



*“Teaching research-based practices of safe home food preservation to the residents of Solano and Yolo Counties.”*

## Three Ways to Make Orange Marmalade

### **Orange Marmalade—no added pectin**

Recipe Source: National Center for Home Food Preservation [https://nchfp.uga.edu/how/can\\_07/orange\\_marmalade.html](https://nchfp.uga.edu/how/can_07/orange_marmalade.html)

4 cups thinly sliced orange peel with albedo (Requires about 3 pounds of oranges)

4 cups orange pulp, cut up

1 cup thinly sliced lemon (about 1 large lemon as purchased)

6 cups of water

6 cups of sugar



**Yield:** About 7 or 8 half-pint jars

Please read [Using Boiling Water Canners](#) before beginning. If this is your first-time canning, it is recommended that you read [Principles of Home Canning](#).

#### **Procedure:**

1. Wash and rinse half-pint (8 ounce-size) canning jars; keep warm and clean until ready to fill. Prepare lids and ring bands according to manufacturer's directions.
2. Rinse oranges and lemons well in clean water.
3. Peel oranges and slice orange peel with albedo attached (albedo = white membrane which has natural pectin) into 1/8" strips. Measure 4 cups.
4. Remove seeds and membrane from orange pulp. Cut sections into smaller pieces; measure 4 cups—see photos on the next page.
5. Slice lemon(s) into 1/8" slices and remove seeds. If desired, cut slices into halves or quarters (we used quarter slices of a large lemon). Measure 1 cup.
6. Add water to fruit in a 10-quart stock pot. Bring to a boil and cook over medium heat until peel is tender, about 1 hour.
7. Add sugar and bring slowly to a boil, stirring until sugar dissolves. Cook rapidly to the [jellying point](#) (220° F at sea level), about 45 minutes, stirring occasionally. Be careful not to get burned with spattering marmalade. Quickly skim foam, if any, from top of mixture.
8. Fill hot marmalade into prepared jars, leaving ¼" headspace. Wipe rims of jars with a dampened, clean paper towel or clean cloth. Add sealing lids and ring bands. Tighten to finger tightness.
9. Process filled jars in a [boiling water canner](#) according to the recommendations in [Table 1](#).

It is the policy of the University of California (UC) and the UC Division of Agriculture & Natural Resources not to engage in discrimination against or harassment of any person in any of its programs or activities (Complete nondiscrimination policy statement can be found at <http://ucanr.edu/sites/anrstaff/files/215244.pdf> ) Inquiries regarding ANR's nondiscrimination policies may be directed to Affirmative Action Compliance Officer/Title IX Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1397.

- Let processed jars cool, undisturbed, 12 to 24 hours and check for seals. Wash, label and store in cool, dark location until ready to eat.

**Table 1.** Recommended process time for **Orange Marmalade** in a boiling water canner or atmospheric steam canner.

		Process Time at Altitudes of		
Style of Pack	Jar Size	0 - 1,000 ft	1,001 - 6,000 ft	Above 6,000 ft
Hot	Half-pints	<b>10 min</b>	15	20

**Notes:**

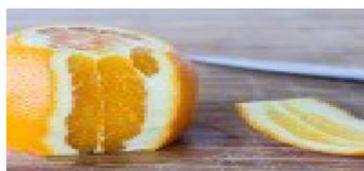
- When peeling citrus fruits for marmalades, be sure to leave all or most of the white albedo (white pith or tissue) left attached to the outer peel. This is where the most pectin (needed for gelling) is located.
- For recipe development, navel oranges were used.
- Refrigerate any leftover marmalade from filling jars, if any, and enjoy freshly made!
- Refrigerate the marmalade once sealed jars are opened for use.

***To remove peel and pulp from the oranges:***

- Cut off both ends of the fruit. You should have something that looks like a truncated sphere.



- Stand the fruit on end, and, with a sharp paring knife, slice off the peel and pith in large strips. Do not cut straight down, but rather, follow the contours of the fruit to waste as little of it as possible. After cutting off a strip of peel and pith, you should be able to see the bright orange fruit beneath.



- Rotate the orange and repeat this process until all the peel is removed and you have a juicy, bright orange sphere left.

- Holding the sphere over a bowl to catch any juices, cut out the citrus segments from in between the strips of membrane surrounding them. Lift out each segment and remove any seeds.



- When you have segmented the entire fruit, squeeze any remaining juices from the pithy part.

## Lower Sugar Orange Marmalade

- 5-1/2 cups prepared fruit (buy 8 medium oranges and 2 medium lemons)
- 2-1/2 cups water
- 1/8 teaspoon baking soda
- 4 cups sugar, measured into separate bowl, divided
- 1 box SURE-JELL for Less or No Sugar Needed Recipes Premium Fruit Pectin®



### Directions:

1. Wash jars, lids, and screw bands in hot soapy water; rinse with warm water. Let dry while preparing the marmalade. Drain jars well before filling jars.
2. Remove colored part of peel from oranges and lemons using vegetable peeler. Use a kitchen shears to cut the peel into thin strips (1/8 inch wide by about 1/2 to 1 inch long); set aside.
3. To obtain pulp, cut off the ends off and then separating the segments and fruit from the membrane between the sections. Chop fruit pulp, reserving any juice; set aside. See photos on preceding page
4. Bring boiling-water canner, half full of water, to a simmer—180 degrees F. Or prepare Steam Canner as directed heating water to a simmer.
5. Place the citrus peel strips, water, and baking soda in large saucepan. Bring to boil on high heat. Reduce heat to medium-low; cover and simmer 20 min., stirring occasionally.
6. Add reserved fruit and juice to the cooked peel; cover and simmer an additional 10 min.
7. Measure exactly 5-1/2 cups prepared fruit into 6- or 8-qt. stockpot.
8. Mix 1/4 cup of the sugar and pectin in small bowl. Add the sugar/pectin mixture to the cooked peel/fruit mixture in stockpot; mix well. If desired, add 1/2 teaspoon butter or vegetable oil to the mixture to reduce foaming. Bring mixture to full rolling boil (a boil that does not stop bubbling when stirred) on medium-high heat, stirring constantly.
9. Stir in remaining sugar (3-3/4 cups). Return mixture to a full rolling boil and boil exactly 1 minute, stirring constantly. Remove from heat. Skim off any foam with metal spoon.
10. Ladle immediately into prepared jars, filling to within 1/4 inch of tops. Wipe jar rims and threads. Cover with two-piece lids. Screw bands finger tight. Place jars on rack in a Boiling Water Canner or Atmospheric Steam Canner. If using a Boiling Water Canner, lower rack into canner so that jars are covered by with at least 1 inch of water over the top of the jars. Add more boiling water, if necessary.) Cover; bring water to gentle boil. If using an Atmospheric Steam Canner, place dome over the top of the jars. Bring the water to a boil and check to make sure steam register is reading correctly before beginning processing.
11. Process according to chart on page 2 (10 minutes at sea level to 1000 feet; 15 minutes for 1001-6000 ft elevation or 20 minutes above 6001 feet. After processing time is complete, turn off the heat. Remove canner lid. Let jars sit in canner for an additional 5 minutes. Remove jars and place upright on towel to cool completely. After jars cool for 12- 24 hours, check seals. If lids are not sealed, and refrigeration is necessary.) Wash jars especially under the rings, label, and store. Marmalade may jell slowly and can take up to 1-2 weeks to set completely.

**Source of recipe:** SURE-JELL - My Food and Family Recipes

It is the policy of the University of California (UC) and the UC Division of Agriculture & Natural Resources not to engage in discrimination against or harassment of any person in any of its programs or activities (Complete nondiscrimination policy statement can be found at <http://ucanr.edu/sites/anrstaff/files/215244.pdf> ) Inquiries regarding ANR's nondiscrimination policies may be directed to Affirmative Action Compliance Officer/Title IX Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1397.

## ***Pomona's Universal Pectin® Light and Fresh Orange Marmalade***

This recipe is a low-sugar or low-honey cooked marmalade made with Pomona's Universal Pectin®. This recipe is found on the recipe sheet enclosed in the pectin box. Pomona's Pectin® contains no sugar and jells reliably with low amounts of any sweetener.

**Yield:** 7 to 8 cups of marmalade; prepare 8 (1 cup) canning jars

### **Ingredients:**

- 6 oranges\*
- ½ grapefruit\*
- 3 cups water or orange juice
- 3 tablespoons commercial lemon or lime juice
- 3 teaspoons calcium water
- 1 to 1.5 cups honey **OR** 2 to 4 cups sugar
- 4½ teaspoons Pomona's Pectin® powder

\* Other citrus fruit can be substituted



### **Directions:**

1. Prepare calcium water. To do this, combine ½ teaspoon calcium powder (found in the small packet in the Pomona's Pectin® box) with ½ cup water in a small, clear glass jar with a lid. Shake well. Extra calcium water should be stored in the refrigerator for your next batch of jam, jelly, or marmalade.
2. Wash the canning jars, lids, and ring bands. Keep clean nearby your workspace. You can place them in the canner or dishwasher as you prepare the rest of the ingredients.
3. Peel the colored portion of the peel from 4 oranges using a vegetable peeler. Then use a kitchen shears to cut into thin (1/8 inch by ½ to 1 inch) strips. Set prepared peel in a 2-quart saucepan and set aside.
4. To obtain the fruit pulp and juice, follow the procedure on the photos found on page two of this handout. Cut off top and bottom of the orange; cut down sides to get the flesh of the orange. Cut between segments to get only pulp and juice discarding the membrane. It is a good idea to do this over a bowl to catch all the juice. Obtain pulp from all six of the oranges and ½ grapefruit.
5. Add the pulp and juice to the peel in saucepan. You may add 1/8 teaspoon of baking soda to remove bitter orange taste if desired. Bring the mixture to a boil; then simmer for 20 minutes.
6. While this is simmering, measure the sweetener you plan to use into a bowl; add the 4 ½ teaspoons pectin powder to sweetener and mix well. Set aside.
7. Remove exactly 6 cups of fruit/juice/peel mixture and place into a 6-8-quart saucepan. Set extra fruit/juice/peel mixture for another use.
8. Add 3 teaspoons calcium water and 3 tablespoons lemon or lime juice to the mixture.
9. Bring the fruit mixture to a full rolling boil (a boil that cannot be stirred down). Add the pectin/sweetener mixture stirring constantly for 1 to 2 minutes to dissolve while the mixture returns to a boil. Boil for 1 more minute. Remove from the heat.
10. Fill the canning jars to ¼ inch from the top; wipe the rims with a clean, damp paper towel or cloth. Add the lids and ring bands tightening to finger tightness.
11. Place jars on rack in a Boiling Water Canner or Atmospheric Steam Canner. If using a Boiling Water Canner, lower rack into canner so that jars are covered by with at least 1 inch of water over the top of the jars. Add more boiling water, if necessary.) Cover; bring water to gentle boil. If using an Atmospheric Steam Canner, place dome over the top of the jars. Bring the water to a boil and check to make sure steam register is reading correctly.
12. Process according to chart on page 2 (10 minutes at sea level to 1000 feet; 15 minutes for 1001-6000 ft elevation or 20 minutes above 6001 feet. After processing time is complete, turn off the heat. Remove canner lid. Let jars sit in canner for an additional 5 minutes. Remove jars and place upright on towel to cool completely. After jars cool for 12- 24 hours, check seals. If lids are not sealed, and refrigeration is necessary.) Wash jars especially under the rings, label, and store.