



# Marzipan, Pastillage, and Nougatine

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## AFTER READING THIS CHAPTER, YOU SHOULD BE ABLE TO:

1. Make and handle marzipan and mold decorative items from it.
2. Make pastillage and use it to create decorative items.
3. Make nougatine and shape it into simple decorative items.



**THIS CHAPTER AND** the next are an introduction to the pastry chef's art of making decorative items out of sugar and other materials. Although all the ingredients used for these pieces are edible, and many of these items are used to decorate cakes and other desserts, they are, in many cases, made as showpieces, such as centerpieces for dessert buffet tables, and are not intended to be eaten.

In hotels and other food service and retail operations, such showpieces can be useful, and even profitable. They serve to draw the customers' attention to the skill and artistry of the pastry chef and, thus, indirectly lead to higher sales of desserts. Perhaps even more important, from a pastry chef's point of view, they are an enjoyable outlet for creative skills.

Some of the items in these two chapters are comparatively easy to make, while others, such as pulled sugar, require a great deal of practice before you can expect to achieve good results. The text and the many photographs that illustrate the techniques provide an introduction but, for the most part, the only effective way to learn these skills is with the guidance of an instructor.

## MARZIPAN

*Marzipan* is a paste made of almonds and sugar that is worked to a plastic consistency. Its texture allows it to be rolled out with a rolling pin, like dough, or modeled into the shapes of fruits, animals, flowers, and other designs.

Pastry chefs and confectioners once had to grind almonds to make marzipan, but today the ready availability of almond paste makes the job much easier. As you can see in the accompanying formula, making marzipan involves moistening the almond paste and blending it with confectioners' sugar. Formulas may vary slightly—calling for more or less sugar, or using different moistening agents, such as fondant or egg whites—but the principle behind them is the same.

Here are important guidelines for working with marzipan:

- To preserve the color of the marzipan, be sure that all equipment, including bowls, mixer attachments, and work surfaces, is very clean. Use stainless steel rather than aluminum mixing bowls, because aluminum discolors marzipan.
- Marzipan dries quickly when exposed to air, and forms a crust on the surface. To avoid this when you are working with marzipan, keep unused portions in a bowl covered with a damp cloth. To store marzipan, keep it wrapped or covered in an airtight container. It keeps indefinitely when protected from air. If left uncovered, it eventually becomes hard as a rock.
- When marzipan is kneaded and worked, the oil content (from the almonds) comes to the surface and makes the marzipan sticky. To avoid this, dust the work surface lightly with confectioners' sugar. Keep a pan of confectioners' sugar handy for this purpose.

### Marzipan Sheets and Cutouts

Marzipan can be rolled out into sheets with a rolling pin in the same way that you roll out short dough. Confectioners' sugar, rather than flour, is used for dusting the workbench and rolling pin. Make sure the bench and the pin are completely clean.

Marzipan sheets are useful for covering cakes and petits fours, as explained in Chapter 17. They may be left smooth or textured with a ribbed roller or basketweave roller (see p. 456).

Colored patterns, such as stripes or polka dots, can be made on marzipan sheets as follows: Roll out a sheet of marzipan partway, so it is about twice as thick as desired. Roll out another small piece of marzipan in a contrasting color until it is  $\frac{1}{8}$  inch (3 mm) thick. Cut out small circles or strips and arrange them carefully on top of the thick sheet. Now continue to roll out this sheet to the desired thickness. Be careful to roll it evenly in all directions, to keep the design uniform.

Using round or fancy cutters, cut out small shapes from the marzipan sheets and use them to decorate cakes and desserts. For additional effect, spread the sheet of marzipan with tempered chocolate and texture it with an icing comb. Make cutouts before the chocolate hardens completely. Create another variation by texturing the marzipan with ribbed rollers and then spinning fine lines of chocolate over the sheet, using a paper cone with a very small opening. (Note that the Easter plaque on the chocolate egg pictured on p. 639 is made of a textured marzipan sheet.)

Marzipan petits fours can be made to look like fancy icebox cookies. Using two colors of marzipan instead of icebox cookie dough, make checkerboard or pinwheel slices using the procedures for Icebox Cookies (p. 494). (Do not bake the slices.)



## MARZIPAN

Ingredients	U.S.	Metric	PROCEDURE
Almond paste	1 lb	500 g	
Glucose or corn syrup	3 oz	90 g	
Confectioners' sugar, sifted	1 lb	500 g	
<b>Total weight:</b>	<b>2 lb</b>	<b>1090 g</b>	

1. In a clean stainless steel bowl, blend the almond paste and glucose, using the paddle attachment, until smooth.
2. Add the sifted sugar, a little at a time, just as fast as it is absorbed. Stop adding sugar when the desired consistency is reached. The marzipan should be stiff but workable and not too dry.
3. If colored marzipan is desired, add a small amount of food coloring and work it in.

### Modeling with Marzipan

Fruits, vegetables, animals, flowers, and many other shapes can be molded with marzipan. Small marzipan fruits, served as petits fours or candies, are perhaps the most popular items.

#### Fruits and Flowers

To make small fruits, first divide the paste into equal portions. For example, to make ¾-ounce (22-g) pieces, flatten 1½ pound (700 g) marzipan into a fairly thick rectangle of uniform thickness. With a knife, carefully cut the rectangle into 4 rows of 8 to make 32 equal pieces.

Begin by rolling each piece between the palms of your hands into a round ball that is perfectly smooth and free of seams and cracks. (Bananas are an exception. In this case, begin by rolling the pieces into smooth sausage shapes).



Marzipan rose, carnation, strawberry, and oranges.

Then start modeling the balls with your fingers into the shapes of pears, apples, and other fruits. The best way to make realistic-looking fruits is to use real fruits as models. Imitate the shapes of the real fruits as closely as possible.

You can add special effects using ordinary tools or special modeling tools. For example, to make the crease on the sides of peaches, apricots, plums, and cherries, use the back of a knife. Texture the surfaces of strawberries by poking them lightly with a toothpick. Imitate the rough surface of lemons and oranges by rolling them lightly over a cheese grater.

Let the fruits dry overnight before coloring. Coloring can be done in two ways:

- Start with tinted marzipan—green for apples and pears, yellow for bananas, peaches, and lemons, and so on. Apply food coloring with a brush to add highlights and markings, such as the brown streaks and dots on bananas, the red blush on apples and peaches, and so on.
- Start with untinted marzipan. Tint the finished fruits with background colors, using either a brush or a sprayer. Let the color dry, then add the highlights.

Flowers such as carnations and roses are useful items to make because they can be used to decorate cakes as well as display pieces.



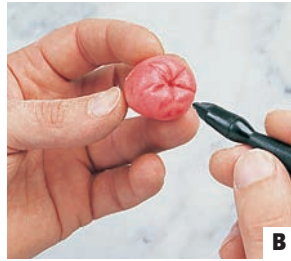
Marzipan tools. Top: basketweave roller. Middle row: metal rolling pin, small cutters with release plungers, strawberry leaf cutter, nippers, modeling tools, smoother for covering cakes with sheets of marzipan. Bottom: color sprayer.

## PROCEDURE: Making a Marzipan Strawberry

1. Roll the ball of marzipan into a strawberry shape with the palms of your hands (a).
2. Indent the stem end of the strawberry with an appropriate modeling tool (b).
3. Roll the strawberry in sugar to simulate the textured surface of the real berry (c).
4. Cut out a leaf shape for the stem end and fasten it in place using an appropriate modeling tool (d).



A



B



C



D

## PROCEDURE: Making a Marzipan Orange

1. Roll a piece of marzipan into a round ball (a).
2. Using a marzipan modeling tool, make an indentation in the ball to resemble the stem end of the orange (b).



A



B

## PROCEDURE: Making a Marzipan Carnation

1. Flatten a strip of marzipan on the workbench until the edges are paper thin. Feather the edge with the point of a knife (a).
2. Release the strip of marzipan by sliding a knife under it. Gather it together into a carnation shape (b).



A



B

## PROCEDURE: Making a Marzipan Rose

1. Taper a ball of marzipan to serve as the base of the rose.



2. Mold the ball with the tapered end pointing up, to serve as the center of the flower.



3. For the petals, roll a log of marzipan and cut pieces of equal size. Flatten these pieces into small disks.



4. With the back of a spoon, flatten the disks, using a circular motion to taper the edges to paper thinness.



5. Wrap the petal around the base, leaving one edge free so the second petal can be inserted under it.



6. Attach the second petal.



7. Continue adding petals in the same fashion until the rose is the desired size. With a sharp knife, cut the rose from the base.







### KEY POINTS TO REVIEW

- What is marzipan and how is it made?
- When working with marzipan, what guidelines should be observed to preserve its color and to keep it moist?
- What techniques are used to make simple marzipan fruits and flowers?

### Other Items

The variety of objects that can be modeled from marzipan is limited only by the imagination and talent of the pastry cook. Vegetables such as carrots, asparagus, potatoes, and peas in the pod can be made in the same way as fruits. Marzipan snowmen and holly leaves are often used to decorate the *Bûche de Noël* (p. 477). Animals such as dogs, pigs, and frogs are also popular subjects. Features such as eyes, noses, and tongues can be applied with royal icing, chocolate, or fondant.

Frames for chocolate paintings on pastillage (p. 661) are generally made of marzipan. Roll marzipan into long, round strips of perfectly uniform thickness and fasten them around the pastillage plaque. With assorted marzipan nippers and modeling tools, texture the marzipan to look like a carved frame. Highlight the raised details by very carefully browning them with a blowtorch.

## PASTILLAGE

*Pastillage* (pronounced PAHS tee yahzh) is a sugar paste used for modeling decorative items. Unlike marzipan and other modeling pastes, it is rarely, if ever, intended to be eaten. Although it is made entirely of edible items, pastillage is as hard and brittle as plaster of Paris when it dries, and nearly as tasteless. It is used primarily for making display pieces, such as centerpieces for dessert buffet tables, or small baskets or boxes to hold petits fours and candies. Pastillage is normally left pure white, although it may be colored in pastel shades.

The formula given here is a simple and popular one using readily available ingredients: confectioners' sugar, cornstarch (as a drying agent), water, cream of tartar (to help preserve whiteness), and gelatin (as a stiffening and stabilizing agent). Pastillage is sometimes called *gum paste*, although that term is more correctly used when a vegetable gum (usually gum tragacanth) is used instead of gelatin (see the Gum Paste sidebar).



Pastillage tools: Ribbed roller, molds, and cutters.

### Making and Handling Pastillage

Many of the same precautions must be taken in the production of pastillage as in the production of marzipan. Great care is essential to preserve the pure white color. Make sure all equipment is scrupulously clean, and use a stainless-steel bowl, not aluminum, for mixing (aluminum imparts a grayish color to the paste). Likewise, the work surface, rolling pin, and molds must be clean and dry.

Pastillage dries and crusts over even faster than marzipan, so it must be kept covered at all times. While working with pastillage, keep unused portions in a bowl covered with a damp cloth. Work quickly and without pause until your products are formed and ready for drying.

Most pastillage pieces are made of thin sheets of the paste cut to shape with the aid of paper patterns. The pieces are left flat, or curved around molds, and allowed to dry, then assembled by gluing them together with royal icing. A marble slab is ideal for rolling out pastillage because it gives the paste a smooth surface. Use cornstarch to dust the work surface. Be careful not to use more starch than is necessary to keep the paste from sticking. Excessive starch dries the surface of the paste quickly and causes it to crust over and crack.

For the most attractive, delicate pieces, the pastillage sheets should be rolled thin (about  $\frac{1}{8}$  in./3 mm thick). Thick sheets make heavy, clumsy-looking pieces. Have paper patterns handy, so that as soon as the pastillage is rolled out you can place the patterns on it. Then cut cleanly and accurately with a sharp knife or cutter.

For pieces that are to be molded, have the molds clean, dry, and dusted with cornstarch. For example, to make a pastillage bowl, you can use the outside of another bowl, placed upside down on the workbench, as your mold. Carefully fit the sheet of paste to the mold, gently fitting it to the shape of the mold with your hands.

When the pastillage is partially dry and firm, turn it over to allow the bottom to dry. Continue turning it over from time to time to dry it evenly. Pastillage that does not dry evenly tends to curl or distort out of shape. Drying time depends on the size and thickness of the pieces and may take from 12 hours to several days.

Dried pastillage may be lightly sanded with extra-fine sandpaper until it is very smooth. This also helps smooth the cut edges, which may be rough or sharp. Finally, assemble the pieces using royal icing as glue. Use as little icing as necessary; any excess is likely to squeeze out at the seams, which spoils the appearance of the piece.

The Techniques for Creating a Showpiece from Pastillage procedure below illustrates most of the steps discussed here. In the accompanying photos, the pastry chef is making and assembling the display piece pictured below. The flowers are tinted with food colors using the sprayer depicted on this page.

Another advantage of the pure-white, smooth surface of pastillage is that it makes an ideal canvas for chocolate painting. To use it in this way, begin by making a round, oval, or rectangular plaque of pastillage; let it dry and then sand it smooth. Using an artist's brush, draw a picture on it using melted unsweetened chocolate. Create light and dark shades by diluting the chocolate with varying proportions of melted cocoa butter. For fine detail, etch lines in the chocolate with a sharp wooden pick. After the chocolate has set, the painting can be finished off with a marzipan frame (p. 660).

## GUM PASTE

Although the terms *gum paste* and *pastillage* are sometimes used interchangeably, they are slightly different products in spite of their similar appearance. Gum paste is made with a vegetable gum called *gum tragacanth* (see p. 84). Because this gum is somewhat expensive, gum paste is less practical than pastillage for large pieces or high-volume work. Also, gum paste dries more slowly than pastillage, making it inconvenient when time is an important factor in finishing a display piece.

The slow-drying property of gum paste is sometimes an important advantage as well. Because it doesn't dry or crust as quickly as pastillage, it is a good choice when you are doing a detailed, intricate piece that takes a long time to shape. And because it is more pliable, it can be rolled thinner and used to make more delicate items.

For those interested in comparing gum paste and pastillage, a formula is included on page 740.

## PASTILLAGE

Ingredients	U.S.	Metric	Sugar at 100% %
Gelatin	0.5 oz	12 g	1.25
Water, cold	5.5 oz	140 g	14
Confectioners' sugar (10X)	2 lb 8 oz	1000 g	100
Cornstarch	5 oz	125 g	12.5
Cream of tartar	0.04 oz (½ tsp)	1 g	0.1
<b>Total weight:</b>	<b>3 lb 3 oz</b>	<b>1278 g</b>	<b>127 %</b>

### PROCEDURE

1. Stir the gelatin into the water. Let stand 5 minutes, then heat until the gelatin is dissolved.
2. Sift together the sugar, starch, and cream of tartar.
3. Place the gelatin mixture in a stainless steel mixer bowl. Fit the mixing machine with the dough hook.
4. With the machine running at low speed, add most of the sugar mixture just as fast as it is absorbed, keeping back a little of the sugar in case the texture must be adjusted. Mix to a smooth, pliable paste. It should have the consistency of a firm dough. If it is too moist, add some or all of the remaining sugar.
5. Keep the paste covered at all times.



Techniques for creating this pastillage showpiece are illustrated on pages 662–663.



## TECHNIQUES: Creating a Showpiece from Pastillage

The techniques shown here are used to create the showpiece pictured on page 661.

1. Roll out the pastillage on a work surface, preferably marble, dusted lightly with cornstarch.



2. Check the thickness.



3. Lift the rolled-out pastillage from the workbench by first draping it over a rolling pin. Always dust off excess cornstarch.



4. Create a textured surface with a ribbed roller.



5. Cut out desired shapes. Working on a tray allows you to remove the pieces from the workbench for drying without disturbing them. Be sure to dust the tray with cornstarch.



6. You can cut some shapes freehand with a knife.



7. Use small cutters to cut additional pieces.



8. Use a ring mold to measure the width of a strip to form the sides of the box.



9. Cut a strip of pastillage and fit it inside the ring mold. Trim the ends so the joint fits smoothly.



10. Trim excess from the top.



11. For leaves and petals, cut appropriate shapes.



12. Press the cutout shapes in a leaf mold.



- 13.** Fit the petals into a mold lined with a little square of parchment, to prevent sticking.



- 14.** To make the center of the flower, press a ball of pastillage into a sieve.



- 15.** Set the center of the flower in place.



- 16.** To use this type of cutter/molder, stamp out a piece of pastillage, press it in to mold it, and then push it out with the spring-loaded plunger.



- 17.** For the feet of the box, press balls of pastillage into a chocolate mold. Pass a scraper over the top of the mold to remove excess and flatten the tops.



- 18.** Once the pastillage has dried, sand it with fine sandpaper to achieve a smooth surface.



- 19.** Fasten pieces together with royal icing.



- 20.** Fasten the dried top of the box, which has been textured with a ribbed roller, in place.



- 21.** Fasten the side pieces in place.



- 22.** Make the decorative lacework by coloring royal icing and piping it using a paper cone.



# NOUGATINE

*Nougatine* is a candy made of caramelized sugar and almonds. (Almonds are traditional, but other sliced nuts are sometimes used as well.) It looks somewhat like peanut brittle but is more attractive because of the sliced almonds. The caramelized sugar should be a clear amber color, not cloudy. The sugar is soft and pliable when it is hot, so it can be cut and molded into shapes to make decorative pieces.

## Production and Shaping

As can be seen in the following formula, cooking nougatine involves two fairly simple steps: caramelizing the sugar and adding the almonds. The glucose inverts some of the sugar (see p. 66), thus preventing unwanted crystallization. Cream of tartar or lemon juice is sometimes used instead of glucose.

Nougatine can be cut into many shapes, and is often cut freehand. If your display piece requires precise shapes, however, it is best to cut patterns out of sheets of parchment. Have all your patterns ready before starting to make the nougatine. Then lay the patterns on top of the sheet of nougatine to guide your work.

When the nougatine is ready, pour it onto a silicone mat or an oiled tray or marble slab. It will cool quickly, so you must work fast. When the sheet has begun to set, flip it over with a spatula to cool it evenly. Have your paper pattern ready. Flatten the sheet with an oiled rolling pin to even the thickness. Place the patterns on the sheet and quickly cut out shapes with a heavy oiled knife. The oiled surface should prevent the patterns from sticking, but don't press them down or leave them on the nougatine too long.

Prepare the molds ahead of time by oiling them lightly. For example, to make a nougatine bowl, you can use the bottom of a stainless steel bowl placed upside down on the bench and rubbed with oil. Lay the soft, cut nougatine over the bowl and carefully press it into shape.

If the nougatine cools and hardens before you can shape it, place it on an oiled baking sheet and place it in a hot oven for a moment to soften it. You can even join two sheets together by laying them next to each other and heating them. Just keep in mind that every time you re-heat nougatine it darkens a little more. Too many shades of nougatine in a display piece detract from its appearance.

When the molded nougatine pieces have cooled and hardened, cement them together as necessary, using either royal icing or a hot sugar syrup boiled to 310°F (190°C). Nougatine pieces can also be decorated with royal icing.

## Other Uses of Nougatine

Unlike some decorative materials, such as pastillage, nougatine is a tasty confection. Thin nougatine sheets can be cut into fancy shapes and used to decorate cakes and other desserts.

Hard nougatine can be crushed and used like chopped nuts for masking the sides of cakes. Finely ground and sifted, or ground to a paste, it makes an excellent flavoring for creams and icings. This product is similar to praline paste, except that praline generally contains hazelnuts.



### KEY POINTS TO REVIEW

- What is pastillage and how is it made?
- What guidelines should be followed when making and handling pastillage?
- What is nougatine and how is it made and handled?



## TECHNIQUES: Working with Nougatine

1. Pour out the hot nougatine mixture onto a silicone mat.



2. With a spatula or your hands (wear rubber gloves), fold the mass over on itself as it cools, to cool it evenly.



3. While it is still hot and soft, roll out the nougatine with a rolling pin to the desired thickness.



4. The nougatine shown here is to be used as the base of a centerpiece. It is molded to shape in a lightly oiled cake tin.



5. Trim off excess with a chef's knife.



6. Cut thinly rolled nougatine into shapes for decorating cakes (such as the top layer of Brasilia, p. 469) and pastries.



7. Bend the cutout to the desired shape while still hot, or rewarm until pliable.





## NOUGATINE

**Yield:** about 2 lb 8 oz (1220 g)

Ingredients	U.S.	Metric	Sugar at 100%	<b>PROCEDURE</b>
			%	
Sliced almonds	12 oz	375 g	50	<ol style="list-style-type: none"> <li>Place the almonds on a heated baking sheet in a 320°F (160°C) oven, mixing occasionally until light golden in color.</li> <li>Cook the water, sugar, and glucose to a blond caramel.</li> <li>Add the almonds to the caramel all at once and mix in carefully. Do not overmix, or the almonds will break into small pieces.</li> <li>Pour the mixture onto an oiled baking sheet or silicone mat.</li> <li>Spread the nougatine in small quantities and use a metal rolling pin to make an even layer.</li> <li>Work the nougatine near the opening of the oven, as this will keep it pliable much longer. The nougatine should not stick to the rolling pin or table. If it does, allow the nougatine to cool a little before continuing, returning it to the oven to achieve the correct consistency.</li> <li>Trimings may be used again after gentle reheating, but be careful not to use nougatine once it has become dark in color and the almonds are broken to a fine powder.</li> </ol>
Sugar	1 lb 8 oz	750 g	100	
Glucose	9.5 oz	300 g	40	
Water	6.5 oz	200 g	27	

## TERMS FOR REVIEW

marzipan

gum paste

pastillage

nougatine



## QUESTIONS FOR DISCUSSION

1. What precaution must be taken when mixing marzipan in order to preserve its color?
2. Suppose you wanted to cover a strawberry-filled Swiss roll with white marzipan decorated with pink polka dots. How would you make the marzipan sheet?
3. Describe the procedure for making a marzipan carnation.
4. What procedure is used to make sure pastillage dries properly?
5. How are dried pieces of pastillage fastened together?
6. Describe the procedure for making, cutting, and molding nougatine.
7. What are some uses for leftover nougatine trimmings?