

CULINARY GUIDE FOR:

**ice Chef**



**100%Lab** **100%Chef**

[www.100x100chef.com](http://www.100x100chef.com)

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# Frozen textures

Ice Chef is a pioneering device engineered to freeze virtually any liquid into aromatic ice forms with unique textures.

Its mission is to elevate culinary creativity by instantly producing ice with novel textural profiles. Inspired by methods like Japanese *Kakigori*, it instantly freezes liquids of diverse compositions—including water, fats, or alcohols—and shaves the ice into thin sheets, flakes, curls or fans.

This opens a whole new realm of possibilities across mixology, desserts, and avant-garde cuisine.

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This file includes links (internal to the file, and external URLs). These are *highlighted in different colours* to distinguish them for easier reading and interaction with the guide. The product codes mentioned at the end of the file are also linked to make them easier to find.

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# 1. INTRODUCTION

## 1.1. From ancient snow to precision gastronomy

The tradition of shaved ice and granita stretches back millennia.

From ancient Rome, China, and Persia, where natural snow was used to chill drinks, to the Italian *granita* and French *granité* of Europe, these preparations have long enriched culinary culture.

Today, in the era of precision gastronomy, these ancient techniques are being rediscovered and refined as expressive culinary tools. Meanwhile, in countries such as Korea, Japan, and much of Latin America, aromatic snow remains a beloved everyday staple, especially in street food, where it forms the foundation of traditional desserts and popular beverages.

## 1.2. The magic of instant snow: from water to aroma

Ice Chef's brilliance lies in transforming the elemental into the extraordinary: creating snow instantly. Starting from the purest element, water, the machine produces an **exceptionally fine, light snow base within seconds**.

This pristine snow is not only an **excellent base** but also a **perfect canvas**. Its ethereal texture absorbs syrups superbly, ideal for classic snow cones, but it is also perfect for pressing and shaping, enabling compact snowballs or bespoke forms. Adding syrups or flavourings directly onto freshly made snow, or while shaping it, infuses flavour deeply, guaranteeing a **delicious sensory experience**.

Beyond that, snow created by Ice Chef allows for serving drinks buried in snow, shooters, or even test tubes, providing a visually captivating and **practical presentation, faster, cleaner, and easier** than bulky frozen plates or traditional crushed ice piles.

**Innovation** goes further: by using aromatic waters—herbal infusions, teas, fruit waters, or floral essences—the flavour becomes the very soul of the ice rather than a mere addition. The result is a **granita of purity and intensity unmatched by traditional methods**, offering a refreshing, clean, and direct taste with every spoonful.

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## 2. CATALOGUE OF TEXTURES



### Snow / Powder

Very fine, airy crystals.  
Ideal for cocktails or refreshing snacks.

### Flakes

Medium, light crystals.  
Suitable for *kakigori*s, *bingsus*,  
and dessert decoration.



## Shavings / Threads

Thicker, denser shavings.  
For fillings, cold dish bases  
and contrasts.



## Sheets / Fans

Long, wide ice sheets.  
It can be used in signature dishes,  
layered desserts or tasting menus.

## Chips

Irregular, crunchy fragments.  
Perfect for the creation of textured  
drinks, or surprising touches.



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## 3. OPERATING PRINCIPLE

At the heart of **Ice Chef** lies its metal roller, actively cooled to  $-40^{\circ}\text{C}$  by a high-performance refrigeration motor. Liquid is dispensed onto the spinning roller, freezing instantly upon contact. An adjustable blade shaves the newly formed ice, granting precise control over the final texture.

### 3.1. Key operational variables

The final result depends on the synergy of three main factors:

#### Liquid composition

Water, fat, sugar, and alcohol content determine freezing behaviour and achievable textures.

#### Roller speed

Adjustable across 10 levels. Higher speeds increase output and modify liquid contact time with the cold surface, directly influencing texture.

#### Blade height and angle

Controls shaving fineness. Precise adjustment enables textures from fine powder to sheets.



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## 4. FORMULATION: THE PERFECT LIQUID

Mastering Ice Chef requires understanding how ingredients affect freezing point and ice structure.

### 4.1. Use of stabilizers

Ingredients such as gums, starches, or proteins modify freezing points and enhance texture stability. Proper use prevents coarse crystallisation, improves shaving uniformity, and yields creamier or airier results.

With Ice Chef, these compounds react immediately to the extreme cold of the roller, amplifying their functional effect and enabling greater creative control over ice texture.

For optimal performance, mixtures containing stabilizers should rest refrigerated for 12 to 24 hours before use. This maturation allows:

- Complete hydration of stabilizers for uniform viscosity and smooth freezing.
- Emulsion stabilisation in fat, or dairy, based mixtures, producing softer, creamier textures.
- More uniform freezing with fewer large crystals, enhancing shave quality.
- Deep flavour integration, especially in infused or spiced bases.

Resting is not always required, simple liquids like syrups or flavoured waters without fat or protein, or when using rapid-hydration stabilizers (e.g. instant gums, modified starches), can be used immediately without loss of quality.



## 4.2. Antifreeze properties: sugar, alcohol, and fats

### SUGAR

Lowers freezing point, adds elasticity and softness.

Ideal for fine flakes or flexible sheets. Excess undiluted sugar causes fragile textures.

### ALCOHOL

Strong antifreeze effect. Enables semi-solid textures or ice layers that melt quickly on the palate, resulting in ethereal, unstable sheets.

### GLICERINA

Adds elasticity and stability, reduces crystallisation, and is flavour-neutral. Especially useful in delicate aqueous bases. Recommended dose: 1–5%.

### FATS

When combined with liquids for freezing, fats inhibit large ice crystals, yielding creamier or sometimes fragmented textures.

Pure fats may be brittle, but emulsions (e.g., vinaigrettes with xanthan gum) function excellently.

Solid fats at room temperature, once melted, allow creation of forms and structures otherwise impossible.

## 4.3. The role of gelatin in snow formation

Gelatin (fast-acting) acts as a stabilizer, providing elasticity, improving ice cohesion, and extending stability. Controlled doses produce finer flakes, stable threads, or cleaner shards.



## 4.4. Liquid characteristics

When preparing liquids for freezing, composition is key to achieving the desired result. Here's what to aim for and avoid:

### ✓ OPTIMAL CHARACTERISTICS

- **Essential aqueous phase:**  
Water is always necessary as a freezing base. Infusions, kombuchas, teas, and coffee are excellent aqueous bases for aromatic snow.
- **Emulsions:**  
Liquids like vinaigrettes or "leche de tigre" are ideal, as their emulsion structure supports stable frozen textures.
- **Moderate viscosity:**  
Juices, broths, milks, and syrups freeze uniformly and process well.

### ✗ PROBLEMATIC CHARACTERISTICS

- **High density or viscosity:**  
Avoid overly dense pastes, purées, or sauces that scrape poorly and risk clogging.
- **Undiluted high sugars:**  
Excessive sugar concentration without dilution results in fragile, unstable frozen textures.
- **Pure fats without water:**  
Pure fats lacking aqueous phases solidify quickly, forming brittle sheets or undesirable textures.

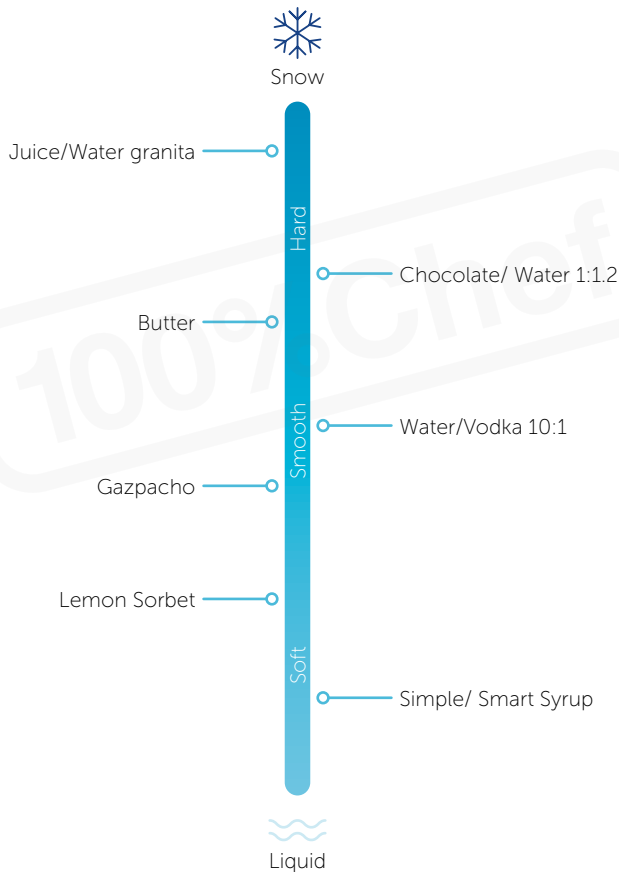


## 5. FROM LIQUID TO ICE: FREEZING EXAMPLES

This table illustrates just a few of the many liquids that can be processed with Ice Chef, and how their ability to freeze varies as they transition from liquid to ice.

The position of each liquid on the scale depends on factors such as its sugar, fat, or solids content: the higher these values, the more difficult it becomes for the liquid to freeze completely, resulting in softer, creamier, or more malleable textures.

Conversely, liquids with lower levels of solids and sugars tend to crystallise more easily, producing drier, firmer, and more brittle textures.



## 6. OPTIMISED RECIPES & FORMULATIONS

Preparation	Ingredients / Proportion	Speed	Expected result
TPT	Water 250 g + sugar 250 g	High	Fluid frozen texture, soft
Smart Syrup	*See <a href="#">section 6.1</a> .*	High	Same as TPT but without sweetness
Lemon sorbet	Lemon juice 250 g + TPT 250 g	High	Soft sorbet
Gazpacho	Classic recipe	High	Creamy granita
Vodka	Water with 10% vodka	High	Smooth, creamy granita
Grenadine syrup	Grenadine 100 g + water 660 g + TPT 200 g + 10% vodka + fast gelatin 0.75 g	Medium	Soft sorbet with fine sheets
Dirty Martini dressing	Vodka/Martini mix (60/15) 70 ml + olive brine 65 ml	High	Firm, salty ice sheets
Flavoured liqueurs	Liqueur / water 1:10	Low / Med	Fine millefeuille-style threads (low) / stable sheets (med)
70% chocolate Ganache	Water / chocolate 1.2:1	Low / Med	Chocolate flakes, curls, or "puritos"
70% dark chocolate	Used as is	Low / Med	Fine crispy curls; may roll at medium speed
Regular butter	Used as is	Low / Med	Malleable sheets (low) / brittle ones (medium)

Preparation	Ingredients / Proportion	Speed	Expected result
Clarified butter	Used as is	Medium	Thin, stable, easy-to-handle sheets
Boiron passion fruit	Used as is	High	Thin, well-formed sheets
Boiron bergamot	Used as is	High	Compact snow / fine flakes at low-medium speed
Boiron yuzu	Used as is	High	Compact snow with excellent aroma
Tanqueray 0.0	Used as is	High	Compact, consistent snow. Ideal for mocktails
Sugarcane liqueur	With 30% water	High	Malleable sorbet-like sheets
Leche de Tigre	Classic recipe	Med / High	Excellent flake texture for appetisers
Tomato juice	Used as is or seasoned	High	Good snow for cocktails like Bloody Mary

## 6.1. Smart Syrup: neutral technical syrup

To achieve the structural benefits of a simple syrup (TPT) without adding sweetness, a neutral technical syrup (Smart Syrup) can be used.

### Formula

184 g maltodextrin  
 184 g water  
 17 g vegetable glycerine  
 1,2 g *Xtan*<sup>c</sup>  
 (xanthan gum crystal)

### Preparation

1. Dissolve the maltodextrin in the water.
2. Add the glycerine.
3. Incorporate the *Xtan*<sup>c</sup>.
4. Let hydrate for 5 minutes, and blend until a fluid mixture is obtained.

### Result

Improves fluidity and the formation of precise textures (flakes, sheets) without altering the original flavour.

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## 7. COMMON ISSUES

To achieve the best results with your **Ice Chef** and address the most common issues, it is essential to pay close attention to the composition of the liquid and the machine settings. Below are the main challenges and their solutions:

### 7.1. The liquid does not freeze properly or clogs the machine

#### *Issue*

This is the most common problem and usually occurs with high-density liquids that contain excess sugar or fat, such as condensed milk, thick syrups, or undiluted fruit purées.

The density prevents the liquid from flowing properly over the roller, and high levels of sugar or alcohol hinder freezing at -40°C.

#### *Solution*

The key is to ensure that the liquid has a fluidity similar to that of water or milk. Dilute purées, concentrated juices, and sauces with water until the proper consistency is achieved.

For high-fat bases (such as oils or butter), it is essential to create a stable emulsion with some water to allow for even freezing and prevent the fat from solidifying unevenly.

### 7.2. Results are inconsistent or difficult to standardize

#### *Issue*

Achieving the same texture consistently (snow, sheet, flake) can be challenging.

#### *Solution*

Standardization is achieved by controlling the three main variables: liquid composition, roller speed (10 levels), and the distance between the blade and the roller.

It is recommended to perform systematic tests and record the adjustments that work for each type of preparation.

### 7.3. When working with fats (e.g., clarified butter), blockages occur

#### *Issue*

Butter or similar fats solidify massively and very quickly upon contact with the roller and collection tray, creating a "plug" that stops the process.

#### *Solution*

This is an advanced use. Work with the butter in liquid state (emulsified if possible) and in small continuous amounts to avoid buildup. Speed in the operation is crucial to form a thin sheet without excess solidified product clogging the system.

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## 8. CLEANING

To clean the system between preparations and avoid cross-contamination, turn off the compressor before starting.

Then, add lukewarm water to the reservoir or conduit until the expelled liquid runs clear. Repeat if necessary.

For a more thorough cleaning, remove the tray and the dispensing bottle, and wash them by hand with hot water. Also, clean the roller with a damp cloth and ensure no residue remains.

This procedure guarantees optimal performance and maintains the equipment's hygiene.



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## 9. CULINARY AND COMMERCIAL APPLICATIONS

Ice Chef is presented as a **highly versatile tool**, designed to meet the demands of contemporary kitchen and cocktail culture as well as the operational needs of modern gastronomic businesses.

Its ability to transform a wide range of liquids into frozen textures quickly and in a controlled manner allows for its implementation across multiple culinary and commercial contexts.

### 9.1. Creative and technical applications in cooking and mixology

#### Advanced mixology

Ice Chef offers new possibilities for technical bartending. It enables the creation of instant *frappés*, deconstructed cocktails, or liquor-based snow with precise control over texture and temperature, ideal for signature bars, contemporary cocktail lounges, and immersive experiences.

#### Modern desserts and ice cream

From kakigoris and layered sorbets to frozen toppings ready for plating, the machine allows for fresh, made-to-order preparations or small batches. It delivers clean results, intense flavors, and excellent flavor definition.

#### High cuisine and savory cooking

Ice Chef enables instant freezing techniques in savory products, opening new possibilities in avant-garde cooking: leche de tigre snow, shavings of concentrated broths, laminated frozen butters, or frozen bases that melt upon contact with the heat of the dish.



## 9.2. Advanced mixology: frozen textures & unlimited creativity

Ice Chef transforms mixology into a laboratory of **sensory experiences**, where cold, aroma, and visual spectacle combine to deliver memorable moments. This machine creates fine, dense, light, or compact frozen textures that can be used alone or with alcoholic and non-alcoholic drinks. Its **quiet and precise operation** makes it **perfect for direct integration at the bar**, turning cocktail preparation into a creative, performative, and highly professional act.

One of its most innovative applications is the ability to **freeze the cocktail directly and instantly** with the machine, provided its alcohol and sugar content allows it. This opens up two exceptional possibilities:

- Serving instantly frozen cocktails in individual portions.
- Maintaining a continuous flow of frozen cocktails, creating an “*on tap*” service similar to a frozen margarita machine, but with limitless flavor, texture, and presentation options.

Next, we will look at different possibilities for Ice Chef applied to mixology.

### 1. Frozen cocktails and *kakigori-style glasses*

Instantly frozen textures:

**Shots and individual portions:** Classic frozen cocktails like Daiquiri, Piña Colada, or Margarita can be served as ready-to-drink portions, with endless texture variations and combinations with fruits, herbs, spices, or creative blends.

***Kakigori* or snow cone-style glasses:** Inspired by traditional Japanese shaved ice, these glasses are filled with the shaved snow of your choice (tea, floral, or fruit infusions), and the alcohol or cocktail is poured over it.

This creates an immediate visual, aromatic, and sensory interaction, as the drink cools on contact while the melting texture gradually enhances the aroma.

The combinations are nearly limitless, unlocking a world of creative flavor and presentation opportunities.

## 2. Creative moulds and shapes

The presentation of the different textures from **Ice Chef** can be elevated by utilizing simple geometric tools, such as cookie cutters, rice-press molds, and more, to **create forms in any shape imaginable**.

Playful figures:	Ducks, swans, snowflakes, or micro-landscapes that serve as cocktail supports or part of the visual experience.
Interaction with the cocktail:	When the drink is poured over these shapes, it creates melted effects, releasing aroma and freshness while enhancing the theatrical presentation.
Creative starting point:	These shapes can be combined with shots, kakigori glasses, or frozen cocktails, enriching storytelling and the element of surprise in service.

## 3. Continuous frozen cocktails

**Ice Chef** can maintain a **constant flow of frozen cocktails** for direct service from the bar:

"On-tap" service:	Ideal for high-demand cocktails like Margaritas, Daiquiris, or signature drinks. This speeds up service and turns the bar into a multisensory performance.
Unlimited customization:	Each cocktail can be flavored, coloured, or combined with different frozen textures, creating unique experiences. Mixes can be pre-prepared and, once added to <b>Ice Chef</b> , instantly freeze without the need for blenders or additional equipment.

## 4. Added value and advantages

- **Perfect bar integration:** Compact, quiet, and easy to use, **Ice Chef** is an everyday ally for professional mixologists. Quick and easy to clean.
- **Creative versatility:** From simple *kakigori*-style presentations to elaborate scenic figures or continuous frozen cocktail streams.
- **Customer interaction:** Each service becomes a playful and memorable show where aroma, color, and texture tell a story.
- **Efficiency and differentiation:** Instant freezing streamlines workflow, speeds up service, and strengthens brand identity at the bar.

**Ice Chef** provides **advanced technical tools** that enhance creativity, performance, and multisensory experience, **taking signature mixology to the next level of innovation**.

## 5. Conceptual examples of frozen cocktails and figures

These examples show how to combine shapes, aromas, and cocktails for a multisensory experience:

### Arctic Swan

**Shape:**

Swan (clip mould).

**Frozen texture:**

Citrus and floral infusion.

**Cocktail:**

Vodka, elderflower liqueur, lemon zest.

**Experience:**

The texture holds its shape while the liqueur gently melts it, releasing aroma and cool freshness.

### Frozen bubble bath – Calendula edition

**Shape:**

Duck (clip mould).

**Frozen texture:**

Calendula infusion with a hint of turmeric.

**Cocktail:**

Gin or Vodka, floral liqueur, citrus juice mixed with *Qfm* (quillaja), transformed into a light foam using *Foam Kit*.

**Experience:**

The duckling is immersed in a bubble bath created with the drink and citrus foam from *Foam Kit*. We blend aroma, color, and texture.

### Blue snow flake

**Shape:**

Snowflake or abstract fragment (clip mould).

**Frozen texture:**

Butterfly pea tea or passionflower infusion.

**Cocktail:**

Citrus liqueur or light cream shot.

**Experience:**

A striking visual and sensory contrast between blue and white, with intense cold and immediate aroma release.

### Frozen tropical shots

**Shape:**

Mini capsules or test tubes with frozen tropical fruit textures, served in a tray of snow (flavoured, coloured, or uncoloured and unflavoured).

**Cocktail:**

White rum or passionfruit liqueur poured over the texture.

**Experience:**

An immediate interaction between liquid and frozen texture, releasing aroma and flavour as it melts.



Complete your frozen bubble bath with:  
*Spa drink gold (210/0048)* & *Sponge (210/0100)*

## 6. Reimagined frozen classics

**Ice Chef** allows for reinterpreting classic frozen cocktails with their original profiles while achieving smoother textures, immediate service, and uniform presentation. Along with creative potential, it offers a practical benefit: the ability to produce classic frozen cocktails with precision and texture impossible through traditional methods.

Below are three classic examples from *Difford's Guide*, adapted for use with **Ice Chef**, whether *à la carte*, continuous flow, or tasting formats.

### Papa Doble (Hemingway Special)

We suggest serving it in a *Martini glass (160/0053)*.

#### Ingredients

105 ml Havana Club 3-Year Rum  
30 ml fresh pink grapefruit juice  
22,5 ml Luxardo Maraschino liqueur  
30 ml fresh lime juice  
15 ml rich syrup  
(2 parts sugar : 1 part water,  
65° Brix)

#### Steps

1. Pre-chill the Martini glass.
2. Prepare garnish: place a Luxardo Maraschino cherry and/or lime slice on top.
3. **Traditional method:**  
Shake with ice and fine strain into a chilled glass.

#### Ice Chef adaptation:

Mix all ingredients and pour directly into **Ice Chef** for a clean, fragrant, granita-like texture.

Serve in the prepared glass with the garnish.

### Piña colada deluxe

#### Ingredients

60 ml light white Rum  
(charcoal filtered, aged 1–4 years)  
15 ml Cachaça  
105 ml fresh pineapple juice  
22,5 ml coconut cream  
(e.g., Coco Lopez, Re'al)  
15 ml fresh lime juice  
7,5 ml fresh cream or half-and-half  
2 drops saline solution  
(20 g sea salt in 80 g water)  
or a tiny pinch of salt  
1/4 barspoon prehydrated *Xtan*  
(xanthan gum)

#### Steps

1. Pre-chill a slightly large glass.
2. Prepare garnish: we add a pineapple wedge, a parasol, and a Luxardo Maraschino cherry.
3. **Traditional method:**  
Dry blend first seven ingredients (no ice), gradually add *Xtan*, then add crushed ice and blend until homogeneous.

#### Ice Chef adaptation:

Mix all liquids and pour directly into **Ice Chef** for a creamy, dense, and uniform texture.

Serve in the prepared glass with the garnish.



## Frozen Margarita

We suggest serving it in a *Margarita glass (160/5050)*.

### Ingredients

- 45 ml Patrón Silver Tequila
- 22,5 ml Kuyper Triple Sec (40%)
- 22,5 ml fresh lime juice
- 15 ml rich syrup  
(2 parts sugar : 1 part water,  
65° Brix)

### Steps

1. Pre-chill the Margarita glass.
2. Prepare garnish: Prepare a slice of lime on the rim.
3. **Traditional method:**  
Blend with crushed ice until smooth and serve.

#### Ice Chef adaptation:

Mix liquids and freeze directly in Ice Chef to produce a fine, stable granita.

Serve in the prepared glass with the garnish.

## Final technical considerations

When working with **Ice Chef**, traditional ice use becomes irrelevant. The machine freezes liquids directly, achieving the desired texture without dilution, preserving both aroma and flavour.

In practice, it can be optimal to **replace the amount of ice indicated in traditional recipes with an equivalent of half its weight in water** so that **Ice Chef** performs **instant freezing precisely** and without noticeable dilution. This method ensures full control over texture, temperature, and presentation, optimizing both workflow and the cocktail's sensory quality.

## 9.2. Commercial operations and continuous production

**Ice Chef** has been designed for **continuous operation**, making it ideal for businesses with steady production needs such as:

- Food trucks and street food.
- Catering, events, and banquets.
- Hotel bars and in-room cocktail services.
- *Chiringuitos* (beach bars) or summer pop-up stations.
- Buffets and restaurants with extended service hours.

Its energy efficiency, rapid service speed, and easy cleaning make **Ice Chef** a **perfect fit for high-performance environments** without compromising the quality of the final product.

## 9.3. Health, sustainability, and new business models

**Ice Chef** enables the development of healthy and sustainable concepts that meet new consumer demands:

- Healthy ice creams and sorbets made from natural juices, infusions, kombuchas, or plant-based drinks.
- **Waste reduction** by using ripe fruits and vegetables to create granitas or frozen flakes ready for sale.
- Greengrocers and local shops can incorporate **Ice Chef** as an innovative and **profitable solution for fresh products with a short shelf life**, generating new lines of added value through cold processing.





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