

Judging Pickled and Fermented Foods

Headspace for pickled foods should be ½ inch. All pickled and fermented foods should be in standard home canning jars and processed in a boiling water canner. (A few USDA recipes allow for a 30-minute timed pasteurization process at 180°F.) Canned pickled and fermented foods should meet all of the general characteristics for container, pack, appearance of contents and attractiveness.

There are many varieties of pickled and fermented foods. These are usually classified by ingredients and method of preparation.

Fermented dill pickles and sauerkraut go through a curing process for several weeks until they are pickled. The color and flavor of the product changes during curing, and acidity develops. Fresh pack, or quick process, pickles do not go through the process of fermentation. These products may or may not be brined for several hours to overnight. Fresh pack pickles are fruit or vegetables covered with a pickling liquid that is usually vinegar-based. Fruit pickles are made from whole or sliced fruits and the vinegar is usually part of a spicy sugar syrup. Relishes are made from chopped fruits and vegetables cooked in a spicy vinegar solution.

A safety concern arises with pickled or fermented foods if the acidity level is not high enough for them to be treated as acid foods processed at boiling water temperatures. Acid in a truly pickled or fermented food is intended to prevent the growth of *Clostridium botulinum*, the bacteria that causes botulism. It is important to use tested recipes with the proper amount of acidity when making pickled or fermented foods.

Below are some general characteristics to look for in all pickled or fermented foods. For guidelines specific to the type of product, refer to the chart on the following pages.

Desirable General Characteristics for Pickles and Fermented Foods

| | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size and Shape | Pieces are uniform in size and shape. Pieces in relishes not chopped or ground too fine. No ragged edges. |
| Pack | Attractive; neat; space well used. Good proportion of solids to liquids. Liquid covers all product with appropriate headspace left empty. No floating of pieces. Fancy packs are generally discouraged. Vertical or horizontal layering is not only impractical, but can interfere with intended heat penetration during the canning process (i.e., the product may be underprocessed). |

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| Texture | Pieces appear plump, not shriveled or shrunken. Firm for pickles and sauerkraut, softer for some relishes and chutneys. See individual product characteristics. A visual indication for texture is that 1/16th inch slice has been removed from the blossom end of cucumbers. |
| Color | Even color, characteristic of fresh product, and even throughout the jar. No artificial coloring except for a few specialty cucumber or apple ring pickles. |
| Liquid | Clear. May have color from some spices. Free of sediment or cloudiness. No foreign matter such as stems, leaves, strings, husks. |
| Container | Properly labeled. Appropriate size for available recommended canning processes*. Clean, clear standard canning jar. No cracks, chips, or rust on jar. Recommended lid with good vacuum seal. Band free of rust and dents or other damage; clean and easily removed. |

*Check recommended processes. Some pickled foods and relishes are to be canned in jars no larger than pints.

Judging Criteria for Individual Pickled or Fermented Products

| | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cucumber and Mixed Pickles | Pieces are firm and plump. Cucumber skin dark green color. All pieces transparent or semi-transparent, completely and evenly saturated with brine. Uniform in size. Small to medium size cucumbers can be used whole; large ones sliced into uniform size slices, strips or chunks. Cucumber not too old and seedy. No oil is to be used. Free of defective spots on peel. |
| Dill Pickles | Pieces are firm, crisp, and plump. Small to medium size cucumbers can be used whole; larger ones halved or quartered. Dill weed and spices visible. Cloves of garlic should be bright and not discolored. Fermented dills might have slightly cloudy liquid with a tiny bit of sediment on bottom. Slice (1/16th inch) should be removed from blossom end of cucumbers. |
| Sweet Cucumber Pickles | Pieces are firm, yet tender, plump and well saturated with the syrup. Neatly cut edges that hold their shape. Small cucumbers (gherkins) may be left whole. Other sweet pickles may be slices, spears or chunks. Liquid may be thin to a thick syrup. Any visible spices in pleasant proportion. |

Judging Criteria for Individual Pickled or Fermented Products

| | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other Pickles (Not Cucumber) | Vegetables are bright with color characteristic of the product. Pieces are uniform in size. Pieces not torn, broken, or with ragged edges. All pieces are saturated with the brine. Differently shaped garnishes (onion ring, red pepper strip, etc.) may be used. Any visible spices in pleasant proportion. |
| Relishes | Small pieces of vegetable or fruit, but large enough to be recognizable. Pieces are uniform in size and shape, cut or chopped neatly. Appear tender but not mushy. Food is semi-transparent in appearance, thoroughly saturated with pickling solution. Clear and bright in color. Visible spices not overwhelming. |
| Fruit Pickles (Spiced Fruits) | Small fruits may be pickled whole; larger ones are cut into uniformly sized pieces with sharp edges. Fruit is translucent or whole fruit (such as peaches) looks cooked with good penetration of syrup. Texture is firm. Color is uniform, bright, and glossy. Syrup is thinner than in preserves but not watery. |
| Chow-Chow | This mixture of finely chopped vegetables usually has cabbage as one ingredient. Criteria are similar to those of relish. Color is often bright, yellowish-green due to cabbage. |
| Chutney | Chutneys are chopped fruit pieces or fruit pulp mixed with raisins and chopped vegetables, such as onions and peppers. Chutneys are cooked with sugar and vinegar until thickened. Texture of vegetable pieces is similar to that of relish, but the liquid is thicker. Color is often dark but depends on ingredients and spices used. Free from any signs of scorching (burned flecks). |
| Sauerkraut | Color is off-white to light straw. Pieces should be translucent, clear and bright. Free from pink, brown, or other discoloration. Shredded pieces should be uniform in thickness. Texture should be firm, not mushy. Clear liquid sufficient to cover all solids. No air bubbles or trapped air. |



Pickled Products Canning Summary Sheet for Judges USDA Recommendations*

| PICKLES – BOILING WATER | Headspace | Style of Pack | Jar Size | Minutes in Boiling Water at Altitudes of | | | |
|--------------------------------|-----------|------------------|----------|------------------------------------------|---------------------|---------------------|-------------------|
| | | | | 0 - 1,000 ft | 1,001 - 3,000 ft | 3,001 - 6,000 ft | Above 6,000 ft |
| Sauerkraut | ½ inch | Hot | Pint | 10 | 15 | 15 | 20 |
| | | | Quart | 15 | 20 | 20 | 25 |
| | | Raw | Pint | 20 | 25 | 30 | 35 |
| | | | Quart | 25 | 30 | 35 | 40 |
| <i>Cucumber Pickles</i> | | | | | | | |
| Fermented Dill Pickles | ½ inch | Raw | Pint | 10 | 15 | 15 | 20 |
| | | Raw | Quart | 15 | 20 | 20 | 25 |
| Bread-and-Butter Pickles | ½ inch | Hot | Pint & | 10 | 15 | 15 | 20 |
| | | Hot | Quart | 10 | 15 | 15 | 20 |
| Quick Fresh-Pack Dill Pickles | ½ inch | Raw | Pint | 10 | 15 | 15 | 20 |
| | | Raw | Quart | 15 | 20 | 20 | 25 |
| Sweet Gherkin Pickles | ½ inch | Raw | Pint | 5 | 10 | 10 | 15 |

* Source: *Complete Guide to Home Canning*, Agriculture Information Bulletin No. 539, US Department of Agriculture. Revised 1994. www.homefoodpreservation.com

Developed by The University of Georgia, Athens, for the National Center for Home Food Preservation. Released by Elizabeth L. Address, Ph.D., Department of Foods and Nutrition, College of Family and Consumer Sciences. August 2003.

**PICKLES –
BOILING WATER**

| | Headspace | Style of Pack | Jar Size | Minutes in Boiling Water at Altitudes of | | | |
|-----------------------------------|-----------|---------------|-------------|------------------------------------------|------------------|------------------|----------------|
| | | | | 0 - 1,000 ft | 1,001 - 3,000 ft | 3,001 - 6,000 ft | Above 6,000 ft |
| 14-Day Sweet Pickles | ½ inch | Raw | Pint | 5 | 10 | 10 | 15 |
| | | Raw | Quart | 10 | 15 | 15 | 20 |
| Quick Sweet Pickles | ½ inch | Hot | Pint & | 5 | 10 | 10 | 15 |
| | | Hot | Quart | 5 | 10 | 10 | 15 |
| | | Raw | Pint | 10 | 15 | 15 | 20 |
| | | Raw | Quart | 15 | 20 | 20 | 25 |
| <i>Pickled Vegetables</i> | | | | | | | |
| Pickled Bread-and-Butter Zucchini | ½ inch | Hot | Pint & | 10 | 15 | 15 | 20 |
| | | Hot | Quart | 10 | 15 | 15 | 20 |
| Dilled Beans | ½ inch | Raw | Pint | 5 | 10 | 10 | 15 |
| Pickled Three-Bean Salad | ½ inch | Hot | Half Pint & | 15 | 20 | 20 | 25 |
| | | Hot | Pint | 15 | 20 | 20 | 25 |
| Pickled Beets | ½ inch | Hot | Pint & | 30 | 35 | 40 | 45 |
| | | Hot | Quart | 30 | 35 | 40 | 45 |
| Pickled Cauliflower | ½ inch | Hot | Half Pint & | 10 | 15 | 15 | 20 |
| | | Hot | Pint | 10 | 15 | 15 | 20 |
| Pickled Mixed Vegetables | ½ inch | Hot | Pint | 5 | 10 | 10 | 15 |
| | | Hot | Quart | 10 | 15 | 15 | 20 |

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|------------------------------|-----------|---------------|------------------|------------------------------------------|------------------|------------------|----------------|
| | | | | 0 - 1,000 ft | 1,001 - 3,000 ft | 3,001 - 6,000 ft | Above 6,000 ft |
| Pickled Sweet Green Tomatoes | ½ inch | Hot | Pint | 10 | 15 | 15 | 20 |
| | | Hot | Quart | 15 | 20 | 20 | 25 |
| Marinated Whole Mushrooms | ½ inch | Hot | Half Pint Only | 20 | 25 | 30 | 35 |
| Pickled Dilled Okra | ½ inch | Hot | Pint | 10 | 15 | 15 | 20 |
| <i>Peppers</i> | | | | | | | |
| Marinated Peppers | ½ inch | Raw | Half Pint Only | 15 | 20 | 20 | 25 |
| Pickled Bell Peppers | ½ inch | Hot | Half Pint & Pint | 5 | 10 | 10 | 15 |
| | | Hot | | 5 | 10 | 10 | 15 |
| Pickled Hot Peppers | ½ inch | Raw | Half Pint & Pint | 10 | 15 | 15 | 20 |
| | | Raw | | 10 | 15 | 15 | 20 |
| <i>Relishes</i> | | | | | | | |
| Pickled Corn Relish | ½ inch | Hot | Half Pint & Pint | 15 | 20 | 20 | 25 |
| | | Hot | | 15 | 20 | 20 | 25 |
| Pickled Pepper-Onion Relish | ½ inch | Hot | Half Pint & Pint | 5 | 10 | 10 | 15 |
| | | Hot | | 5 | 10 | 10 | 15 |

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| | | | | 0 - 1,000 ft | 1,001 - 3,000 ft | 3,001 - 6,000 ft | Above 6,000 ft |
| Piccalilli | ½ inch | Hot | Pint | 5 | 10 | 10 | 15 |
| Pickle Relish | ½ inch | Hot | Half Pint & Pint | 10 | 15 | 15 | 20 |
| | | Hot | | 10 | 15 | 15 | 20 |
| Pickled Green Tomato Relish | ½ inch | Hot | Pint | 5 | 10 | 10 | 15 |
| <i>Reduced Sodium Pickles</i> | | | | | | | |
| Reduced Sodium Sliced Dill Pickles | ½ inch | Raw | Pint | 15 | 20 | 20 | 25 |
| Reduced Sodium Sliced Sweet Pickles | ½ inch | Hot | Pint | 10 | 15 | 15 | 20 |

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Pickles and Relishes

| Characteristic | Points | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--|
| <p>Pack Processed in boiling water canner with correct altitude adjustment made; no open kettle canning.</p> | 30 | |
| Jar filled to appropriate headspace (½ inch). | | |
| Good proportion of solids and liquids; neatly packed. | | |
| Liquid covers all solids; no floating pieces. | | |
| <p>Quality of Product</p> <p>Color Even color, characteristic of cured or cooked product. No artificial coloring except for a few specialty cucumber or apple ring pickles. Sauerkraut is off-white to light straw, translucent.</p> | 20 | |
| Color and translucency uniform throughout the jar. | | |
| Free of discoloration, blemishes on food pieces. | | |
| Fermented pickles and sauerkraut completely cured. | | |
| <p>Texture/Consistency Pieces appear plump, not shriveled or shrunken. No internal holes in pickles.</p> | 20 | |
| Firm for pickles and sauerkraut. Softer for some relishes and chutneys. | | |
| Food pieces cut or chopped attractively, not too fine in relishes. Evenly distributed throughout container. No separation or layering. | | |
| Spices and seasonings not overwhelming; attractive in pack. | | |
| <p>Quality of Liquid Clear, no unnatural cloudiness, free of bubbles.</p> | 20 | |
| Free of trapped air bubbles; no active bubbling. | | |
| Free of sediment and foreign matter (stems, cores, peel, seeds, etc.) and mold. | | |
| <p>Container Vacuum-sealed.</p> | 10 | |
| Clean, clear glass standard canning jar; appropriate size jar for available processes. | | |
| New lid and band free of rust; screwband clean, unbent and easily removed. | | |
| Label clean, neatly placed and contains name of product, date processed, processing method and time. | | |
| Comments | | |