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NON-DAIRY

chapter five Non-Dairy Frozen Desserts Machine Churned or Pacotized/ Scraped and Shaved

THE PREVIOUS CHAPTER EXPLAINS THE USDA'S DEFINITIONS FOR DAIRY-BASED TYPES OF FROZEN DESSERTS. Unfortunately, there are no USDA definitions for non-dairy-based frozen desserts and they are not government regulated. These are categorized in this chapter and include sorbets, frappés, granités (or granitas), and ices.

There are a variety of definitions from various sources for these products, which could leave you more confused than informed. For example, according to one well-known dictionary, a sorbet is similar to a frappé, is usually made from fruit juice, and should have a mushy consistency. "Mushy consistency" doesn't do much justice to the consistency of sorbets, and a frappé is in a completely different category of frozen desserts.

ANOTHER FOOD ENTHUSIAST DICTIONARY CLAIMS THAT *sorbet* IS FRENCH FOR “SHERBET” BUT IS DISTINGUISHED BY THE FACT THAT IT NEVER CONTAINS MILK AND HAS A SOFTER CONSISTENCY THAN SHERBET. THE SAME DICTIONARY NOTES THAT SORBETS ARE OFTEN SERVED AS A PALATE REFRESHER BETWEEN COURSES OR AS DESSERT, AND THAT THEY ARE SOMETIMES CALLED ICES OR GRANITÉS. THIS DEFINITION MAKES NO CLEAR DISTINCTION BETWEEN A SORBET, A SHERBET (WHICH, AS MENTIONED IN THE PREVIOUS CHAPTER, *must* CONTAIN DAIRY IN ORDER TO RECEIVE THAT DESIGNATION), AN ICE, AND A GRANITÉ. NEITHER OF THE PREVIOUS DEFINITIONS GIVES A SOLID, CORRECT DEFINITION OF WHAT A SORBET IS, OFTEN PUTTING IT INTO DIFFERENT CATEGORIES ALL TOGETHER.

Speaking of *granité*, the same dictionary defines *granité* as a frozen mixture of water, sugar, and liquid flavoring with four parts liquid to one part sugar, and notes that *granités* are stirred frequently during freezing to produce a slightly granular texture. In this definition there is a very imprecise ratio of sugar-to-liquid, which does not apply to every type of *granité*. The ingredients used for a *granité* can be as simple as a liquid with a certain amount of sugar or as complex as the Almond Milk *Granité* on page 399.

Another definition for *granité* points out that it is an Italian sorbet popularized by Tortoni in Paris in the nineteenth century, and defines it as half-frozen, with a granular texture made of a lightly sweetened or flavored syrup. According to this source, *granité* differs from sorbet because it does not contain Italian meringue. Does half-frozen also mean it's half-melted? If so, how and

where would this product be kept? Can't *granités* be made from anything else?

All of these definitions have some truth to them, but it is necessary to set the record straight to prevent any further misunderstanding. The following are the most accurate definitions for small-batch production. They are divided into two categories based on their production methods. The first category requires a batch freezer or Pacojet to be processed and includes sorbets and *frappés*. Their texture is smooth and delicate because when they are churned or *pacotized* they form minuscule ice crystals that trap similarly minuscule air bubbles. The second category, *granités*, ices and ice pops, need only a freezer. Ice, whether in small but still visible crystal form or as a single solid piece, is the desired end result. Their main differences are in the way they are frozen, the size of the ice crystal, and their mouth feel.

Varieties and Definitions

MACHINE-CHURNED OR PACOTIZED NON-DAIRY FROZEN DESSERTS

Sorbet

A sorbet is an aerated non-dairy frozen product that is churned in a batch freezer or *pacotized* in a Pacojet. Sorbets are made mainly of a fruit or vegetable juice, a fruit or vegetable *purée*, an infused or flavored liquid, a wine, or a liqueur. They contain a percentage of sugar (typically 25 to 32 percent for dessert preparations; this sugar is the total sugar that may be found in any of the ingredients, such as a fruit *purée* plus the added sweetener) whose amount is dependent on the desired sweetness

and the sweetness of the main component. In other words, a sorbet is not necessarily a dessert. The type of sugar (or sugars) used will depend on the desired result and flavor (see sugars, page 15). An acid (generally in the form of lemon juice) is sometimes added to intensify flavor and control sweetness.

The addition of stabilizers is a common practice employed to protect the quality of the sorbet during service, but they are not an indispensable ingredient. However, without the use of stabilizers, the sorbet might suffer from heat shock during service, and from freezer burn as well (see stabilizers, page 18). If stabilizers are not being used, the sorbet base should ideally be *pacotized*. Remem-

ber that a Pacojet can be used during service to process frozen items as you go and give you a consistently smooth product, while a batch freezer is a one-shot deal that might have a negative effect on the sorbet when it sits in a freezer for an entire day with the temperature fluctuating due to use. If stabilizers are going to be added, a batch freezer should be used (see batch freezer, page 37). Emulsifiers are never added to sorbet bases, since sorbets contain little to no fats that need to be emulsified.

On average, a dessert sorbet will read between 25° and 32° Brix in the refractometer (remember that the percentage of sugar is the same amount in Brix degrees). A savory sorbet should read 15° to 25° Brix. The use of a Pacojet is highly recommended for savory sorbets. Sugar helps the formation of minuscule ice crystals that trap minuscule air bubbles, which contribute to the finished product's smooth texture. The Pacojet will produce minuscule air bubbles through "drilling" no matter what the sugar content is of the sorbet. However, be advised that a savory sorbet will have a shorter shelf life in the freezer because, even if you pacotized it, the lack of sugar will cause those air bubbles to collapse. The sorbet will slowly deflate and the product will eventually harden completely and become icy within an hour. Pacotize as you go.

There are some general guidelines to use when formulating sorbet. A sorbet should contain a bare minimum of 30 percent "sweet" fruit purées (from fruits such as strawberry, mango, raspberry, or other fruits that can be puréed) or 15

percent acidic fruit such as citrus fruits or passion fruit. Sweeter fruits tend to contain more pulp (or thicker body) than acidic fruits, which tend to have a higher liquid to solid ratio. These percentages are the absolute minimum needed to produce a good (not excellent) sorbet, and they are based on the finished product's weight, overrun included, (meaning that even if you have a larger amount of volume due to overrun, the weight will be the same before it is churned or pacotized). The ideal percentage of "sweet" fruits is 40 to 60 percent, and is 25 to 40 of acidic fruits. The formulation for overrun that appears on page 64 in Chapter 4 applies to sorbets as well. The parameters for testing overrun in ice creams, gelatos, and sherbets is the same for sorbets.

A variation on sorbet is the *spuma*, or "spoom," which is of Italian origin. It is a sorbet that has a measured quantity (generally about 5 percent) of Italian meringue added to it. An Italian meringue is a cooked meringue, meaning that sugar syrup is cooked to 120°C / 248°F and then poured into whipping egg whites as they reach the stiff peak stage. The heat from the sugar pasteurizes the egg whites and coagulates the albumen protein, which envelopes the incorporated air, thus making it a stable and permanent foam. This foam, when added to a sorbet when it is about to be extracted from a batch freezer, will produce a very smooth sorbet. However, as smooth as the meringue makes the *spuma*, it tastes somewhat eggy and "un-sorbet-like." If you must add egg whites to a sorbet, always make sure that they are pasteurized.

Recommended Minimum and Maximum Percentages of Sorbet Composition

INGREDIENT	MINIMUM	MAXIMUM
Fruit purée (sweet fruit)	40% total weight	60% total weight
Fruit purée or juice (acidic fruit)	25% total weight	40% total weight
Dry extracts (fruit solids plus sugar and powdered glucose)	31%	36%
Stabilizer (if used)	0%	1% total weight
Percentage of sugar (or Brix)	25% (or 25° Brix)	32% (or 32° Brix)

Vanilla and Strawberry Jam Ice Cream with Macerated Strawberry Gelée

YIELD 10 PORTIONS

COMPONENTS

10 cubes MACERATED STRAWBERRY GELÉE

10 ALMOND LACE TUILES

100 g / 3.53 oz STRAWBERRY SAUCE

300 g / 10.58 oz VANILLA AND STRAWBERRY JAM ICE CREAM (page 372)

ASSEMBLY

1. Place a cube of strawberry gelée on the plate. Torch it for 1 to 2 seconds to give the cube a cleaner, shinier look.
2. Place an almond tuile on top of the cube.
3. Pour 10 g / .35 oz of the strawberry sauce around one half of the gelée cube.
4. Scoop a medium quenelle (30 g / 1.06 oz) of the ice cream on top of the almond tuile and serve immediately.

Macerated Strawberry Gelée

YIELD ABOUT 3 KG / 6 LB 9.82 OZ

MACERATED STRAWBERRIES

500 g / 1 lb 1.64 oz fresh strawberries, trimmed

100 g / 3.53 oz sugar

38 g / 1.34 oz balsamic vinegar

VANILLA GELÉE

8 vanilla pods, split and scraped

2 kg / 4 lb 6.55 oz water

500 g / 1 lb 1.64 oz sugar

24 gelatin sheets

1. **FOR THE MACERATED STRAWBERRIES:** Trim the stems off the strawberries. Toss in the sugar to coat. Add the balsamic vinegar. Let macerate until the sugar has dissolved and formed a syrup, about 2 hours.
2. Remove the strawberries from of the liquid and pat dry. Reserve under refrigeration until needed.
3. **FOR THE VANILLA GELÉE:** Combine the vanilla pods and the water. Let the vanilla pods cold-infuse overnight.
4. Bloom the gelatin. Bring 500 g / 1 lb 1.64 oz of the infused water to a boil with the sugar to dissolve the sugar. Melt the gelatin by adding it to the hot vanilla water. Stir until dissolved. Pass through a fine-mesh strainer. Add this mixture to the remaining vanilla water.
5. Fill a half sheet pan lined with plastic wrap halfway with the gelée. The pan should be completely covered with plastic, even the frame. Try to do this on a reach-in refrigerator shelf so that the pan doesn't have to move too much. Let the gelée set in the refrigerator.



6. Pat the macerated strawberries dry with paper towels. Place them on the set gelée. Keep the strawberries 5 cm / 2 in apart from each other. Pour the remaining gelée over the strawberries until it covers the strawberries. If the gelée has set up while setting the strawberries in the pan, warm the mixture slightly to melt the gelatin. Try to do this on a reach-in refrigerator shelf so that the pan doesn't have to move too much. Let the gelée set in the refrigerator.
7. Using a 3.75-cm / 1.5-in square cutter, cut out cubes that surround where the strawberries are set in the gelée. Dip the cutter in hot water and pat it dry before cutting each time.
8. Place each cube on a sheet pan lined with an acetate sheet. Cover with plastic wrap and reserve refrigerated.

- Using a paring knife, cut the acetate sheets around the gelée cubes. This will make them easy to handle during service, since it is easier to pick up a sheet of acetate than a slippery cube of gelée. Use an offset spatula to pick up the acetate.

NOTE The entire 500 g / 1 lb 1.64 oz of macerated strawberry as listed above may not be needed; use extras to make the sauce.

Almond Lace Tiles

YIELD 250 G / 8.81 OZ

106 g / 3.74 oz sugar

23 g / .81 oz all-purpose flour

50 g / 1.76 oz almond flour

50 g / 1.76 oz water

23 g / .81 oz butter, melted but cool

- Combine all of the dry ingredients in the bowl of an electric mixer using the paddle attachment.
- Slowly pour in the water, then the butter, while the mixer is on.
- Refrigerate the batter, because once it firms up it is easier to spread.
- Preheat a convection oven to 160°C / 325°F.
- Spread a paper-thin layer of batter on a nonstick rubber mat.
- Bake until the tuile is golden brown, about 6 minutes.
- Remove it from the oven and slide the nonstick rubber mat onto a marble surface or stainless steel table. Wait a few seconds for it cool down. Use a 3.75-cm / 1.5-in square cutter to cut squares out.
- If the tuile becomes too hard and it cracks when it is being cut, return it to the oven to soften. This procedure may need to be repeated a few times before the amount of tuiles that is needed is obtained.
- Reserve in an airtight container at room temperature. Refresh daily in a hot oven for 2 minutes; discard after 3 days.

Strawberry Sauce

YIELD 200 G / 7.05 OZ

200 g / 7.05 oz macerated strawberries

- Cook the strawberries down over medium-low heat until they thicken to a sauce consistency, about 20 minutes. Skim the sauce as it cooks.
- Purée the strawberries and pass through a fine-mesh strainer.
- Reserve refrigerated. Discard leftover sauce after 2 days.