

		Activity water of finished product	Sugar Content	PH ≈	Purée (g)	Sucrose (g)	Inverted Sugar 1 (g)	Gelatin 180 bloom (g)	Cold Water (g)	Inverted Sugar 2 (g)	Liquid Citric Acid Solution 1/1 (g)
Apricot	Bergeron   France (Rhône Valley)	0,70	10%	3,40	1000	1500	500	125	500	625	10
Banana	Costa Rica	0,69	10%	4,40	1000	1500	500	100	400	625	15
Blackberry	Serbia	0,72	10%	3,45	1000	1500	500	100	400	625	10
Blackcurrant	Noir de Bourgogne   France (Burgundy)	0,70	10%	3,00	1000	1500	500	100	400	625	10
Blood Orange 100%	Italy (Sicily)	0,72	0%	3,50	1000	1500	500	100	400	625	10
Blueberry	Wild, Cultivated   Poland, Chile	0,65	10%	3,00	1000	1500	500	100	400	625	10
Cattley Guava	France (Reunion Island)	0,67	10%	3,90	1000	1500	500	100	400	625	10
Coconut	Indonesia	0,67	10%	6,20	1000	1500	500	100	400	625	20
Exotic Fruits	Mango, Banana, Passion Fruit, Lime	0,73	10%	3,40	1000	1500	500	100	400	625	10
Green Apple	Granny Smith   France (Haute Provence)	0,71	10%	3,00	1000	1500	500	100	400	625	10
Kalamansi 100%	Calamondin   Vietnam	0,71	0%	2,20	1000	4000	1330	330	1330	1660	0
Lemon 100%	Italy (Sicily)	0,70	0%	3,00	1000	4000	1330	330	1330	1660	0
Lychee	Madagascar	0,68	0%	4,50	1000	1500	500	100	400	625	15
Lychee Raspberry with Rose	Lychee, Raspberry, Rose	0,66	10%	3,40	1000	1500	500	100	400	625	10
Mandarin 100%	Italy (Sicily)	0,69	0%	3,00	1000	1500	500	100	400	625	10
Mango	Alphonso   India (Ratnagiri)	0,70	10%	4,00	1000	2425	790	150	605	1000	20
Morello cherry	Oblacinska   Serbia	0,70	10%	3,35	1000	1500	500	100	400	625	10
Passion Fruit	Flavicarpa   Ecuador	0,67	10%	3,00	1000	1500	500	100	400	625	0
Pear	Williams   France (Haute Provence)	0,69	10%	3,50	1000	1500	500	100	400	625	10
Pineapple	Costa Rica	0,70	10%	3,70	1000	1500	500	100	400	625	10
Pineapple Yuzu Cardamom	Pineapple, Yuzu, Cardamom	0,70	10%	3,70	1000	1500	500	100	400	625	10
Prickly Pear	Mexico	0,69	10%	4,20	1000	1500	500	100	400	625	15
Raspberry	Willamette, Mecker   Serbia	0,59	10%	2,90	1000	1500	500	100	400	625	10
Raspberry 100%	Willamette, Mecker   Serbia	0,58	0%	2,90	1000	1500	500	100	400	625	10
Red Fruits	Raspberry, Strawberry, Morello Cherry, Blackcurrant	0,71	10%	3,50	1000	1500	500	100	400	625	10
Red Rhubarb	Frambosa   Poland	0,73	10%	3,00	1000	1500	500	100	400	625	10
Strawberry	Camarosa, Mara des Bois   Morocco, France	0,65	10%	3,20	1000	1500	500	100	400	625	10
Strawberry 100%	Camarosa, Mara des Bois   Morocco, France	0,70	0%	3,20	1000	1500	500	100	400	625	10
Sudachi 100%	Japan (Kôchi)	0,67	0%	2,20	1000	4000	1330	330	1330	1660	0
Violet Fig	France (Provence)	0,70	10%	3,60	1000	1500	500	100	400	625	10
White Peach	France (Rhône Valley)	0,69	10%	3,50	1000	1500	500	100	400	625	10
Yuzu 100%	Japan (Kôchi)	0,69	0%	2,60	1000	4000	1330	330	1330	1660	0

## Method

1. Weigh the ingredients with a precision scale.
  2. Line the desired sheet pan with a lightly oiled acetate sheet or parchment paper on both sides.
  3. Bloom the gelatin in the cold water for 5 minutes.
  4. Place the inverted sugar #2 in a mixing bowl.
  5. Place the purée, sucrose, and inverted sugar #1 in a saucepan and cook to 230°F (110°C).
  6. Pour the hot purée/sugar mixture on the inverted sugar #2 while whipping on medium speed for 1 minute.
  7. Melt the bloomed gelatin in the microwave for 15-20 seconds on half power.
  8. Add the melted gelatin to the purée mixture. Whip on medium speed for 2 minutes, then on fast speed for 8 to 10 minutes until the mixture is at 95°F (35°C).
  9. Add the citric acid solution and mix well. Spread the batter evenly in the pan with an offset spatula.
  10. Cover it with a second oiled acetate sheet or parchment paper.
  11. Rest overnight in a cool place at 62°F (17°C).
  12. Sift together 150g of confectioners' sugar and 150g of cornstarch in a large bowl.
  13. Unmold the marshmallow on a cutting board and cut to the desired size using a guitar cutter or a slightly oiled large chef's knife.
  14. Roll the pieces in the confectioners' sugar/cornstarch mixture.
  15. Remove the excess powder using a sifter and rest them on a sheet tray for 24 hours at 62°F (17°C) to dry.
- Shelf life: Keep them packed airtight in desired cellophane bags for about two months.

## Gelatin conversion

The recipes have been formulated with 180 Bloom gelatin, and it was added 4 times the amount of water to it (1 part gelatin to 4 parts of water). Here is a formula to convert a recipe with a different gelatin.

Example: Making the strawberry marshmallow with 220 Bloom gelatin instead of 180 Bloom:

1. Refer to the recipe chart and add the gelatin with the water: 100g (gelatin 180 Bloom) + 400g (water) = 500g, called mass A.
2. Divide the gelatin Bloom in the recipe (180 Bloom) by the desired gelatin (220 Bloom); called the dividing coefficient:  $180 \div 220 = 0,818$ .
3. Multiply mass A (500g) by the dividing coefficient (0,818), to obtain mass B:  $500 \times 0,818 = 409g$ , round to 410g. Mass B is the gelatin and water that need to be added to the new recipe.
4. Divide mass B by 5 (1 part gelatin to 4 parts of water) to obtain the weight of gelatin needed for the recipe:  $410 \div 5 = 82g$  of gelatin 220 Bloom.
5. Multiply the 82g gelatin by 4 to determine the amount of water needed:  $82 \times 4 = 328g$  of water.
6. The recipe will need 82g of 220 Bloom gelatin and 328g of water.

## Use of no added sugar purées

Simply add the 10% weight of sugar to the purée missing in the recipe. Example, for a marshmallow made with 1000g of raspberry purée that contains 0% sugar, add 100g of sucrose to the recipe.