



ULST Timisoara

Multidisciplinary Conference on Sustainable Development

15-16 May 2025



Nutritional and organoleptic evaluation of gogonele jam with lime and ginger

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Abstract:

Gogonele jam, an unusual delicacy but with a unique taste, is a rich source of vitamins, nutrients and dietary fiber, offering an inherent organoleptic experience. Lemon and ginger gogonele jam contains a significant amount of vitamin C due to the addition of lime. Vitamin C is a powerful antioxidant that supports the immune system. Ginger also has a high nutritional value, providing bioactive compounds such as polyphenols, which have anti-inflammatory and antioxidant properties. The jam has a dark orange color, specific to ripe peppers, with nuances of lime and ginger, with the sweet-sour taste of peppers with the freshness of lemon and the subtle spiciness of ginger. With a soft texture of homogeneous consistency, with small pieces of gogonele and lime and ginger peel, which contribute to a pleasant sensory experience. The gogonele jam with lime and ginger is appreciated for its balance between sweet, sour and spicy, offering a unique and refined taste experience that can be used as a topping for desserts or as an ingredient in various recipes.



Introduction

The gogonele jam with lemon and ginger is a dish born from the desire to capitalize on green vegetables (especially gogonele – unripe tomatoes) in a creative and refined way. This jam does not have a very old history like other traditional Romanian jams, but it is based on culinary traditions and interesting influences. Giovanucci E., Rimm E.B., Liu Y., Stapfer M.J., Williett W.C., 2002, A prospecto study tomato products: lycopene and prostate cancer risk, J. Natl.Cancer Instit., 94, 391-398. Gogonele (green, unripe tomatoes) have been used in Romanian cuisine for generations, especially for pickles. The idea of making jam from a vegetable is probably inspired by Ottoman and Balkan cuisine, where vegetable jam (including eggplant or tomato) has a tradition. Lemon and ginger, exotic ingredients, have begun to be integrated into Romanian recipes especially in recent decades, with the opening to international cuisine and easier access to spices. It is a modern reinterpretation of the classic gogonele jam, which was made only with sugar. Lemon adds freshness and balance to the sweet taste, and ginger provides a spicy and aromatic touch, turning the recipe into a sophisticated delight, often used in modern gastronomic combinations (fine cheeses, refined desserts, etc.).

Material and method

TECHNOLOGY SHEET

Fresh green tomatoes (Solanum lycopersicum var. cerasiforme), known as gogonele, were obtained from a local farmers' market in Hunedoara. Fresh lime (Citrus aurantiifolia) and ginger roots (Zingiber officinale) were purchased from a commercial food supplier.).

Quantities for 10 jars / 200 g



	Quantity (gr)
Gogonele	1000g
Lime	100g
Ginger	200g
Brown sugar	500 ml
Water	500g



Preparation of the gogones:

We wash the gogonele well:We cut them into quarters or slices, depending on the size. Remove the seeds if they are large and hard (optional).

Blanching:

(optional, but recommended): Boil the gogonelles for 2-3 minutes in boiling water; We take them out and put them in cold water, this procedure helps them keep their shape in sweetness.

Preparation of the syrup:

In a thick-bottomed saucepan, put the sugar and water; Boil until we get a lightly bound syrup (the drop sticks between your fingers). We add the lime:

We grate the peel (only the green part) and squeeze the juice, we also grate the ginger.

Add the ginger together with the juice and lime zest in the syrup.

Boiling the jam:

Add the gogonelles to the syrup. Boil over low heat, 30–40 minutes, until the fruit becomes translucent and the syrup binds well.; Mix gently with a wooden spoon, so as not to crush the gogonele.

Consistency test: We put a drop on a cold plate: if it curdles, the jam is ready.

Ambalare:

We put the hot jam in sterilized jars.

We close them tightly and turn them with the lid down for 5-10 minutes.

Let them cool wrapped in a thick towel.

Nutritional assessment

Green gogons, are commonly used in Eastern European cuisine. When combined with **lime** and **ginger**, jam provides a blend of essential nutrients and bioactive compounds .

Nutritional components

Component	Source	Potential benefits
Acid ascorbic	Lime, green tomatoes	Antioxidant, immune support
Fibre	Green tomatoes, ginger	Digestive health
Antioxidants	Gingerol (ghimbir), polyphenols	Anti-inflammatory, cell protection
Natural sugars	From tomatoes, added sugar	Power source
Organic acids	Citric (lime), malic (roșii)	Flavor enhancer, preservative effect

Acknowledgemen:

Gogonele, laim, ginger, sensory analysis, nutritional values •

Results and discussions

The gogonele jam (green tomatoes) with lime and ginger is a unique recipe, with contrasting flavors: the sweetness of raw tomatoes, the fresh acidity of lime and the warm spiciness of ginger.

Overall appearance and consistency

The sweetness obtained has a greenish-yellow color, with golden reflections, influenced by the peel of the lime and the caramelization of the sugar. The texture is slightly syrupy, with semi-transparent chunks of gogonele and fine ginger fibers visible. The shell of the gogonels has been kept firm, but not rubberized, which indicates an optimal boiling time and careful processing.

Flavors and taste

The aromatic profile is complex: **Sweet-sour notes**, given by the combination of sugar with citric acid from lime;**The citrus freshness**, highlighted by the grated lime peel;**Moderate and warm heat**, coming from fresh ginger, which balances the excess sweetness.The tasting highlighted a **successful balance** between the three main components (gogonele, lime, ginger), without any of them dominating excessively. A **pleasant persistence of the taste** on the palate was noted, with a slight spicy sensation on the finish.The evaluation of the product "Gogonele jam with lemon and ginger" indicates a high level of quality, both in terms of technical execution and gastronomic innovation

Sensory analysis sheet – Lemon and ginger gogonele jam

Criterion	Expected description	Taster observations	Score (1–5)
Visual appearance	Clear, bright, with whole pieces of gogonele, lemon slices visible	The pieces are even, glossy appearance, without foam; elegant presentation.	5
Color	Golden-greenish, amber hues	Slightly amber hue, appetizing, well caramelized.	4
Consistency	Bound syrup, viscous; slightly firm, undecomposed fruits	Dense syrup, does not flow quickly; The gogonelles have a pleasant texture, they are not soft.	5
Smell	Sweet-fruity, with fresh and slightly spicy citrus notes of ginger	The flavor is balanced, fresh; lemon initially dominates, ginger appears fine.	4
Taste	Balanced: sweet, sour (lemon), spicy (ginger), subtle vegetal aroma	Surprising combination, very pleasant; sweet-sour, with a warm touch.	5
Originality	Interesting combination of vegetable, citrus and exotic spice	Inspired innovation – reinterpret a trivial ingredient into a gourmet dessert.	5

After a month of storage in sterilized jars, it was observed to maintain sensory qualities, without signs of fermentation, syrup separation or discoloration. It is recommended to store in a cool, dark place, preferably below 20°C.

The gogonele jam with lime and ginger has proven to be an innovative product, with the potential to attract consumers interested in unconventional combinations and complex flavors. The sensory evaluation highlighted a successful balance between sweetness, acidity and slightly spicy note, which contributes to a refined and memorable final taste.

The results of the sensory analysis (scores above 5 out of 5 in most criteria) confirm the positive appreciation of the subjects and support the idea that this jam can be successfully integrated into a gourmet segment. In addition, its pleasant texture and attractive appearance make it suitable for artisanal packaging and marketing in niche markets or gift baskets.

Conclusions

- .Gogonele (green tomatoes) jam with lime and ginger is an unusual but interesting combination that offers a pleasant balance between sweet, sour and slightly spicy..
- Although it is a dessert rich in sugar, the gogonele jam with lime and ginger stands out for its contribution of phytonutrients and natural flavors, being a more interesting and potentially more beneficial alternative to the classic jam, if consumed in moderation.