

Mixology guide
Infusions with
Lisboa Siphon & CO₂

100%Barman



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Advanced creation of drinks made with dry ice

The Siphon Infuser “Lisboa”, also known as a vacuum coffee maker, is a coffee brewing method that uses steam pressure and vacuum to brew coffee. It is characterized by its visual appeal and its ability to **bring out complex flavors** from coffee.

It consists of two glass chambers connected by a tube, where the water is heated in the lower chamber and then rises to the upper chamber come into contact with the ground coffee.

When cooled, the coffee is filtered back into the lower chamber, creating a **unique brewing experience**.

In this case, we have used it to prepare different cocktails and perform various table services. This tool allows us to make **quick cold infusions with the help of dry ice** thanks to the CO₂, which causes the liquid to travel through the tool while remaining in contact with the ingredients we want to **macerate or cold infuse**.

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.

1. Sublimation concept and technical foundations 04

- 1.1. Development of the concept of sublimation
- 1.2. Dry ice use procedure
- 1.3. Recommendations for use

2. Applications in cocktails 05

3. Must-have accessories 06



1. SUBLIMATION CONCEPT AND TECHNICAL FOUNDATIONS

The process of using the Siphon Infuser “Lisboa” and dry ice to make cocktails is known as sublimation infusion or cold infusion by CO₂ pressure:

INFUSION	SUBLIMATION	CO ₂ PRESSURE COLD INFUSION
The base liquid (juice, tea, etc.) is enriched with aromas and flavours of ingredients such as spices, fruits, or herbs.	Dry ice (solid CO ₂) sublimates , going from a solid state to a gas without passing through the liquid state.	The gas generated creates pressure that propels the liquid through the siphon, simulating the effect of heat without using fire.

1.1. Development of the concept of sublimation

Sublimation is a change of physical state whereby a substance goes directly from the solid state to the gaseous state, without first becoming a liquid.

Common states of the matter:

PROCESS	INITIAL STATE	→	CHANGE OF STATE	→	FINAL STATE
Fusion	Solid		Liquid		Liquid
Evaporation	Liquid		Evaporation		Gas
Sublimation	Solid		Gas		Gas

Why does sublimation happen?

- **Weak intermolecular forces** (the forces that predetermine boiling points, melting point, solubility and physical state) in some substances cause them to turn directly into a gas.
- **Low ambient pressure** can facilitate the transition from the liquid state (as occurs in the atmosphere or in vacuum systems).
- The applied **energy breaks down the solid structure** before it melts.



EXPLANATORY VIDEO WITH AN EXAMPLE OF HOW THE LISBOA SYPHON INFUSER WORKS

What happens if we mix dry ice with a liquid?

Dry ice sublimation

Dry ice does not melt, but goes directly from solid to gas (sublimation) at -78.5°C .

Upon contact with the liquid (which is at room temperature or cold), the solid CO_2 heats up quickly and transforms into a gas.

Bubble and fog formation

The carbon dioxide gas escapes in the form of bubbles that rise through the liquid.

When it mixes with water vapour in the environment, it forms a dense, cold, white mist (the visual effect of "smoke").

This effect is entirely visual.

Pressurization of the vessel (in the siphon)

In a siphon coffee maker, CO_2 gas creates a controlled internal pressure, which pushes the liquid toward the top of the siphon.

This allows the liquid to pass through the aromatic ingredients without the need for fire.

Cold infusion

Not using heat means that the extracted aromas are more delicate and fresh, such as citrus, floral and herbal notes. This prevents the oxidation or burning of sensitive ingredients.

Light carbonation

When CO_2 remains in contact with the liquid for long enough to be absorbed, it generates a very light effervescence, like a slightly carbonated drink.

The level of carbonation depends on the type of liquid (water carbonates more easily than juice or tea).

In modern cocktails or mixology, these techniques are part of:
Molecular Cooking Techniques / Express or instant infusions / Advanced sensory presentations

1.2. How to use dry ice:

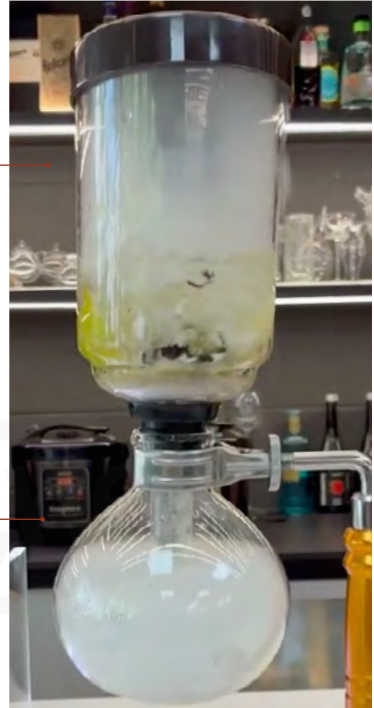
The Siphon Infuser "Lisboa" is made up of three parts: Bottom, top and the "stove". The latter is discarded in this process, as dry ice provides the necessary energy or source for this procedure.

Superior part (cylindrical container)

It contains **aromatic ingredients** such as orange peel, spices, coffee or herbs. The base liquid is driven upwards by the gas generated by the dry ice, and is **cold-infused** with these ingredients.

Inferior part (spherical container)

Dry ice (solid CO₂) is placed along with the **base distillate** (e.g. whiskey, rum or vermouth). Dry ice generates pressure when it sublimates, pushing the liquid upwards without the need for fire.



Chocovodka Mule (*see section 2*).

End of the process

When the CO₂ dissipates, the liquid returns to the lower container, loaded with aromas and flavours, ready to be served.

Once the maceration time is up (either when the dry ice has dissolved or when we consider that maceration is sufficient), we will remove the top part with the lid, which will now serve as a base.

Subsequently, we will remove the lower part from the set, and serve the **maceration**, which is now **fully filtered** with botanicals thanks to the mesh that separates both containers.

This procedure can be applied in different preparations, either in distillates alone or combined with liqueurs or syrups, or in a mixture of whole cocktails (Negronis, Dry Martinis, Bijous...). Alternatively, we can return to the stove and apply heat to make hot cocktails or teas for Hot Toddy cocktails.

Result

The result of this combination is that the liquids are macerated and cooled in an approximate time of 1-2 minutes using a process that appeals to customers. This product allows you to offer a unique, innovative service.

Why use dry ice?

- It enables **cold brewing**, which preserves the delicate aromas that could be damaged by heat.
- It creates a **spectacular visual effect** (clouds of white vapour).
- It adds a slight **natural carbonation** and freshness to the cocktail if handled correctly.

1.3. Recommendations for use

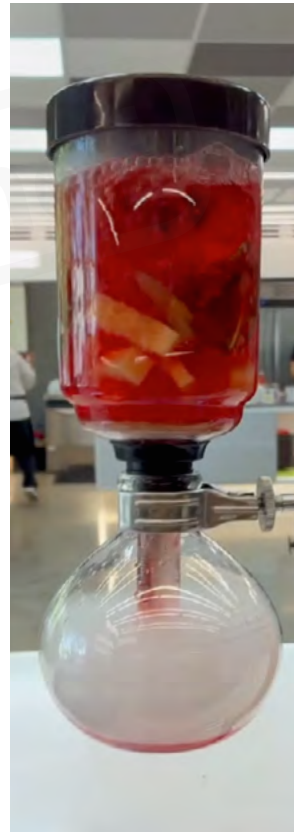
The recommended amount is between 7-10 gr of dry ice, which should be left to macerate for approximately 1 minute, depending on the desired result, the botanicals used (herbs, citrus peels, spices, teas, flowers, etc.) and the type of service.

To add dilution to the cocktail or preparation, it is recommended to add crushed ice in the top glass, containing the "botanicals". In the case of the Negroni, it is perfect since it avoids the stir and, in addition to maceration, applies cold and dilution, as in the stir but in a single step, with its subsequent filtering thanks to the mesh that is in the upper vessel.

For its correct functioning and capacity, it is recommended to use between 120-140 ml of liquid in the lower part (at least), so that a correct maceration can be carried out or with whole cocktails, as is done in the case of the Negroni (*see section 2*).

The use of dry ice requires careful handling:

- It should never be ingested directly.
- Ensure it has fully sublimated before serving.
- Handle with gloves or tweezers.
- Do not seal it in an airtight container without an exhaust valve, as the gas can generate dangerous pressure.



Summer Negroni (*see section 2*).

2. APPLICATIONS IN COCKTAILS

Summer Negroni

Botanical ingredients

- 1/2 u cucumber without skin
- 6-8 u basil leaves
- 1 u lime cutted into quarters

Liquid ingredients

- 60 ml Campari
- 60 ml Martini White Vermouth
- 60 ml Malfy Gin lemon

Oaxaca Old Fashioned

Botanical ingredients

- 2-3 u orange peels
- 1 tsp of Chicory
- 2 u bags of Chai black tea

Liquid ingredients

- 120 ml Tequila Reposado 3 Sombreros

Service

Add chocolate bitters in the glass with the ice and give a small stir when serving in front of the customer to homogenize the mixture.

Brazilian Highball

Botanical ingredients

- 4-6 u mint leaves
- 2 g Lapsang Souchang
- 2 u lime peels
- 2 u grapefruit peels

Liquid ingredients

- 40 ml Cachaça
- 20 ml Italicus
- 10 ml Agave syrup

Service

For the *mise en place* of this cocktail, we must prepare two separate sodas or tonics, two highball glasses and ice in an ice bucket.

During the maceration we must prepare the service, serve the mixture and finish the cocktail with the top of soda or tonic to the consumer's liking (the soda lengthens the drink and the tonic will add very pleasant bitter notes). As a garnish, we propose to add a "sprig" or bouquet of mint.

Citrus Garden (w/o alcohol)

Botanical ingredients

- 2 u orange peels
- 2 u lemon peels
- 2 u basil leaves
- 1 u green tea bag

Liquid ingredients

- 120 ml cold water
- 15 ml Elderflower syrup

Service

We recomend an english tea-style service to complete both the sensory and visual experience of the cocktail.

Garnish: dried lemon slice and edible flower.

You can find different glassware in our catalog that are perfect for this service:

160/0059 - Retro mug

160/0101 - Tea cup

160/0102 - Retro cup

160/0141 - Versailles

160/0124 - Victorian cocktail cup

Smoked red tea (w/o alcohol)

Botanical ingredients

- 2 u orange peels
- 2 u lemon peels
- 3 u pink pepper grains
- 1/4 u cinnamon stick
- 2-3 u cherry wood chips
- 1 u Rooibos tea bag

Liquid ingredients

- 100 ml cold water
- 30 ml red grape juice
- 1 spoonful of honey

Service

It is proposed to carry out a service in a *Dry Freezer* glass, available in our catalogue, that was previously cooled, next to it we'll have a plate with fruits and herbs, to make the cocktail assembly and decoration in front of the customer.

160/0061 - Dry Freezer

Curry tonic (w/o alcohol)

Botanical ingredients

- 6 u pink pepper seeds
- 1 barspoon of yellow curry spice blend*
- 1/2 u lime cutted into pieces

Liquid ingredients

- 60 ml Tanqueray w/o alcohol
- 25 ml Vibrant Martini 0,0%

* Yellow curry spice blend

Bay leaf, cayenne, citronella, coriander seeds, black pepper, cumin, turmeric, kefir lime and lemongrass.

Service

We prepare two separate grapefruit sodas, two highball glasses and ice in an ice bucket.

During the maceration, serve the mixture and finish the cocktail with the grapefruit and garnish soda top of your choice (we chosed edible flowers).

Chocovodka Mule

Botanical ingredients

- 1/2 u vainilla pod (open)
- 2 u ginger slices (chopped)
- 1 u lime cutted into quarters

Liquid ingredients

- 100 ml Vodka
- 20 ml white chocolate liqueur
- 20 ml simple syrup

Service

Prepare 50 ml of lime juice squeezed and have an ice bucket with crushed ice beforehand.

When serving this cocktail, while making our cold "infusion" in front of the customer, pour 25 ml of lime juice in each glass, serve the mixture, add crushed ice and stir lightly with the help of a barspoon.

Decorate with elements used in the infusion.



Chocovodka Mule.

3. MUST-HAVE ACCESSORIES

Dry Ice

The use of 100% Chef's *Dry Ice Black* and *Dry Ice Black Triple* is specifically designed to handle dry ice safely and aesthetically, ideal for avant-garde cocktails and creative gastronomy.

Dry Ice Black

It is a serving container designed to safely manufacture dry ice, in less than a minute a 30 g tablet.

120/1015	Conexión UE
120/2015	Conexión USA



Dry Ice Pellet moulder

Dry ice generator in fine pellets.
Exclusive for the use of individual Dry Ice.

120/0046
Dry Ice Pellet



All this elements are necessary if the you want to produce your own dry ice and want to follow or try new techniques with dry ice in the Lisbon glass.

Dry Ice Triple

Advanced version with three separate internal chambers, producing a larger tablet weighing 90 g of dry ice instantly.

120/0053

Conexión UE

120/0054

Conexión USA



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© Text:

Almudena Castro – R&D Bartender 100%Barman – 100%Lab
Damià Mulà – R&D Head Bartender 100%Barman– 100%Lab

© Photography:
100% Chef

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Cocina sin Límites, S.L.

Joan Peiró i Belis 2 – 08339 Vilassar de Dalt – Barcelona, Spain

Tel. +34 93 429 63 40 - lab@100x100chef.com - barman@100x100chef.com

