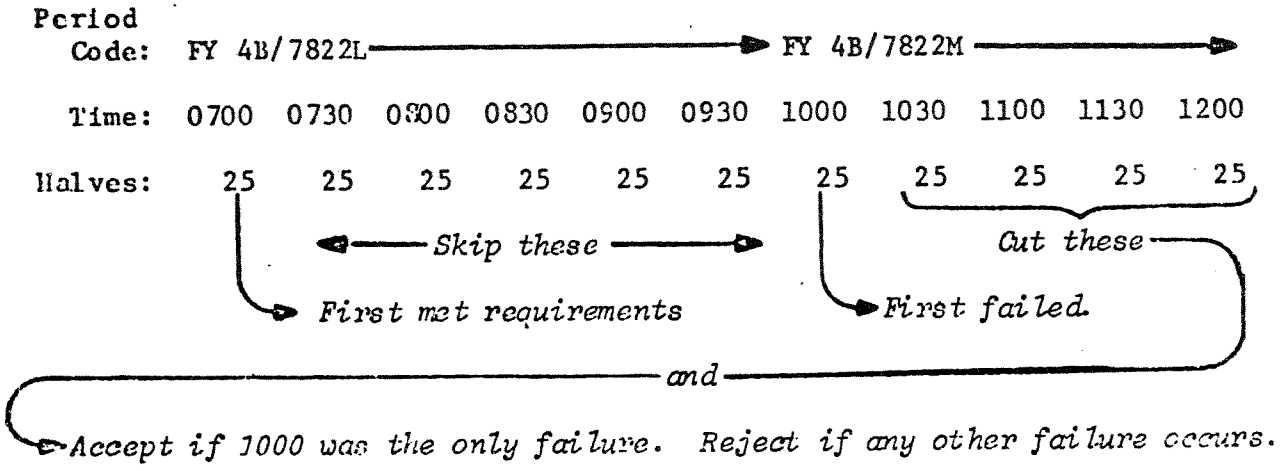
a. *Draw* at least one standard sample unit size (you might need to draw more than one can for small containers) for each 30 minutes of production. Mark the time. Cut the first can from the period code. Accept the period code if the first can meets the requirements. Cut the additional cans from the period code in question if the first can fails the requirements. Allow a failure to occur at the rate in File Code 120-A-4 for time sampling deviants (one can could fail from cans 4 through 8). If a failure does occur, the recorded time of the "cooked prerequisites" check could be used to pinpoint the portion of the period code that might be overcooked or undercooked.

b. *Draw* at least one can for each 30 minutes of production. Make sure that you have enough product for one standard sample unit size from each period code. At random, cut all of the cans and select one standard sample unit size for examination. The period code would pass or fail based on just one check. If a failure does occur, the exact portion, or time, that the period code was overcooked or undercooked could not be pinpointed. However, the period code in question could be resampled and reevaluated as in (a) above. This procedure might be acceptable to high volume plants that can't control their cook any closer than every 2 hours.
(See also the next page).

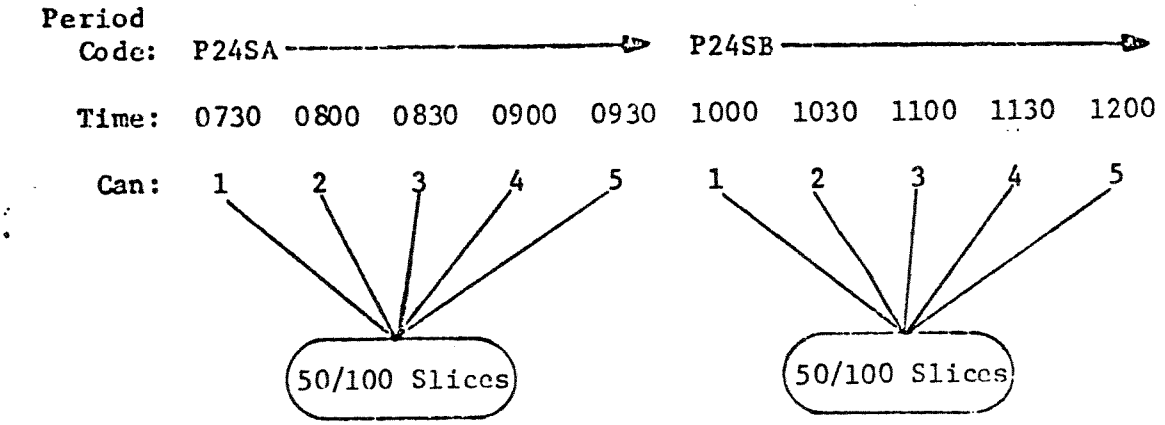
SPECIAL ON-LINE SAMPLING SITUATIONS

1. *CHECKING "COOKED PREREQUISITES" (continuation).*

Example 1: (1 standard sample unit size each 30 minutes) 1/



Example 2: (Composite standard sample unit size)



Accept if the composite standard sample unit size meets; Reject if it fails.

1/ *At the option of the grader or the packer, each standard sample unit during each period code may be cut, regardless of the results of the first check.*

SPECIAL ON-LINE SAMPLING SITUATIONS

2. *USE OF CUSUM SAMPLING PLANS FOR PREREQUISITE QUALITY FACTORS.*

Consider prerequisite quality factors independent of the classified quality factors. Although some of the prerequisites (crushed or broken and pit fragments) may be set to AQL's and appropriate CuCum sampling plans, don't use the CuSum rules in File Code 120-A-6 for the prerequisites, except, for assigning a grade to the period code.

Example: (Prerequisites set to AQL's)

* * *

CODE: A → B → C → D →

			S	T	L								
UNCOOKED	Crushed or Broken					1	0	3	2	1	0	1	0
		CUSUM	1	2	3	0	0	1	1	0	0	0	0
	Peel (Area) cm^2												
	PIT	Large Pieces				0	1	0	1	0	0	0	0
		CUSUM	0	.5	.5	0	5	0	5	0	0	0	0
		Small Pieces				0	0	1	5	2	0	0	1
		CUSUM	1.5	1.5	3.0	0	0	0	(2)	(3)	1.5	0	0

* * *

TOTAL	TOTAL ALL CLASSES					8	7	8	10	6	6	8	4
	CUSUM	GRADE A	1	5	3								
		GRADE B	1	8	3	1	0	0	2	0	0	0	0
		GRADE C	2	12	5								
SAMPLE UNIT GRADE						B	B	B	SSTD	SSTD	B	B	B
FINAL GRADE						B →		SSTD →			→	B →	

4

Don't apply Step 3 of 120-A-6, 2 in a row fail the designated grade

SPECIAL ON-LINE SAMPLING SITUATIONS

3. *HOW TO ADJUST A DEFECT TALLY.*

If a sample unit fails to meet the requirements of grade B, adjust the defect tally before comparing the defects against the CuSum values for Grade C. This must be done because "fairly good" color (major defect) and "shelly" (major defect) are not counted against grade C. A grade C sample unit could have all "fairly good" color and all "shelly" units. Adjust the defect tally as follows:

HALVES

		S	T	L						
Prerequisite Grade					A	A	A	A	A	A
MAJOR	Color-Fairly Good (A & B Only)				1	3	1	1	1	4
	Blemished					5		1		5
	Off-Suture				1		2		1	1
	Detached Pieces					1				
	Other Mech. Damage									
	Shelly (A & B Only)				1	2		1	1	
	Gouges					1				2
	TOTAL MAJOR				3	7	3	3	3	8
CUSUM	GRADE A	0	3	2						
	GRADE B	1	5	3	C	(3)	1	0	0	(3)
	GRADE C	1	8	3		C				C

* * *

TOTAL	TOTAL ALL CLASSES				6	13	8	5	5	14
CUSUM	GRADE A	1	5	3						
	GRADE B	1	8	3	0	(3)	3	0	0	(3)
	GRADE C	2	12	5		C				C
SAMPLE UNIT GRADE					B	C	B	B	B	C
FINAL GRADE										

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES

1. *Follow* the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan [Attributes]).

2. *Use* the same defect tally sheet for lot inspection as you would use for on-line inspection. Ignore the section of the tally devoted to CuSum values.

3. Ignore the breakdown of prerequisites into "cooked" and "uncooked." For the purposes of lot inspection, consider all prerequisites as "cooked." However, some of the prerequisites are to be evaluated on a *container-by-container* basis and other prerequisites are to be evaluated on the *sample as a whole* (all of the peach slices).

4. After the *nonquality factors* have been evaluated (net weight, drained weight, count, sirup, etc.), grade and evaluate on a container by container basis the following prerequisites:

   a. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally (disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack);

   b. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites;"

   c. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners;
   (See also the next page)

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

4. Prerequisites on a container by container basis (continuation).

   d. *Evaluate* the sample unit for uniformity of size as follows:

      a. *Eliminate* slivers, slabs and partial slices. Keep 15 of the least uniform slices (largest and smallest) and ignore the remainder of the sample unit.

      b. *Compare* the 15 least uniform slices (largest and smallest) to the photoguide.

      c. If the 15 least uniform slices are at least as uniform as the photoguide, assign the sample unit the letter grade A.

      d. If the 15 least uniform slices are less uniform than the photoguide, assign the sample unit the letter grade C.

      e. If there are fewer than 15 slices in the container, use all of the slices and compare against the photoguide.

      f. *Record* the letter grade, either A or C, in the "uncooked prerequisites" section of the defect tally.

Example: (Prerequisites on a container by container basis)

	Can No. 1	Can No. 2	Can No. 3, etc.
Similar Varietal Characteristics	A	A	A
Brightness	A	A	A
Flavor and Odor	A	A	A
Uniformity of Size	A	A	A

5. *Reassemble* any partial slice. Count each reassembled slice as one unit.

6. *Assemble* (physically or mentally) all of the slices from all of the containers into one sample. Adjust the total number of slices to meet the lot single sampling plan that you're using. (See 120-A-7, page 8, Example 5)

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

7. *Arrange* all of the slices in the sample by turning the outer surface of each slice (peel side) toward yourself.

8. *Count* the number of pieces of EVM and the number of short stems in the sample. The small "collar" that may remain on the stem end of the peach is not considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the total number of pieces of EVM and the number of short stems in the sample (not each container) as follows:

   a. EVM - critical; and
   b. Short stems - severe.

9. *Evaluate* the color of the individual peach slices. Use the following guidelines to judge the color classification of each peach slice.

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

   d. *Oxidation* - Occasionally, units in the headspace of the container discolor due to oxidation caused by the absence of liquid around the slice. Count these slices as either "fairly good" color or "poor" color, depending upon the severity of oxidation. (See also the next page).

1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

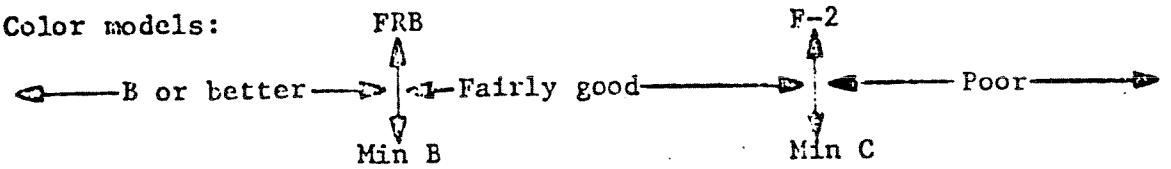
SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

9. Color (continuation).

Count under "blemished" not under "color," any unit with abnormal discoloration of the pit cavity. Record on the defect tally the total number of slices in the sample that are either "fairly good" color or "poor" color (not each container). If the sample fails the requirements for grade B, adjust the defect tally. Only "poor" color is a defect against grade C. Disregard the "fairly good" color for grade C. Use the peach color models to evaluate the color classifications.

Defects in grade A & B



Defect in grade C

10. *Count* and record on the defect tally the number of partial slices in the sample (not each container). Usually, the partial slices are the broken slices. Remember that each reassembled slice is equal to only one defect -- not one defect for each piece of the slice. If the missing part of the broken slice isn't in the sample, the part that is present in the sample is equal to one defect.

11. *Count* and record on the defect tally the number of slivers in the sample (not each container). A weight of three (3) grams or less is the only reason for classifying a sliver as a defect. If a slice is much smaller than the other slices in the sample but weighs more than 3 grams, don't count it as a defect.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

12. *Count* and record on the defect tally the number of slabs in the sample (not each container). Usually slabs are of the following descriptions:

    a. Flat-sided slices with a round top; or

    b. Slices resulting from halves that go through the slicer cup-side up; or

    c. Any other condition similar to a or b above.

    If a slab and a partial slice result from improper slicing of the same unit, count the reassembled unit only once, against the more severe defect. Under lot inspection it would be difficult to determine if the slab and partial slice came from the same original slice, but if the two units fit together, count as only one defect.

13. *Count* and record on the defect tally the number of shelly slices in the sample (not each container). Shelly slices are thin-fleshed units usually caused by repitting the half from which the slice originated. If the sample fails grade B, adjust the defect tally. Shelly units are not counted against grade C -- any number is allowed. Use the photoguides for "shelly halves" as an aid to correct classification of the shelly slices.

14. *Count* and record on the defect tally the number of gouged slices in the sample (not each container). If the slice has been trimmed by gouging defective tissue, count it as "gouged." Otherwise, the slice is not counted. If the slice contains impressions caused by the beaded sidewall of the container, don't count it as gouged. Gouged slices are classified as follows:

    a. Severe; or
    b. Major; or
    c. Minor.

    } ——————→ Use photoguides.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

15. *Count* and record on the defect tally the number of blemished slices in the sample (not each container). Blemished means that the slice is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. Blemished slices are classified as follows:

    a. Severe (decay); or
    b. Major; or
    c. Minor.

    } ——▷ Use photoguides.

16. *Visually scan* the sample for apparent units with "fairly good" character and units with "poor" character. Also, the seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the slices. Record the total number of "seriously frayed," "substantially firm," "very soft," and "mushy" slices in the sample. Make this tally in the section for "cooked prerequisites." Then assign the letter grade (A, B, C or SSTD) for the character of the total sample. In lieu of actually recording the total number of "substantially firm," "very soft," and "mushy" slices in the sample, the letter grade (A, B, C, or SSTD) may be assigned for the character of the sample based on the estimated number of "fairly good" character and "poor" character units in the sample. In either case, actual count or the letter grade based on estimated count, assign the character grade based on the tolerances given on the following page. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

TOLERANCES FOR CHARACTER - SLICED

STANDARD UNITS	Number of Sample Units	Number of Slices											
		1/		2/		1/		2/		1/		2/	
6	6	36	FG	Poor	78	FG	Poor	126	FG	Poor	174	FG	Poor
		A =	2	0	A =	4	0	A =	6	0	A =	9	0
		B =	4	0	B =	8	0	B =	13	0	B =	17	0
		C =	All or	4	C =	All or	8	C =	All or	13	C =	All or	17
13	13	78	FG	Poor	169	FG	Poor	273	FG	Poor	377	FG	Poor
		A =	4	0	A =	8	0	A =	14	0	A =	19	0
		B =	8	0	B =	17	0	B =	27	0	B =	38	0
		C =	All or	8	C =	All or	17	C =	All or	27	C =	All or	38
25	21	150	FG	Poor	325	FG	Poor	525	FG	Poor	725	FG	Poor
		A =	8	0	A =	16	0	A =	26	0	A =	36	0
		B =	15	0	B =	33	0	B =	53	0	B =	73	0
		C =	All or	15	C =	All or	33	C =	All or	53	C =	All or	73
50	29	300	FG	Poor	650	FG	Poor	1050	FG	Poor	1450	FG	Poor
		A =	15	0	A =	33	0	A =	53	0	A =	73	0
		B =	30	0	B =	65	0	B =	105	0	B =	145	0
		C =	All or	30	C =	All or	65	C =	All or	105	C =	All or	145
100		600	FG	Poor	1300	FG	Poor	2100	FG	Poor	2900	FG	Poor
		A =	30	0	A =	65	0	A =	105	0	A =	145	0
		B =	60	0	B =	130	0	B =	210	0	B =	290	0
		C =	All or	60	C =	All or	130	C =	All or	210	C =	All or	290

1/ Number of units of "fairly good" character.
2/ Number of units of "poor" character.
Calculations: 5% "fairly good" in grade A.
10% "fairly good" in grade B.
10% "poor" in grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

16. Character (continuation).

    a. *"Seriously frayed"* means that the ragged appearance extends well into the flesh of the slice and that the overall appearance or eating quality may be seriously affected; provided that the normal shape of the slice is not destroyed.

    b. *Fairly good character* - Count each seriously frayed, very soft, or substantially firm slice.

       Poor character - Count each mushy, excessively soft, or hard slice.

17. *Use* your finger tips and feel for peel as the units are scanned for blemishes and character. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel from all of the units in the sample (not each container). As a practical method of evaluating the amount of peel in the sample, assign the letter grade A, B, C or SSTD, based on the estimated area of peel in the sample.

    CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

Use the guide on the following page for the total aggregate area of peel allowed in the sample. (See also the following page).

TOLERANCES FOR PEEL - SLICED

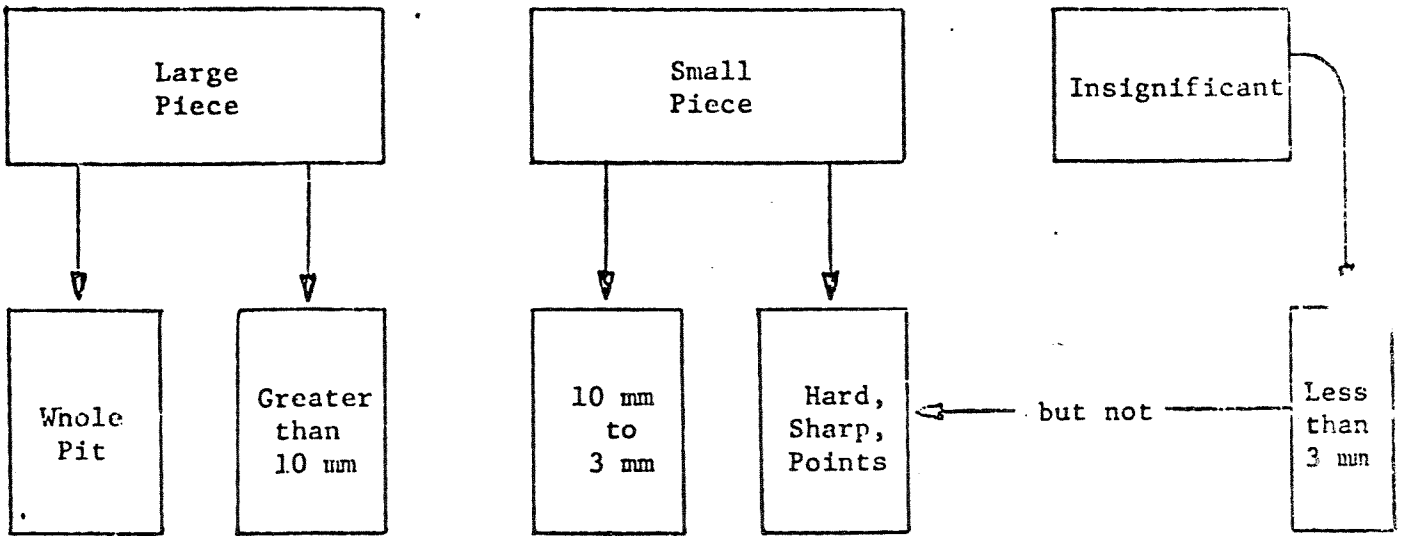
STANDARD SAMPLE UNIT SIZES	Number of Sample Units: 6	Number of Slices: 6	Number of Slices: 13	Number of Slices: 21	Number of Slices: 29
	6	36 1/ A = 1.3 cm² B = 5.0 cm² C = 10.8 cm²	78 1/ A = 2.8 cm² B = 10.9 cm² C = 23.4 cm²	126 1/ A = 4.5 cm² B = 17.6 cm² C = 37.8 cm²	174 1/ A = 6.3 cm² B = 24.4 cm² C = 52.2 cm²
	13	78 A = 2.8 cm² B = 10.9 cm² C = 23.4 cm²	169 A = 6.0 cm² B = 23.7 cm² C = 50.7 cm²	273 A = 9.8 cm² B = 38.2 cm² C = 81.9 cm²	377 A = 13.6 cm² B = 52.8 cm² C = 113.1 cm²
	25	150 A = 5.4 cm² B = 21.0 cm² C = 45.0 cm²	325 A = 11.7 cm² B = 45.5 cm² C = 97.5 cm²	525 A = 18.9 cm² B = 73.5 cm² C = 157.5 cm²	725 A = 26.1 cm² B = 101.5 cm² C = 217.5 cm²
	50	300 A = 10.8 cm² B = 42.0 cm² C = 90.0 cm²	650 A = 23.4 cm² B = 91.0 cm² C = 195.0 cm²	1050 A = 37.8 cm² B = 147.0 cm² C = 315.0 cm²	1450 A = 52.2 cm² B = 203.0 cm² C = 435.0 cm²
	100	600 A = 21.6 cm² B = 84.0 cm² C = 180.0 cm²	1300 A = 46.8 cm² B = 182.0 cm² C = 390.0 cm²	2100 A = 75.6 cm² B = 294.0 cm² C = 630.0 cm²	2900 A = 104.4 cm² B = 406.0 cm² C = 870.0 cm²

1/ *Total aggregate area of peel permitted in the sample.*
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{50}{\text{Smpl Size}}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

18. Too, as you check for peel with your finger tips, turn the slices or examine them closely for any pit fragments that are attached to the flesh of the unit. Count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the total number of pit fragments in the sample (not each container).



TOLERANCE		
SLICED		
	Small Fragments	Large
AQL 1/	2.5	0.4

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

SLICED PEACHES (continuation).

19. *Compare* the total number of defects that you found in the sample (not each container) with the acceptance number for the applicable AQL and sample size in the Regulations (File Code 109-A-1, Tables IV - XIX).

20. *Assign* a grade to the sample based on the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS

1. *Follow* the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan [Attributes]).

2. *Use* the same defect tally sheet for lot inspection as you would use for on-line inspection. Ignore the section of the tally devoted to CuSum values.

3. Ignore the breakdown of prerequisites into "cooked" and "uncooked." For the purposes of lot inspection, consider all prerequisites as "cooked." However, some of the prerequisites are to be evaluated on a *container-by-container* basis and other prerequisites are to be evaluated on the *sample as a whole* (all of the peach halves or all of the peach quarters).

4. After the *nonquality factors* have been evaluated (net weight, drained weight, count, sirup, etc.), grade and evaluate on a container by container basis the following prerequisites:

   a. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally (disregard "brightness" on special packs such as brown sugar and honey, if the appearance is normal for the pack);

   b. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites:"

   c. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

Example: (Prerequisites on a container by container basis)

	Can No. 1	Can No. 2	Can No. 3, etc.
Similar Varietal Characteristics	A	A	A
Brightness	A	A	A
Flavor and Odor	A	A	A

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

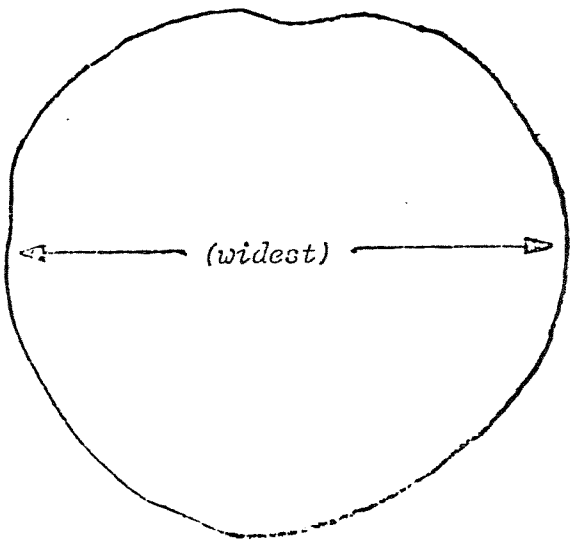
HALVES OR QUARTERS (continuation).

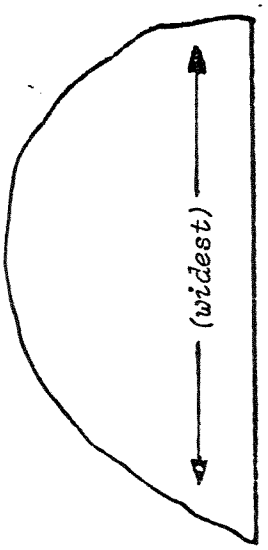
5. *Turn* all of the halves or quarters "cup side" down *(container by container).*

6. As the units are being turned over, check the *uniformity of size.* It isn't necessary to measure each half or quarter. Measure only the apparent large units or the apparent small units. Use a metric grid similar to Inspection Aid No. 101 if one is available. Each peach unit that varies in diameter more than 1 cm (0.4 in) from the predominate diameters of peaches in the container is counted as one minor defect. In effect, this procedure would allow an acceptable range of diameters in the container with only the units that are more than 1 cm (0.4 in) outside of the acceptable range counted as defects.

   a. *Measure* the widest diameter of the apparent large units or the apparent small units as follows:

Halves *Quarters*





(See also the next page)

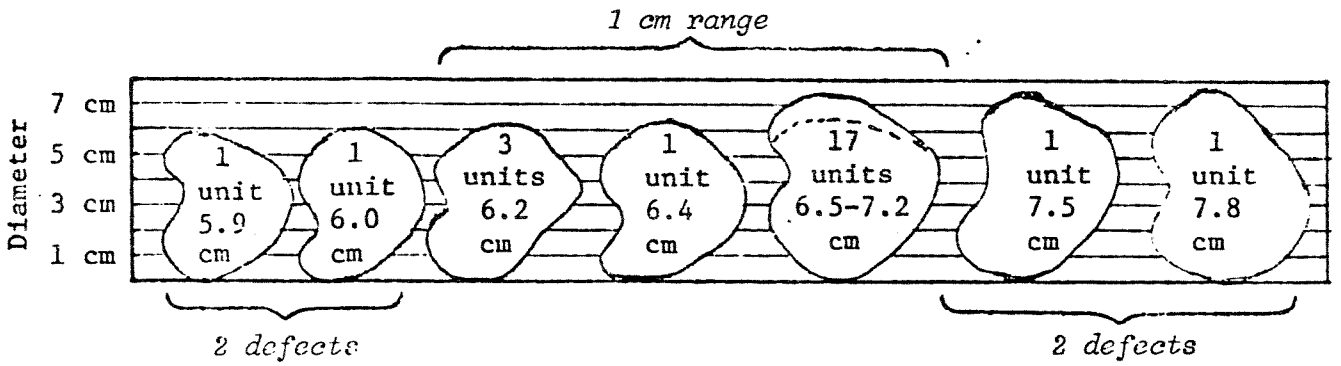
SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

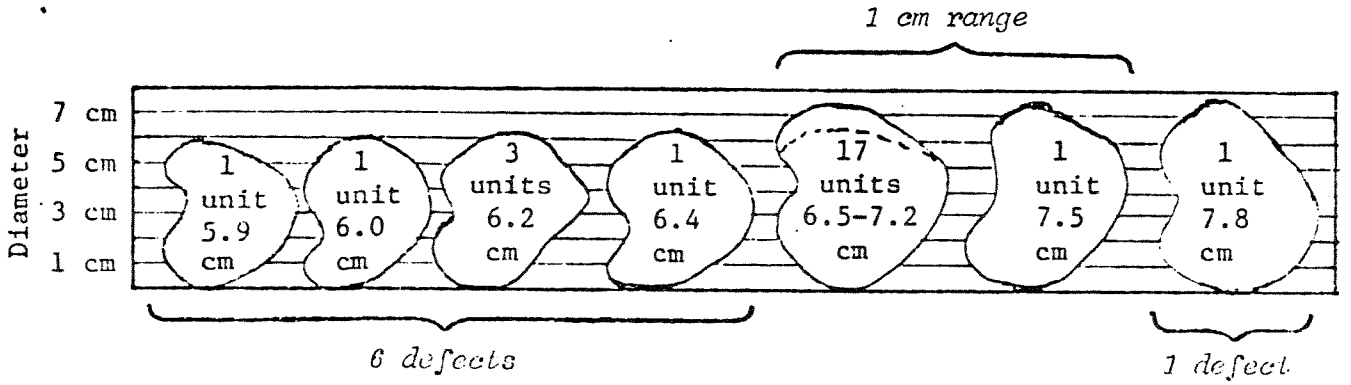
b. Determine size variation so that the least number of defects are counted against size.

Record on the defect tally the total number of halves or quarters that fall more than 1 cm (0.4 in) outside of the acceptable range for each container.

Example 1: (correct method) - 25 peach units showing 4 defects.



Example 2: (incorrect method) - 25 peach units showing 7 defects.



SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

7. *Assemble* (physically or mentally) all of the halves or quarters from all of the containers into one sample. Adjust the total number of halves or quarters to meet the lot single sampling plan that you're using.
Note: At the grader's option, it isn't necessary to physically assemble all of the halves or quarters into one sample. However, if the units from each container are kept in a separate tray, mentally assemble them into one sample with the other trays.

8. *Count* the number of crushed or broken units *(not due to ripeness)* and turn all units "cup down." Reassemble any broken unit. Count each reassembled half or quarter as one unit. Don't count as crushed or broken any unit which is slightly split from the edge to the pit cavity. Record in the "uncooked prerequisites" section of the tally sheet the total number of crushed or broken units in the sample (not each container).

	TOLERANCE
	GRADE A, B & C
AQL 1/	6.5

1/ AQL expressed as percent defective.

9. *Count* the number of detached and partially detached pieces. Don't count these defects again under off-suture. Record on the defect tally the total number of detached and partially detached pieces in the sample (not each container) as follows:

   a. Detached pieces - major; and
   b. Partially detached pieces - minor.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

10. *Count* the number of pieces of EVM and the number of short stems in the sample. The small "collar" that may remain on the stem end of the peach isn't considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the total number of pieces of EVM and the total number of short stems in the sample (not each container) as follows:

    a. EVM - critical; and
    b. Short stems - severe.

11. *Evaluate* the color of the individual peach halves or quarters. Use the following guidelines to judge the color classification of each peach unit:

    a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

    b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

    c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

    d. *Oxidation* - Occasionally, units in the headspace of the container discolor due to oxidation caused by the absence of liquid around the unit. Count these units as either "fairly good" color or "poor" color, depending upon the severity of oxidation. (See also the next page).

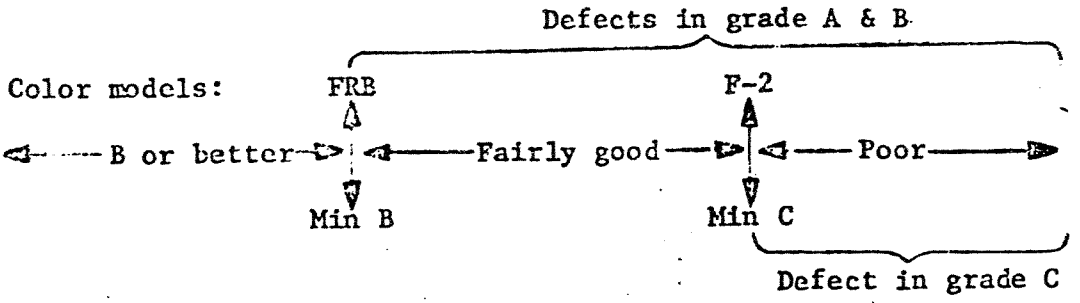
1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

11. Color (continuation).

Record on the defect tally the total number of halves or quarters in the sample that are either "fairly good" color or "poor" color (not each container). If the sample fails the requirements for grade B, adjust the defect tally. Only "poor" color is a defect against grade C. Disregard the "fairly good" color for grade C. Use the peach color models to evaluate the color classifications.



12. *Evaluate* the halves or quarters for off-suture cuts. Keep in mind that the units must be kept in a "cup down" position and look only at the outside surface. Count and record on the defect tally the total number of off-suture cuts in the sample (not each container) and classify them as follows:

a. Severe (donuts); or
b. Major; or
c. Minor.

} → Use photoguides.

13. *Count* the number of gouged units. If the half or quarter has been trimmed by gouging defective tissue, count the unit as "gouged." Otherwise, the unit is not counted. If the half or quarter contains impressions caused by the beaded sidewall of containers, don't count it as gouged. Record on the defect tally the total number of gouged units in the sample (not each container) and classify them as follows:

a. Severe; or
b. Major; or
c. Minor.

} → Use photoguides.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

14. *Count* the number of halves or quarters that are affected by mechanical damage. Classify as mechanical damage only those units with missing outside surface flesh. Don't count under "mechanical damage" any units that were previously counted under "crushed" or "broken." Record on the defect tally the total number of mechanically damaged units in the sample (not each container) and classify them as follows:

    a. Severe - total loss of normal shape; or
    b. Major - normal shape seriously affected; or
    c. Minor - normal shape materially affected.

15. *Count* the number of units that are blemished. Blemished means that the half or quarter is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. Record on the defect tally the total number of blemished units in the sample (not each container) and classify them as follows:

    a. Severe (decay); or
    b. Major; or
    c. Minor.

    } ——➪ Use photoguides.

16. While the halves or quarters are turned "cup down," *visually scan* the sample for apparent units with "fairly good" character and units with "poor" character. Also, the seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the units. *Record* the total number of "seriously frayed," "very soft," "substantially firm," and "mushy" units in the sample. Make this tally in the section for "cooked prerequisites." Then assign the letter grade (A, B, C or SSTD) for the character of the total sample. In lieu of actually recording the total number of "substantially firm," "very soft" and "mushy" units in the sample, the letter grade (A, B, C, or SSTD) may be assigned for the character of the sample based on the estimated number of "fairly good" character and "poor" character units in the sample. In either case, actual count or the letter grade based on estimated count, assign the character grade based on the tolerances given on the following page. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

TOLERANCES FOR CHARACTER - HALVES QUARTERS

STANDARD SAMPLE UNIT SIZES	*Number of Sample Units* 6	13	21	29
	Number of Halves or Quarters			
		1/ 2/	1/ 2/	1/ 2/
6	36 FG Poor	78 FG Poor	126 FG Poor	174 FG Poor
	A = 2 0	A = 4 0	A = 6 0	A = 9 0
	B = 4 0	B = 8 0	B = 13 0	B = 17 0
	C = All or 4	C = All or 8	C = All or 13	C = All or 17
13	78 FG Poor	169 FG Poor	273 FG Poor	377 FG Poor
	A = 4 0	A = 8 0	A = 14 0	A = 19 0
	B = 8 0	B = 17 0	B = 27 0	B = 38 0
	C = All or 8	C = All or 17	C = All or 27	C = All or 38
25	150 FG Poor	325 FG Poor	525 FG Poor	725 FG Poor
	A = 8 0	A = 16 0	A = 26 0	A = 36 0
	B = 15 0	B = 33 0	B = 53 0	B = 73 0
	C = All or 15	C = All or 33	C = All or 53	C = All or 73
50	300 FG Poor	650 FG Poor	1050 FG Poor	1450 FG Poor
	A = 15 0	A = 33 0	A = 53 0	A = 73 0
	B = 30 0	B = 65 0	B = 105 0	B = 145 0
	C = All or 30	C = All or 65	C = All or 105	C = All or 145
100	600 FG Poor	1300 FG Poor	2100 FG Poor	2900 FG Poor
	A = 30 0	A = 65 0	A = 105 0	A = 145 0
	B = 60 0	B = 130 0	B = 210 0	B = 290 0
	C = All or 60	C = All or 130	C = All or 210	C = All or 290

1/ Number of units of "fairly good" character.
2/ Number of units of "poor" character.
Calculations: 5% "fairly good" in grade A.
10% "fairly good" in grade B.
10% "poor" in grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

16. Character (continuation).

a. "Seriously frayed" means that the ragged appearance extends well into the flesh of the unit and the overall appearance or eating quality may be seriously affected; provided that the normal shape of the unit is not destroyed.

Halves - More than 1/2 of the circumference of the cut edge of the unit is seriously frayed.
Quarters - More than one cut edge of the unit is seriously frayed.

b. "Fairly good" vs. "Poor" character.

Fairly good - Count each seriously frayed, very soft, or substantially firm unit.

Poor - Count each mushy, excessively soft, or hard unit.

17. *Use* your finger tips and feel for peel as the units are scanned for blemishes and character. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel from all of the units in the sample (not each container). As a practical method of evaluating the amount of peel in the sample, assign the letter grade A, B. C or SSTD, based on the estimated area of peel in the sample.

CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

Use the guide on the following page for the total aggregate area of peel allowed in the sample. (See also the following page).

TOLERANCES FOR PEEL - HALVES

STANDARD SAMPLE UNIT SIZES	*Number of Sample Units* 6	13	21	29
	Number of Halves			
6	36 <u>1/</u> A = 6.5 cm^2 B = 27.4 cm^2 C = 54.7 cm^2	78 <u>1/</u> A = 14.0 cm^2 B = 59.3 cm^2 C = 118.6 cm^2	126 <u>1/</u> A = 22.7 cm^2 B = 95.8 cm^2 C = 191.5 cm^2	174 <u>1/</u> A = 31.3 cm^2 B = 132.2 cm^2 C = 264.5 cm^2
13	78 A = 14.0 cm^2 B = 59.3 cm^2 C = 118.6 cm^2	169 A = 30.4 cm^2 B = 128.4 cm^2 C = 256.9 cm^2	273 A = 49.1 cm^2 B = 207.5 cm^2 C = 415.0 cm^2	377 A = 67.9 cm^2 B = 286.5 cm^2 C = 573.0 cm^2
25	150 A = 27.0 cm^2 B = 114.0 cm^2 C = 228.0 cm^2	325 A = 58.5 cm^2 B = 247.0 cm^2 C = 494.0 cm^2	525 A = 94.5 cm^2 B = 399.0 cm^2 C = 798.0 cm^2	725 A = 130.5 cm^2 B = 551.0 cm^2 C = 1102.0 cm^2
50	300 A = 54.0 cm^2 B = 228.0 cm^2 C = 456.0 cm^2	650 A = 117.0 cm^2 B = 494.0 cm^2 C = 988.0 cm^2	1050 A = 189.0 cm^2 B = 798.0 cm^2 C = 1596.0 cm^2	1450 A = 261.0 cm^2 B = 1102.0 cm^2 C = 2204.0 cm^2
100	600 A = 108.0 cm^2 B = 456.0 cm^2 C = 912.0 cm^2	1300 A = 234.0 cm^2 B = 988.0 cm^2 C = 1976.0 cm^2	2100 A = 378.0 cm^2 B = 1596.0 cm^2 C = 3192.0 cm^2	2900 A = 522.0 cm^2 B = 2204.0 cm^2 C = 4408.0 cm^2

<u>1/</u> *Total aggregate area of peel permitted in the sample.*
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{25}{Smpl\ Size}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

TOLERANCES FOR PEEL - QUARTERS

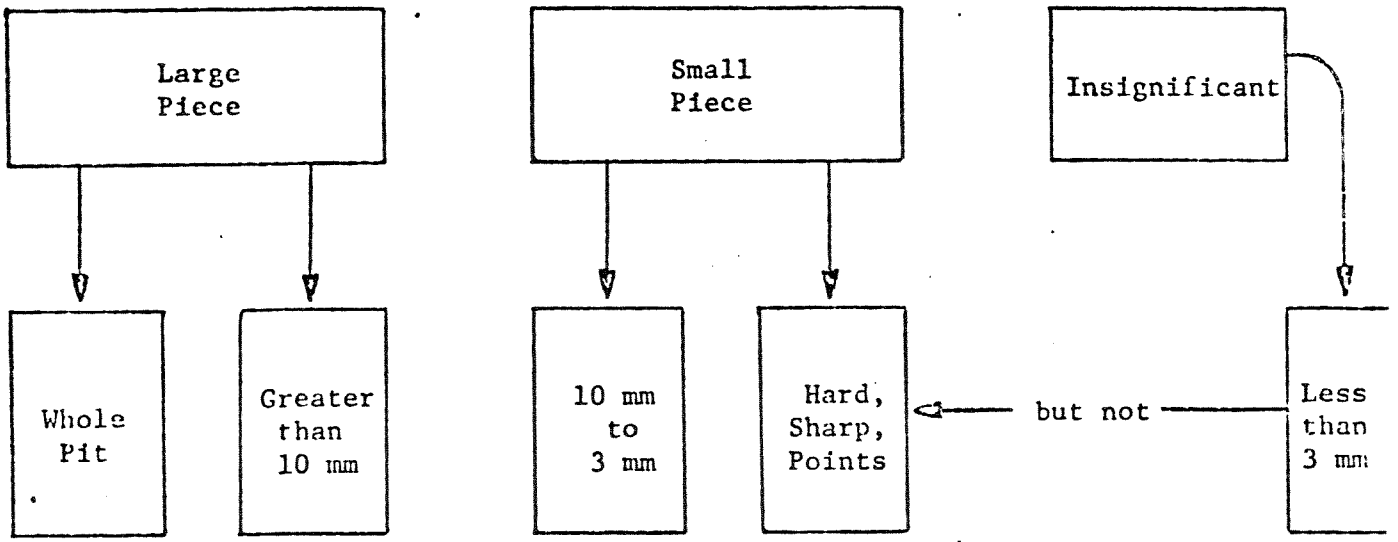
STANDARD SAMPLE UNIT SIZES	*Number of Sample Units* 6	13	21	29
		Number of Quarters		
6	36 A = 3.2 cm^2 1/ B = 13.7 cm^2 C = 27.4 cm^2	78 A = 7.0 cm^2 1/ B = 29.6 cm^2 C = 59.3 cm^2	126 A = 11.3 cm^2 1/ B = 47.9 cm^2 C = 95.8 cm^2	174 A = 15.7 cm^2 1/ B = 66.1 cm^2 C = 132.2 cm^2
13	78 A = 7.0 cm^2 B = 29.6 cm^2 C = 59.3 cm^2	169 A = 15.2 cm^2 B = 64.2 cm^2 C = 128.4 cm^2	273 A = 24.6 cm^2 B = 103.7 cm^2 C = 207.5 cm^2	377 A = 33.9 cm^2 B = 143.3 cm^2 C = 286.5 cm^2
25	150 A = 13.5 cm^2 B = 57.0 cm^2 C = 114.0 cm^2	325 A = 29.3 cm^2 B = 123.5 cm^2 C = 247.0 cm^2	525 A = 47.3 cm^2 B = 199.5 cm^2 C = 399.0 cm^2	725 A = 65.3 cm^2 B = 275.5 cm^2 C = 551.0 cm^2
50	300 A = 27.0 cm^2 B = 114.0 cm^2 C = 228.0 cm^2	650 A = 58.5 cm^2 B = 247.0 cm^2 C = 494.0 cm^2	1050 A = 94.5 cm^2 B = 399.0 cm^2 C = 798.0 cm^2	1450 A = 130.5 cm^2 B = 551.0 cm^2 C = 1102.0 cm^2
100	600 A = 54.0 cm^2 B = 228.0 cm^2 C = 456.0 cm^2	1300 A = 117.0 cm^2 B = 494.0 cm^2 C = 988.0 cm^2	2100 A = 189.0 cm^2 B = 798.0 cm^2 C = 1596.0 cm^2	2900 A = 261.0 cm^2 B = 1102.0 cm^2 C = 2204.0 cm^2

1/ *Total aggregate area of peel permitted in the sample.*
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{25}{Smpl\ Size}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

18. Too, as you check for peel with your finger tips, turn all of the halves or quarters over and feel in the pit cavity for any pit fragments that might be attached to the flesh of the unit. Count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the number of pit fragments in the sample (not each container).



	TOLERANCE			
	HALVES		QUARTERS	
	Small fragments	Large	Small fragments	Large
AQL 1/	10.0	1.5	5.0	1.0

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

HALVES OR QUARTERS (continuation).

19. *Count* the number of shelly units. Shelly units are thin-fleshed units usually caused by repitting. Don't count shelly units twice, under "shelly" and then again under "mechanical damage." Record on the defect tally the total number of shelly units in the sample (not each container). If the sample fails grade B, adjust the defect tally. Shelly units are not counted against grade C — any number is allowed. Use the photoguides.

20. *Compare* the total number of defects that you found in the sample (not each container) with the acceptance number for the applicable AQL and sample size in the Regulations (File Code 109-A-1, Tables XV - XIX).

21. *Assign* a grade to the sample based on the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES

1. *Follow* the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan [Attributes]).

2. *Use* the same defect tally sheet for lot inspection as you would use for on-line inspection. Ignore the section of the tally devoted to CuSum values.

3. Ignore the breakdown of prerequisites into "cooked" and "uncooked." For the purposes of lot inspection, consider all prerequisites as "cooked." However, some of the prerequisites are to be evaluated on a *container-by-container* basis and other prerequisites are to evaluated on the *sample as a whole* (all of the pieces from all of the containers in the sample).

4. After the *nonquality factors* have been recorded (net weight, drained weight, count, sirup, etc.), evaluate on a container by container basis the following prerequisites:

   a. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally (disregard "brightness" on special packs such as brown sugar and honey, if the appearance is normal for the pack);

   b. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites;"

   c. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section of the tally for "cooked prerequisites." Make allowance for special packs (pie pack) or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

   Example: (Prerequisites on a container by container basis)

	Can No. 1	Can No. 2	Can No. 3, etc.
Similar Varietal Characteristics	A	A	A
Brightness	A	A	A
Flavor and Odor	A	A	A

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

5. *To evaluate* the sample for classified defects, consider the peaches from all of the containers as one sample. It isn't necessary to assemble physically the peaches into one mass. Assembling a sample of peaches (by weight) that are pieces is different than the other styles of peaches that are assembled by count. In pieces or irregulars, each 40 g of peaches is equal to one unit. For example, 80 g of drained peaches is equal to 2 units; 120 g is equal to 3 units; 160 g is equal to 4 units, etc.

   Determine the weight of all of the drained peaches by totaling the drained weights of the individual containers. (The drained weights should have been recorded in step 4 of this procedure.)

   Next, adjust (either by removing pieces or adding pieces) the weight of the drained peaches to equal the closest weight possible in the lot single sampling plan. To adjust the sample back to a standard sample size, remove at random enough pieces from the grading trays to equal one of the sample sizes on the following page. (See also the next page).

   NOTE: ASSEMBLING MAY BE DEFINED AS THE BRINGING TOGETHER OF SAMPLE UNITS, DEFECTIVE UNITS OF PRODUCT, DEFECTS TALLIED ON PAPER, ETC.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

STANDARD SAMPLE UNIT SIZES	Number of Sample Units	Total Weight of Peaches 1/ (grams)		
		6	13	21	29
6	6	1440 (51 oz)	3120 (110 oz)	5040 (178 oz)	6960 (246 oz)
13	13	3120 (110 oz)	6760 (238 oz)	10920 (385 oz)	15080 (532 oz)
25	25	6000 (212 oz)	13000 (459 oz)	21000 (741 oz)	29000 (1023 oz)
50	50	12000 (423 oz)	26000 (917 oz)	42000 (1375 oz)	58000 (2046 oz)
100	100	24000 (847 oz)	52000 (1834 oz)	84000 (2963 oz)	116000 (4092 oz)

1/ *Sample size x 40 g increments = weight of peaches equivalent to the number of sample units x the standard sample unit size.*

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES

6. *Count* the number of pieces of EVM and the number of short stems in the sample. The small "collar" that may remain on the stem end of the peach isn't considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the total number of pieces of EVM and the total number of short stems in the sample (not each container) as follows:

   a. EVM - critical; and
   b. Short stems - critical.

7. *Evaluate* the color of the individual peach units. Use the following guidelines to judge the color classification of each unit.

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

   d. *Oxidation* - Occasionally, units in the headspace of the container discolor due to oxidation caused by the absence of liquid around the unit. Count these units as either "fairly good" color or "poor" color, depending upon the severity of oxidation. (See also the next page).

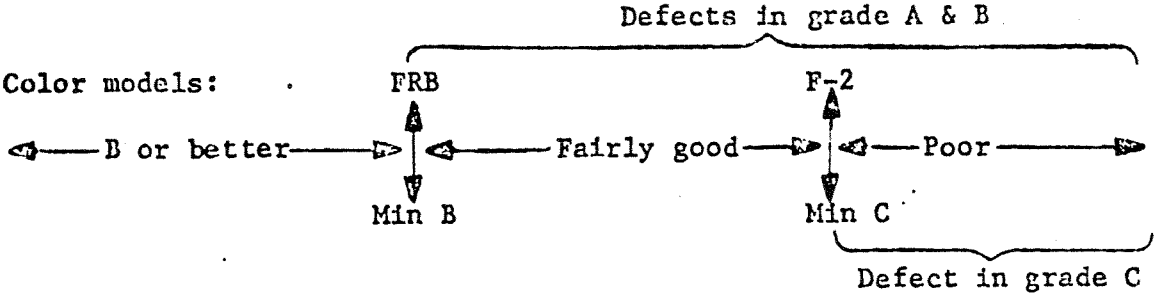
1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

7. Color (continuation).

Use the peach color models to evaluate the color classifications:



As a practical method of evaluating the individual unit color of pieces or irregulars, scan the sample unit and separate into two groups the apparent "fairly good" color and the apparent "poor" color. Weigh each group -- "fairly good" color and "poor" color — separately. Each 40 g increment, to the nearest 40 g, is counted as follows:

Fairly good color - one major defect.
Poor color - one severe defect.

Record on the defect tally the number of defects — the number of 40 g increments -- that are either "fairly good" color or "poor" color. If the sample fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation)

8. *Separate* the peach units that are blemished. Blemished means that the peach unit is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. After you have separated all of the blemished units from the sample, classify them into three groups as follows:

a. Severe (decay); or
b. Major; or
c. Minor.

} ⟶ Use photoguides.

Weigh each of the three groups -- severe, major and minor. Each 40 g increment, to the nearest 40 g, is equal to one defect. Record on the defect tally the number of defects — the number of 40 g increments — that are either "severe" blemish or "major" blemish or "minor" blemish.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation)

9. *Visually scan* the sample for units with apparent "fairly good" character and units with apparent "poor" character. Also, any seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the peaches. Separate the units that are "fairly good" character into one group and the units that are "poor" character into another group. Weigh each group — "fairly good" and "poor." Record in the "cooked prerequisites" section of the defect tally the actual weight of "fairly good" character and the actual weight of "poor" character.

   a. *Fairly good character* - Count seriously frayed, very soft, or substantially firm units.

      Poor character - Count mushy, excessively soft, or hard units.

   b. *Time saver.* If you are using a larger sample for classified quality defects, you may use a smaller sample for weighing character. It would save time. In effect, this procedure would be the equivalent of drawing a subsample. For example, if you are using a 116000 g (4092 oz) sample for classified defects, you could choose a smaller sample size for character, such as 1440 g (51 oz); or 3120 g (110 oz); or 5040 g (178 oz); or 6960 g (246 oz), etc. If you do use a smaller sample size for weighing character, note on the defect tally that you've used the smaller sample. Otherwise, it's difficult for someone other than the original grader to reevaluate the defect tally.

Assign the letter grade (A, B, C or SSTD) for the character of the sample based on the tolerances on the following page. (See also the next page).

TOLERANCES FOR CHARACTER - PIECES OR IRREGULARS; HALVES AND PIECES (EXCEPT PIE-PACK)

Number of Sample Units												
6			13			21			29			
	Total Weight of Peaches (grams)											
	1/	2/		1/	2/		1/	2/		1/	2/
1440	FG	Poor	3120	FG	Poor	5040	FG	Poor	6960	FG	Poor
A =	72	0	A =	156	0	A =	252	0	A =	348	0
B =	144	0	B =	312	0	B =	504	0	B =	696	0
C =	All or	144	C =	All or	312	C =	All or	504	C =	All or	696
3120	FG	Poor	6760	FG	Poor	10920	FG	Poor	15080	FG	Poor
A =	156	0	A =	338	0	A =	546	0	A =	754	0
B =	312	0	B =	676	0	B =	1092	0	B =	1508	0
C =	All or	312	C =	All or	676	C =	All or	1092	C =	All or	1508
6000	FG	Poor	13000	FG	Poor	21000	FG	Poor	29000	FG	Poor
A =	300	0	A =	650	0	A =	1050	0	A =	1450	0
B =	600	0	B =	1300	0	B =	2100	0	B =	2900	0
C =	All or	600	C =	All or	1300	C =	All or	2100	C =	All or	2900
12000	FG	Poor	26000	FG	Poor	42000	FG	Poor	58000	FG	Poor
A =	600	0	A =	1300	0	A =	2100	0	A =	2900	0
B =	1200	0	B =	2600	0	B =	4200	0	B =	5800	0
C =	All or	1200	C =	All or	2600	C =	All or	4200	C =	All or	5800
24000	FG	Poor	52000	FG	Poor	84000	FG	Poor	116000	FG	Poor
A =	1200	0	A =	2600	0	A =	4200	0	A =	5800	0
B =	2400	0	B =	5200	0	B =	8400	0	B =	11600	0
C =	All or	2400	C =	All or	5200	C =	All or	8400	C =	All or	11600

1/ *Number of grams of "fairly good" character.*
2/ *Number of grams of "poor" character.*
Calculations: 5% "fairly good" in grade A.
10% "fairly good" in grade B.
10% "poor" in grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

TOLERANCES FOR CHARACTER (PIE-PACK)

	"Fairly good"	"Poor"
Grade A	37.5%, by weight but not more than	12.5%, by weight.
Grade B	75%, by weight but not more than	25.0%, by weight.
Grade C	100%, by weight but not more than	50.0%, by weight.

10. As the peaches are scanned for blemishes and character, check for peel. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel from all of the peaches in the sample (not each container). As a practical method of evaluating the amount of peel in the sample, assign the letter grade A, B, C, or SSTD, based on the estimated area of peel in the sample.

CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

Use the guide on the following page for the total aggregate area of peel allowed in the sample. (See also the following page).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

TOLERANCES FOR PEEL - PIECES OR IRREGULARS; HALVES AND PIECES

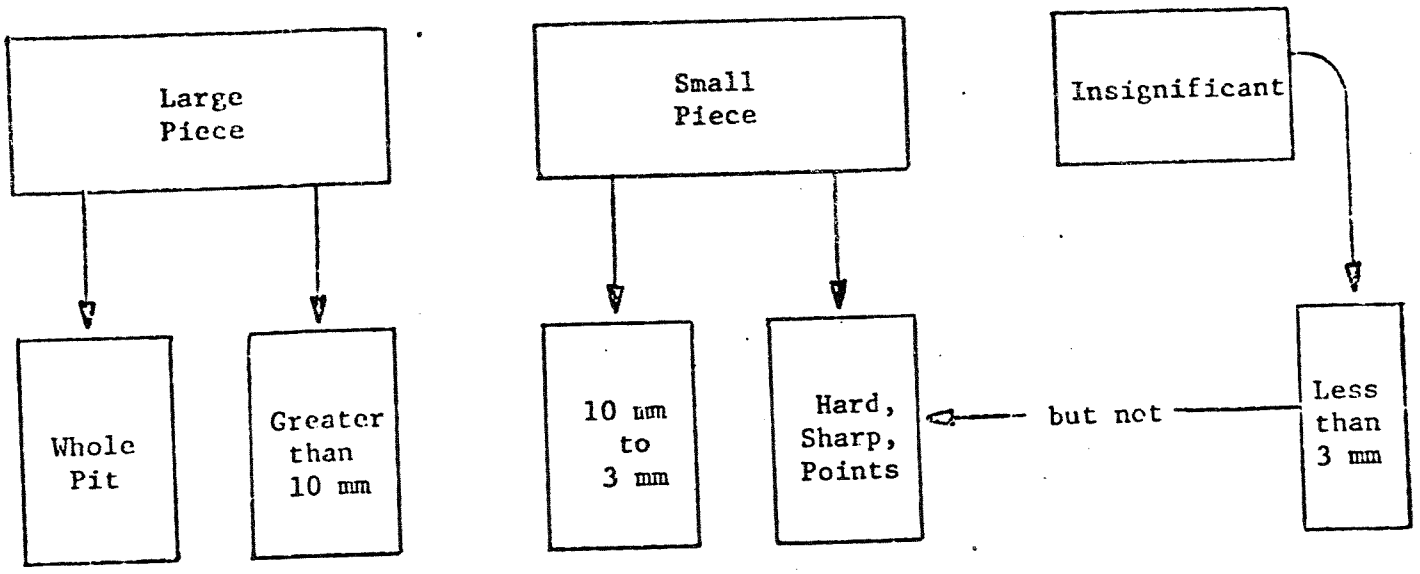
Number of Sample Units											
6		13		21		29					
		Total Weight of Peaches (grams)									
1440	1/	3120	1/	5040	1/	6960	1/	15080	1/	29000	1/
A =	4.7 cm^2	A =	10.0 cm^2	A =	16.4 cm^2	A =	22.7 cm^2	A =	49.0 cm^2	A =	94.3 cm^2
B =	17.6 cm^2	B =	38.2 cm^2	B =	61.7 cm^2	B =	85.3 cm^2	C =	184.7 cm^2	B =	355.3 cm^2
C =	38.9 cm^2	C =	84.3 cm^2	C =	136.1 cm^2	C =	187.9 cm^2	C =	407.2 cm^2	C =	783.0 cm^2
3120		6760		10920		15080		29000		58000	
A =	10.1 cm^2	A =	22.0 cm^2	A =	35.5 cm^2	A =	49.0 cm^2	A =	94.3 cm^2	A =	188.5 cm^2
B =	38.2 cm^2	B =	82.8 cm^2	B =	133.8 cm^2	C =	184.7 cm^2	B =	355.3 cm^2	B =	710.5 cm^2
C =	84.3 cm^2	C =	182.5 cm^2	C =	294.8 cm^2	C =	407.2 cm^2	C =	783.0 cm^2	C =	1566.0 cm^2
6000		13000		21000		29000		58000		116000	
A =	19.5 cm^2	A =	42.3 cm^2	A =	68.3 cm^2	A =	94.3 cm^2	A =	188.5 cm^2	A =	377.0 cm^2
B =	73.5 cm^2	B =	159.3 cm^2	B =	257.3 cm^2	B =	355.3 cm^2	B =	710.5 cm^2	B =	1421.0 cm^2
C =	162.0 cm^2	C =	351.0 cm^2	C =	567.0 cm^2	C =	783.0 cm^2	C =	1566.0 cm^2	C =	3132.0 cm^2
12000		26000		42000		58000		116000			
A =	39.0 cm^2	A =	84.5 cm^2	A =	136.5 cm^2	A =	188.5 cm^2	A =	377.0 cm^2		
B =	147.0 cm^2	B =	318.5 cm^2	B =	514.5 cm^2	B =	710.5 cm^2	B =	1421.0 cm^2		
C =	324.0 cm^2	C =	702.0 cm^2	C =	1134.0 cm^2	C =	1566.0 cm^2	C =	3132.0 cm^2		
24000		52000		84000							
A =	78.0 cm^2	A =	169.0 cm^2	A =	273.0 cm^2						
B =	294.0 cm^2	B =	637.0 cm^2	B =	1029.0 cm^2						
C =	648.0 cm^2	C =	1404.0 cm^2	C =	2268.0 cm^2						

1/ Total aggregate area of peel permitted in the sample.
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{1000 \text{ g}}{\text{Sample Size}}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

11. *Turn* the peaches and count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the total number of pit fragments.



	TOLERANCE	
	PIECES; HALVES AND PIECES	
	Small Fragments	Large
AQL 1/	6.5	1.0

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

PIECES OR IRREGULARS; HALVES AND PIECES (continuation).

12. *Compare* the total number of defects that you found in the sample (not each container) with the acceptance numbers for the applicable AQL and sample size in the Regulations (File Code 109-A-1, Tables XV - XIX).

13. *Assign* a grade to the sample based on the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES

1. *Follow* the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan [Attributes]).

2. *Use* the same defect tally sheet for lot inspection as you would use for on-line inspection. Ignore the section of the tally devoted to CuSum values.

3. Ignore the breakdown of prerequisites into "cooked" and "uncooked." For the purposes of lot inspection, consider all prerequisites as "cooked." However, some of the prerequisites are to be evaluated on a *container-by-container* basis and other prerequisites are to be evaluated on the *sample as a whole* (all of the dice from all of the containers in the sample).

4. After the *nonquality factors* have been recorded (net weight, drained weight, count, sirup, etc.), evaluate on a container by container basis the following prerequisites:

   a. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally (disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack);

   b. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites";

   c. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

Example: (Prerequisites on a container by container basis)

	Can No. 1	Can No. 2	Can No. 3, etc.
Similar Varietal Characteristics	A	A	A
Brightness	A	A	A
Flavor and Odor	A	A	A

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

5. To evaluate the sample for classified defects, consider the diced peaches from all of the containers as one sample. It isn't necessary to assemble physically the diced peaches into one mass. Assembling a sample of diced peaches (by weight) is different than the other styles of peaches that are assembled by count. In diced peaches, each 8 g of diced peaches is equal to one unit. For example, 80 g of drained diced peaches is equal to 10 units.

   Determine the weight of all of the drained diced peaches by totaling the drained weights of the individual containers. (The drained weights should have been recorded in step 4 of this procedure).

   Next, adjust (either by removing dice or adding dice) the weight of the drained diced peaches to equal the closest point in the lot single sampling plan. If 13 or more No. 10 cans of diced peaches are drawn for grading, the mass of the sample will range from about 900 oz (equivalent of about 13 No. 10 cans) to about 2500 oz (equivalent of about 29 No. 10 cans). Thus, the mass would exceed our maximum sample size (29 x 100-8 g increments = 818.4 oz). To adjust the sample back to 818.4 oz, 592.6 oz or 366.8 oz, remove at random enough dice from the grading trays to equal one of the foregoing sample sizes. (See also the next page).

NOTE: ASSEMBLING MAY BE DEFINED AS THE BRINGING TOGETHER OF SAMPLE UNITS, DEFECTIVE UNITS OF PRODUCT, DEFECTS TALLIED ON PAPER, ETC.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

STANDARD SAMPLE UNITS	Number of Sample Units 6	13	21	29
		Total Weight of Dice 1/		
6	36 x 8 g = (288 g or 10.2 oz)	78 x 8 g = (624 g or 22 oz)	126 x 8 g = (1008 g or 35.6 oz)	174 x 8 g = (1392 g or 49.1 oz)
13	78 x 8 g = (624 g or 22 oz)	169 x 8 g = (1352 g or 47.7 oz)	273 x 8 g = (2184 g or 77 oz)	377 x 8 g = (3016 g or 98.7 oz)
25	150 x 8 g = (1200 g or 42.3 oz)	325 x 8 g = (2600 g or 91.7 oz)	525 x 8 g = (4200 g or 148.2 oz)	725 x 8 g = (5800 g or 204.6 oz)
50	300 x 8 g = (2400 g or 84.7 oz)	650 x 8 g = (5200 g or 183.4 oz)	1050 x 8 g = (8400 g or 296.3 oz)	1450 x 8 g = (11600 g or 409.2 oz)
100	600 x 8 g = (4800 g or 169.3 oz)	1300 x 8 g = (10400 g or 366.8 oz)	2100 x 8 g = (16800 g or 592.6 oz)	2900 x 8 g = (23200 g or 818.4 oz)

1/ Sample size x 8 g increments = weight of diced peaches equivalent to the number of sample units x the standard sample unit size.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

6. *Count* the number of pieces of EVM and the number of short stems in the sample. The small "collar" that may remain on the stem end of the peach isn't considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the total number of pieces of EVM and the total number of short stems in the sample (not each container) as follows:

   Critical - each piece of EVM and each short stem.

7. *Evaluate* the color of the individual peach dice. Use the following guidelines to judge the color classification of each peach dice.

   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation 1/, or other causes that seriously affects the appearance or eating quality, or both.

   d. *Oxidation* - Occasionally, units in the headspace of the container discolor due to oxidation caused by the absence of liquid around the unit. Count these units as either "fairly good" color or "poor" color, depending upon the severity of oxidation. (See also the next page).

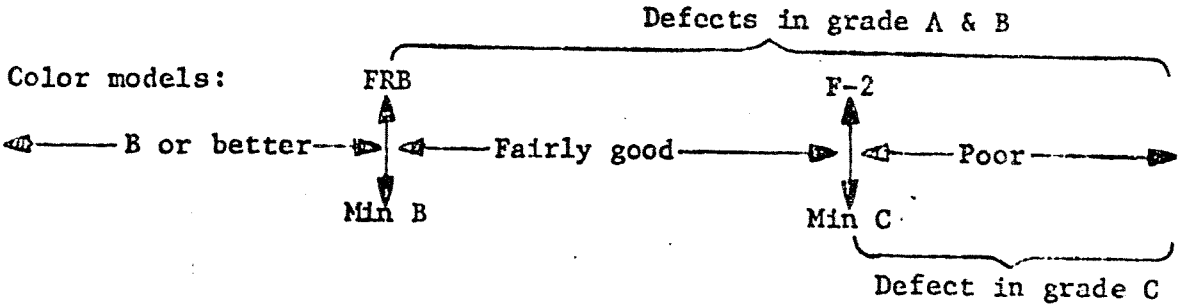
1/ The presence of orange to reddish-purple pit cavity pigmentation is typical of freestone peaches. Abnormal brown discoloration of the pit cavity should be counted under "blemished" only.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

7. Color (continuation).

Use the peach color models to evaluate the color classification:



As a practical method of evaluating the individual unit color of diced peaches, *scan* the sample unit and separate into two groups the apparent dice that are "fairly good" color and the apparent dice that are "poor" color. Weigh each group — "fairly good" color and "poor" color — separately. Each 8 g increment to the nearest 8 g is as follows:

Fairly good color - one major defect.
Poor color - one severe defect.

Record on the defect tally the number of defects -- the number of 8 g increments — that are either "fairly good" color or "poor" color. If the sample fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect in grade C. Disregard the "fairly good" color for grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

8. *Separate* the dice that are blemished. Blemished means that the dice is affected by decay (count it as a severe defect and under File Code 172, too); bruise; gummosis (external only); insect injury; or by abnormal brown discoloration of the pit cavity. After you have separated all of the blemished dice from the sample, classify them into three groups as follows:

   a. Severe (decay); or
   b. Major; or
   c. Insignificant (same as minor in whole, halves, quarters, slices or irregulars).

   } Use photoguides.

   Weigh each of the two groups — severe and major. Each 8 g increment, to the nearest 8 g, is one defect. Record on the defect tally the number of defects -- the number of 8 g increments — that are either "severe" blemish or "major" blemish.

9. *Separate* the dice that are more than 20 mm (0.8 in) on one cut edge and those that pass through the meshes of a 5/16 inch (8 mm) sieve. It isn't necessary to separate the large dice from the small dice. Composite the large dice and small dice and weigh. The sieve method used to determine the size of diced units in Canned Fruit Cocktail is used for Canned Freestone Peaches too. Each 8 g increment, to the nearest 8 g, is equal to one defect. Record on the defect tally the number of defects -- the composite number of 8 g increments -- that are excessively large and excessively small.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

10. *Visually scan* the sample for units with apparent "fairly good" character and units with apparent "poor" character. Also, any seriously frayed units can be identified. The final test for checking character is the touch sensation from actually feeling of the dice. Separate the dice that are "fairly good" character into one group and the dice that are "poor" character into another group. Weigh each group — "fairly good" and "poor." Record in the "cooked prerequisites" section of the defect tally the actual weight of "fairly good" character and the actual weight of "poor" character.

    a. *Fairly good character* - Count seriously frayed, very soft, or substantially firm dice.
    Poor character - Count mushy, excessively soft, or hard dice.

    b. *Time saver.* If you are using a larger sample for classified quality defects, you may use a smaller sample for weighing character. It would save time. In effect, this procedure would be the equivalent of drawing a subsample. For example, if you are using a 23,200 g (818.4 oz) sample for classified defects, you could choose a smaller sample size for character, such as 288 g (10.2 oz); or 624 g (22 oz); or 1008 g (35.6 oz); or 1392 g (49.1 oz), etc.
    If you use a smaller sample size for weighing character, note on the defect tally that you've used the smaller sample. Otherwise, it's difficult for someone other than the original grader to reevaluate the defect tally.

Assign the letter grade (A, B, C or SSTD) for the character of the sample based on the tolerances on the following page. (See also the next page).

TOLERANCES FOR CHARACTER – DICED

STANDARD SAMPLE UNIT SIZES	Number of Sample Units	6	13	21	29
		Total Weight of Dice (grams)			
		1/ 2/	1/ 2/	1/ 2/	1/ 2/
	6	288 FG Poor	624 FG Poor	1008 FG Poor	1392 FG Poor
		A = 14 0	A = 31 0	A = 50 0	A = 70 0
		B = 29 0	B = 62 0	B = 101 0	B = 139 0
		C = All or 29	C = All or 62	C = All or 101	C = All or 139
	13	624 FG Poor	1352 FG Poor	2184 FG Poor	3016 FG Poor
		A = 31	A = 68 0	A = 109 0	A = 151 0
		B = 62 0	B = 135 0	B = 218 0	B = 302 0
		C = All or 62	C = All or 135	C = All or 218	C = All or 302
	25	1200 FG Poor	2600 FG Poor	4200 FG Poor	5800 FG Poor
		A = 60 0	A = 130 0	A = 210 0	A = 290 0
		B = 120 0	B = 260 0	B = 420 0	B = 580 0
		C = All or 120	C = All or 260	C = All or 420	C = All or 580
	50	2400 FG Poor	5200 FG Poor	8400 FG Poor	11600 FG Poor
		A = 120 0	A = 260 0	A = 420 0	A = 580 0
		B = 240 0	B = 520 0	B = 840 0	B = 1160 0
		C = All or 240	C = All or 520	C = All or 840	C = All or 1160
	100	4800 FG Poor	10400 FG Poor	16800 FG Poor	23200 FG Poor
		A = 240 0	A = 520 0	A = 840 0	A = 1160 0
		B = 480 0	B = 1040 0	B = 1680 0	B = 2320 0
		C = All or 480	C = All or 1040	C = All or 1680	C = All or 2320

1/ *Number of grams of "fairly good" character.*
2/ *Number of grams of "poor" character.*
Calculations: 5% "fairly good" in grade A.
10% "fairly good" in grade B.
10% "poor" in grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

11. As the dice are scanned for blemishes and character, check for peel. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel from all of the dice in the sample (not each container). As a practical method of evaluating the amount of peel in the sample, assign the letter grade A, B, C or SSTD, based on the estimated area of peel in the sample.

CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

Use the guide on the following page for the total aggregate area of peel allowed in the sample. (See also the following page).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

TOLERANCES FOR PEEL - DICED

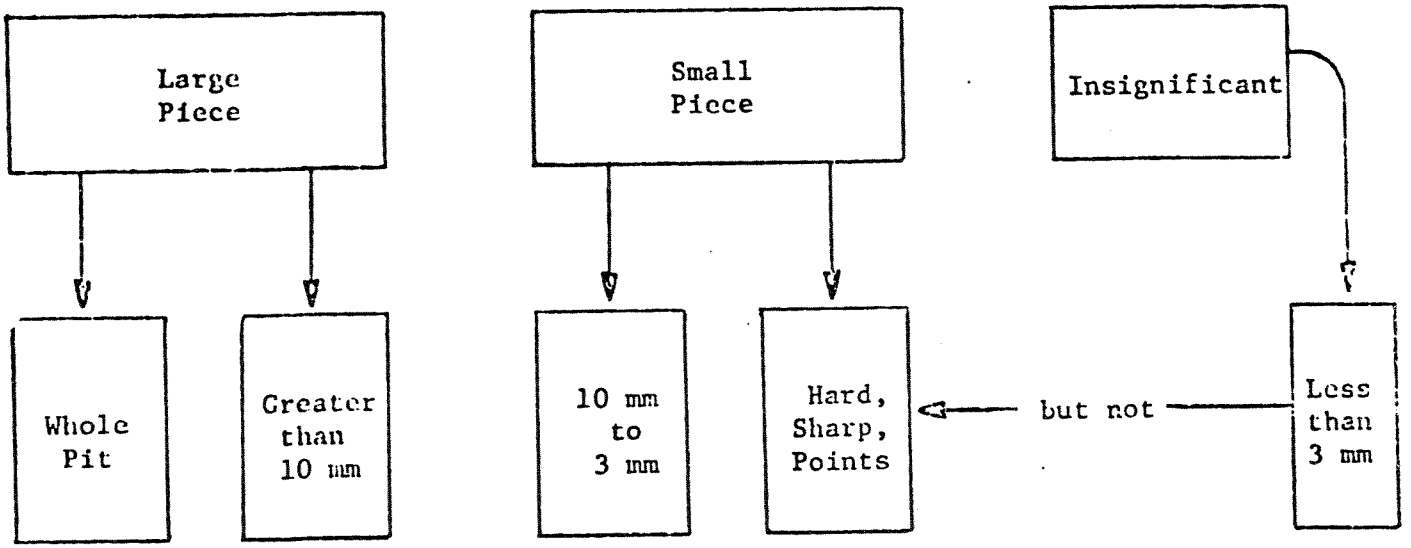
STANDARD SAMPLE UNITS	Number of Sample Units	Total Weight of Dice (grams)					
	6	13	21	29			
6	288	624	1008	1392			
	A = 0.7 cm^2	A = 1.6 cm^2	A = 2.5 cm^2	A = 3.5 cm^2			
	B = 2.2 cm^2	B = 4.7 cm^2	B = 7.6 cm^2	B = 10.4 cm^2			
	C = 4.3 cm^2	C = 9.4 cm^2	C = 15.1 cm^2	C = 20.8 cm^2			
13	624	1352	2184	3016			
	A = 1.6 cm^2	A = 3.4 cm^2	A = 5.5 cm^2	A = 7.5 cm^2			
	B = 4.7 cm^2	B = 10.1 cm^2	B = 16.4 cm^2	B = 22.6 cm^2			
	C = 9.4 cm^2	C = 20.3 cm^2	C = 32.8 cm^2	C = 45.3 cm^2			
25	1200	2600	4200	5800			
	A = 3.0 cm^2	A = 6.5 cm^2	A = 10.5 cm^2	A = 14.5 cm^2			
	B = 9.0 cm^2	B = 19.5 cm^2	B = 31.5 cm^2	B = 43.5 cm^2			
	C = 18.0 cm^2	C = 39.0 cm^2	C = 63.0 cm^2	C = 87.0 cm^2			
50	2400	5200	8400	11600			
	A = 6.0 cm^2	A = 13.0 cm^2	A = 21.0 cm^2	A = 29.0 cm^2			
	B = 18.0 cm^2	B = 39.0 cm^2	B = 63.0 cm^2	B = 87.0 cm^2			
	C = 36.0 cm^2	C = 78.0 cm^2	C = 126.0 cm^2	C = 174.0 cm^2			
100	4600	10400	16800	23200			
	A = 12.0 cm^2	A = 26.0 cm^2	A = 42.0 cm^2	A = 58.0 cm^2			
	B = 36.0 cm^2	B = 78.0 cm^2	B = 126.0 cm^2	B = 174.0 cm^2			
	C = 72.0 cm^2	C = 156.0 cm^2	C = 252.0 cm^2	C = 348.0 cm^2			

1/ Total aggregate area of peel permitted in the sample.
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{200 \text{ g}}{\text{Sample Size}}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

12. *Turn* or roll the diced peaches and count each loose pit fragment and each unit affected by pit fragment(s) as one defect. Classify each unit affected by more than one pit fragment against the largest pit fragment present on the unit. Record in the "uncooked prerequisites" section of the defect tally the total number of pit fragments.



TOLERANCE		
DICED		
	Small Fragments	Large
AQL 1/	1.0	0.4

1/ *AQL expressed as defects per hundred units.*

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

DICED PEACHES (continuation).

13. *Compare* the total number of defects that you found in the sample (not each container) with the acceptance number for the applicable AQL and sample size in the Regulations (File Code 109-A-1, Tables XV - XIX).

14. *Assign* a grade to the sample based on the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES

1. *Follow* the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan [Attributes]).

2. *Use* the same defect tally sheet for lot inspection as you would use for on-line inspection. Ignore the section of the tally devoted to CuSum values.

3. Ignore the breakdown of prerequisites into "cooked" and "uncooked." For the purposes of lot inspection, consider all prerequisites as "cooked." However, some of the prerequisites are to be evaluated on a *container-by-container* basis and other prerequisites are to be evaluated on the *sample as a whole* (all of the peaches).

4. After the *nonquality factors* have been evaluated (net weight, drained weight, count, sirup, etc.), use the peaches and evaluate on a container by container basis the following prerequisites:

   a. *Evaluate* "brightness" and record the letter grade (A, C or SSTD) in the "cooked prerequisites" section of the defect tally (disregard "brightness" on special packs, such as brown sugar and honey, if the appearance is normal for the pack);

   b. *Assign* the letter grade (A or SSTD) for similar varietal characteristics in the section for "cooked prerequisites";

   c. *Taste* the syrup for flavor and odor. Assign the letter grade (A or SSTD) for flavor and odor in the section for "cooked prerequisites." Make allowance for special packs or optional packing media, such as brown sugar and honey or nonnutritive sweeteners.

Example: (Prerequisites on a container by container basis)

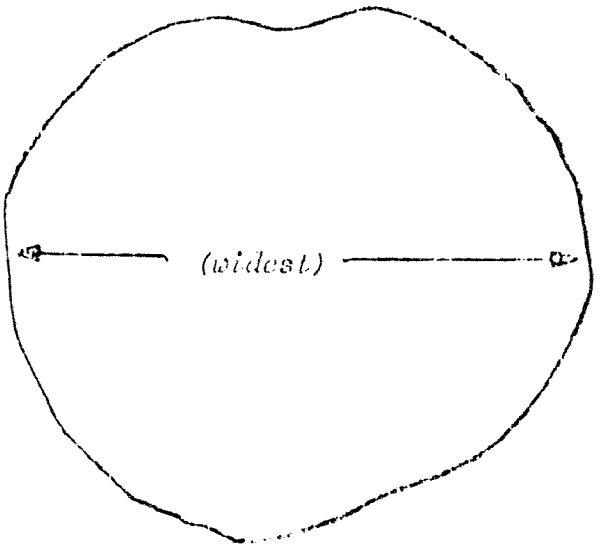
	Can No. 1	Can No. 2	Can No. 3, etc.
Similar Varietal Characteristics	A	A	A
Brightness	A	A	A
Flavor and Odor	A	A	A

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

5. *Check* the peaches for uniformity of size *(container by container).* It isn't necessary to measure each peach. Measure only the apparent large units or the apparent small units. Each peach that varies in diameter more than 1 cm (0.4 in) from the predominant diameters of peaches in the container is counted as one minor defect. In effect, this procedure would allow an acceptable range of diameters in the container with only the units that are more than 1 cm (0.4 in) outside of the acceptable range counted as defects.

   a. *Measure* the widest diameter of the apparent large peaches or the apparent small peaches as follows:



   b. *Determine* size variation so that the least number of defects are counted against size. Please refer to step 6 under lot "halves" or "quarters" for the correct interpretation of this requirement.

Record on the defect tally the total number of peaches that fall more than 1 cm (0.4 in) outside of the acceptable range for each container.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

6. *Assemble* (physically or mentally) all of the peaches from all of the containers into one sample. Adjust the total number of peaches to meet the lot single sampling plan that you're using. Note: At the grader's option, it isn't necessary to physically assemble all of the peaches into one sample. However, if the units from each container are kept in a separate tray, mentally assemble them into one sample with the other trays.

7. *Count* the number of crushed or broken units (not due to ripeness). Reassemble any broken peach. Count each reassembled peach as one unit. Record in the "uncooked prerequisites" section of the tally sheet the total number of crushed or broken units in the sample (not each container).

	TOLERANCE
	GRADE A, B & C
AQL 1/	6.5

1/ AQL expressed as percent defective.

8. *Count* the number of pieces of EVM in the sample. The small "collar" that may remain on the stem end of the peach isn't considered as EVM unless the overall appearance of the unit is affected. Record on the defect tally the total number of pieces of EVM in the sample (not each container) as follows:

Critical - each piece of EVM.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

9. *Evaluate* the color of the individual peach. Use the guidelines below to judge the color classification of each peach:

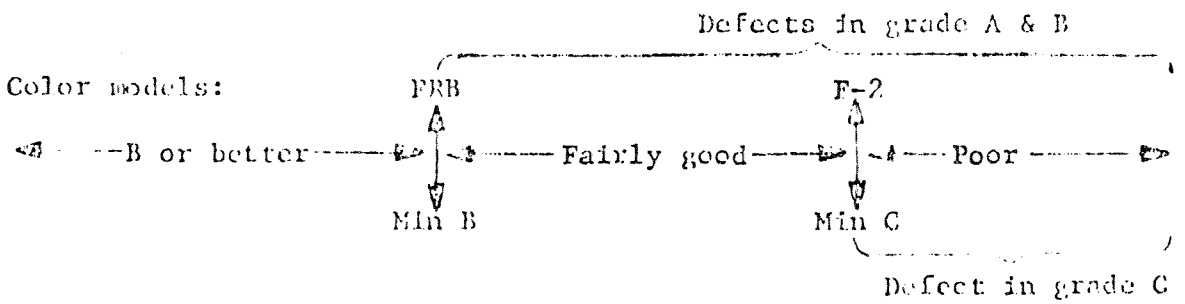
   a. *Good color* - The unit may possess discoloration due to oxidation, pigmentation, or other causes that slightly affects the appearance or eating quality, or both.

   b. *Fairly good color* - The unit may possess discoloration due to oxidation, pigmentation, or other causes that materially affects the appearance or eating quality, or both.

   c. *Poor color* - The unit may possess discoloration due to oxidation, pigmentation, or other causes that seriously affects the appearance or eating quality, or both.

   d. *Oxidation* - Occasionally, units in the headspace of the container discolor due to the absence of liquid around the unit. Count these peaches as either "fairly good" color or "poor" color, depending upon their severity.

   Record on the defect tally the total number of peaches in the sample (not in the container) that are either "fairly good" color or "poor" color. If the sample fails requirements for grade B, adjust the defect tally. Only "poor" color is a defect against grade C. Disregard the "fairly good" color for grade C. Use the peach color models to evaluate color.



If you are grading spiced peaches, or other special packs such as brown sugar and honey, disregard the characteristic coloration caused by the optional ingredients. Count against color only abnormal discoloration caused by oxidation or other similar causes.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

10. *Count* the number of gouged units. If the peach has been trimmed by gouging defective tissue, count the unit as gouged. Otherwise, the unit is not counted. If the peach has impressions caused by the beaded sidewall of the container, don't count it as gouged. Record on the defect tally the total number of gouged units in the sample (not each container) and classify them as follows:

    a. Severe; or
    b. Major; or
    c. Minor.

    } ——————▷ Use photoguides.

11. *Count* the number of peaches that are affected by mechanical damage. Classify as mechanical damage only those units with missing outside surface flesh. Don't count under "mechanical damage" any units that were previously counted under "crushed" or "broken." Record on the defect tally the total number of mechanically damaged units in the sample (not each container) and classify them as follows:

    a. Severe -- total loss of normal shape; or
    b. Major - normal shape seriously affected; or
    c. Minor - normal shape materially affected.

12. *Count* the number of peaches that are blemished. Blemished means that the peach is affected by decay (count it as a a severe defect and under File Code 172, too); bruise; gummosis (external only); or insect injury. Record on the defect tally the total number of blemished peaches in the sample (not each container) and classify them as follows:

    a. Severe (decay); or
    b. Major; or
    c. Minor.

    } ——————▷ Use photoguides.

13. *Visually scan* the sample for units with apparent "fairly good" character and units with apparent "poor" character. The final test for checking character is the touch sensation from actually feeling of the units. Record on the tally the total number of "substantially hard," "very soft," and "mushy" units in the sample (not each container). Make this tally in the section for "cooked prerequisites." Then assign the letter grade (A, B, C or SSTD) for the character of the total sample. Graders option: It is permissible to estimate character. But, assign the character grade based on the tolerances given on the following page. (See also the next page).

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

TOLERANCES FOR CHARACTER – WHOLE

STANDARD SAMPLE UNIT SIZES	*Number of Sample Units* 6	13	21	29
	Number of Peaches			
	6	78	126	174
	1/ FG: A = 2, B = 4, C = All or 4	1/ FG: A = 4, B = 8, C = All or 8	1/ FG: A = 6, B = 13, C = All or 13	1/ FG: A = 9, B = 17, C = All or 17
	2/ Poor: 0	2/ Poor: 0	2/ Poor: 0	2/ Poor: 0
	13	169	273	377
	FG: A = 4, B = 8, C = All or 8	FG: A = 8, B = 17, C = All or 17	FG: A = 14, B = 27, C = All or 27	FG: A = 19, B = 38, C = All or 38
	Poor: 0	Poor: 0	Poor: 0	Poor: 0
	25	325	525	725
	FG: A = 8, B = 15, C = All or 15	FG: A = 16, B = 33, C = All or 33	FG: A = 26, B = 53, C = All or 53	FG: A = 36, B = 73, C = All or 73
	Poor: 0	Poor: 0	Poor: 0	Poor: 0
	50	650	1050	1450
	FG: A = 15, B = 30, C = All or 30	FG: A = 33, B = 65, C = All or 65	FG: A = 53, B = 105, C = All or 105	FG: A = 73, B = 145, C = All or 145
	Poor: 0	Poor: 0	Poor: 0	Poor: 0
	100	1300	2100	2900
	FG: A = 30, B = 60, C = All or 60	FG: A = 65, B = 130, C = All or 130	FG: A = 105, B = 210, C = All or 210	FG: A = 145, B = 290, C = All or 290
	Poor: 0	Poor: 0	Poor: 0	Poor: 0

1/ *Number of units of "fairly good" character.*
2/ *Number of units of "poor" character.*
Calculations: 5% "fairly good" in grade A.
10% "fairly good" in grade B.
10% "poor" in grade C.

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

13. Character (continuation).

Mushy - Count each mushy peach as "poor" character.

Use the photoguides for "mushy" halves, to aid in classifying "mushy" whole peaches correctly.

14. *Use* your finger tips and feel for peel as the units are scanned for blemishes and character. Record in the "uncooked prerequisites" section of the defect tally the aggregate area of peel from all of the units in the sample (not each container). As a practical method of evaluating the amount of peel in the sample, assign the letter grade A, B, C or SSTD, based on the estimated area of peel in the sample.

CAUTION: LYE PEELING MAY CAUSE THE PEEL TO DISCOLOR. DON'T COUNT PEEL AS BLEMISHED.

Use the guide on the following page for the total aggregate area of peel allowed in the sample. (See also the following page).

TOLERANCES FOR PEEL - WHOLE

STANDARD SAMPLE UNITS	*Number of Sample Units* 6	13	21	29
	Number of Peaches			
6	36 <u>1/</u> A = 8.0 cm^2 B = 32.4 cm^2 C = 64.8 cm^2	78 <u>1/</u> A = 17.2 cm^2 B = 70.2 cm^2 C = 140.4 cm^2	126 <u>1/</u> A = 27.8 cm^2 B = 113.4 cm^2 C = 226.8 cm^2	174 <u>1/</u> A = 38.3 cm^2 B = 156.6 cm^2 C = 313.2 cm^2
13	78 A = 17.2 cm^2 B = 70.2 cm^2 C = 140.4 cm^2	169 A = 37.2 cm^2 B = 152.1 cm^2 C = 304.2 cm^2	273 A = 60.0 cm^2 B = 245.3 cm^2 C = 491.4 cm^2	377 A = 83.0 cm^2 B = 339.3 cm^2 C = 678.6 cm^2
25	150 A = 33.0 cm^2 B = 135.0 cm^2 C = 270.0 cm^2	325 A = 71.5 cm^2 B = 292.5 cm^2 C = 585.0 cm^2	525 A = 115.5 cm^2 B = 472.5 cm^2 C = 945.0 cm^2	725 A = 159.5 cm^2 B = 652.5 cm^2 C = 1305.0 cm^2
50	300 A = 66.0 cm^2 B = 270.0 cm^2 C = 540.0 cm^2	650 A = 143.0 cm^2 B = 585.0 cm^2 C = 1170.0 cm^2	1050 A = 231.0 cm^2 B = 945.0 cm^2 C = 1890.0 cm^2	1450 A = 319.0 cm^2 B = 1305.0 cm^2 C = 2610.0 cm^2
100	600 A = 132.0 cm^2 B = 540.0 cm^2 C = 1080.0 cm^2	1300 A = 286.0 cm^2 B = 1170.0 cm^2 C = 2340.0 cm^2	2100 A = 462.0 cm^2 B = 1890.0 cm^2 C = 3780.0 cm^2	2900 A = 638.0 cm^2 B = 2610.0 cm^2 C = 5220.0 cm^2

<u>1/</u> *Total aggregate area of peel permitted in the sample.*
Calculations: $\frac{cm^2 \text{ peel}}{x} \times \frac{25}{\text{Smpl Size}}$

SUGGESTED ORDER OF GRADING A SAMPLE UNDER LOT INSPECTION

WHOLE PEACHES (continuation).

15. *Compare* the total number of defects that you found in the sample (not each container) with the acceptance number for the applicable AQL and sample size in the Regulations (File Code 109-A-1, Tables XV - XIX).

16. *Assign* a grade to the sample based on the procedure outlined in File Code 120-A-7 (Lot Single Sampling Plan).

SPECIAL LOT INSPECTION SITUATIONS

1. *INSPECTION OF NUMBER 10 CANS OR OTHER LARGE CONTAINERS.*

File Code 120-A-7 permits you to draw a minimum of 3 No. 10 cans for inspection of small lots if Inspection Aid No. 42 specifies the 3 sample size. Although the lot single sampling plan is designed for a minimum of 6 sample units, you may use the maximum number of peaches in the 3 cans and adjust the sample to 36-78-126-150-169 or more peaches. However, you must have at least 36 peaches in the sample to perform a lot inspection. If 3 cans give fewer than 36 peaches, draw 4 or more cans. The same thing would hold true for a sample drawn by weight. For example, for "pieces," adjust the sample to 1440-3120-5040-6000-6760 or more grams. Or, for "dice," adjust the sample to 288-624-1008-1200-1352 or more grams.

CAUTION: REMEMBER THAT INSPECTION AID NO. 42 SPECIFIES ONLY THE MINIMUM SAMPLE SIZE. YOU MAY INCREASE THE SAMPLE SIZE FOR SUSPECT OR BORDERLINE LOTS.

2. *INSPECTION OF SMALL CANS (8s) OR LARGE UNITS PACKED IN SMALL CANS (PEACH HALVES IN NO. 303 CANS).*

If lot inspection covers small cans or large units packed in small cans, it may be necessary to increase the number of cans that are to be drawn from the lot. Without the increase in sampling, the sample may not be adequate. If the approximate number of units in each container in a lot is unknown, open one can at the sampling point to get this information.

3. *SOFT (OR MUSHY) PEACHES W/ PARTIAL SLICES, PARTIALLY DETACHED PIECES AND DETACHED PIECES.*

Occasionally, peaches are overcooked due to an oversight of the processor. Along with softness or mushiness, the peaches might have fallen apart. Numerous small pieces would be in the container. Don't count the small pieces if they are in a container of overcooked peaches. The character grade will correctly handle this situation.

SPECIAL LOT INSPECTION SITUATIONS (continuation).

4. *HOW TO ADJUST A DEFECT TALLY.*

If a sample fails to meet the requirements of grade B, adjust the defect tally before comparing the defects against the acceptance numbers for grade C. This must be done because "fairly good" color (major defect) and "shelly" (major defect) are not counted against grade C. 1/ A grade C lot could have all "fairly good" color and all "shelly" units. Adjust the defect tally as follows:

HALVES

	Count	6	7	6	7	7	36	
	* * *							
	Prerequisite Grade	A	A	A	A	A	A	
	* * *							
MAJOR	Color - Fairly Good							4 → 2
	Blemished							2 → 1
	Off-Suture							
	Detached Pieces							
	Other Mech. Damage							
	Shelly							4 → 2
	Cracks							
	TOTAL MAJOR							10 → 5
	* * *							Failed grade B
	TOTAL ALL CLASSES							20 → 15
	* * *							
	FINAL GRADE							C

1/ *If the defects exceed the acceptance numbers for grade B, but don't exceed the acceptance numbers for grade C, it isn't necessary to adjust.*

NOTES