

Matcha Drink and Yokan Side Dish by Hannah Lorinc

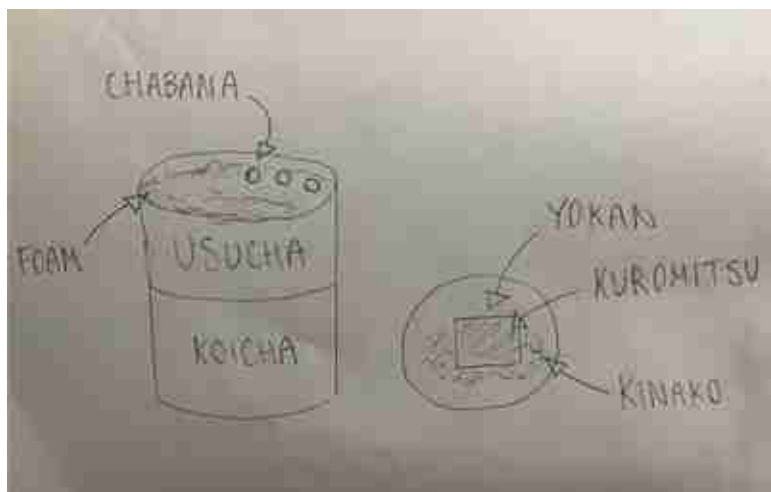


Figure 1 – Preliminary Sketch of the Proposed Dish



Figure 2: Matcha drink and Yokan Side Dish

Materials & Methods

Materials

The materials consist of ingredients and equipment required to create the final dish, which are as follows:

- 1 clear drinking glass (250ml)
- 1 weighing scale
- 1 whisk
- 1 spatula
- 1 stainless steel pot
- 3 small mixing bowls
- 1 large mixing bowl
- 1 chef's knife
- 1 tablespoon
- 1 teaspoon
- 1 droplet

- 1 small tray or mold
- 1 small plate (for serving)

The quantity of preparation equipment was intentionally kept to a minimum, with the assumption that washing occurs between the preparation of each dish component.

The specific ingredients, their respective quantities, and associated costs used in this dish are presented below:

Ingredient	Form	Compounds	Brand	Quantity (g)	Cost (€/g)	Total Cost (€)
Matcha	Powder	Powdered matcha green tea (C) - Epigallocatechin gallate (EGCG), Catechins, Caffeine, L-theanine, Chlorophyll	Seas	5.5	0.124	0.682
		Phycocyanin, Chlorophyll-a, Amino acids	Bulk	1	0.017	0.017
Xanthan Gum	Powder	Polysaccharide	MSK	2.7	0.054	0.1458
Sucralose	Powder	Sucrose	Bulk	0.5	0.0135	0.00675
Pure Whey Protein	Powder	β -Lactoglobulin	Bulk	19	0.064	1.216
Lecithin	Powder	Soy lecithin powder (E-322) - phosphatidylcholine (PC), phosphatidylethanolamine (PE), phosphatidylinositol (PI), phosphatidic acid (PA), triglycerides	Texturas	3	0.043	0.129
		Pure	MSK	5	0.027	0.135
Sodium Alginate	Powder	β -D-mannuronic acid (M), α -L-gulonic acid (G)	Seas	1	0.13	0.13
Yellow Food Coloring	Gel	Tartrazine (E102)	Cake Decoration	0.05	0.011	0.00055
Red Food Coloring	Gel	Allura Red AC (E129)	Cake Decoration	0.05	0.016	0.0008
Orange Food Coloring	Gel	Sunset Yellow FCF (E110)	Cake Decoration	0.05	0.011	0.00055
Berry Malt Extract	Liquid	Maltose, Dextrins, Glucose	Seas	0.1	0.052	0.0052
Pleaser Flavoring N.6	Liquid	Pure	theKitchenLaboratory	0.3	0.43	0.129
Peach Flavoring N.10	Liquid	Pure	theKitchenLaboratory	0.3	0.43	0.129
Almond Flavoring N.1	Liquid	Pure	theKitchenLaboratory	0.2	0.43	0.086
Popcorn Flavoring N.1	Liquid	Pure	theKitchenLaboratory	0.2	0.43	0.086
Vanillin	Liquid	Pure	Euro Vanille	0.15	0.011	0.00195
Agave Syrup	Liquid	Fructose, glucose	Biona	10	0.021	0.21
Agar	Powder	Agar (E406) - polysaccharides	Louis François	5	0.09	0.45
Mahodextrin	Powder	Polysaccharide	Seas	10	0.043	0.43
Cocmat Oil	Solid	Triacylglycerols (TAG)	Biona	1.5	0.016	0.024
					Total Cost (€)	4.0546

Table 1

Source for compounds: (Burke *et al.*, 2021; Foodb.ca., 2026)

The equipment used for the preparation of the final dish are outlined below:

Equipment	Brand / Material
Siphon	iSi Gourmet Whip
Mixing bowls (1L. & 5L.)	Stainless steel
Teaspoons	Stainless steel
Tablespoons	Stainless steel
Clear drinking glass (250ml)	Glass
Chef's knife	Stainless steel
Small rectangular plate	Plastic
Whisk	Stainless steel
Pot	Stainless steel
Spatula	Silicone
High-precision digital weighing scale	

Methods

The method of the preparation of the final dish is presented below:

Matcha Drink

Koicha: water was heated in a pot until boiling, then removed from heat and left to rest for 2 minutes. Approximately 30ml of the water was poured into a bowl, and the matcha powder was whisked in until no clumps remained. Spirulina powder, xanthan gum, and sucralose were then added and whisked until smooth. Finally, the remaining water was poured in and whisked until fully incorporated. The mixture was poured into the glass as the first layer.

Usucha: water was heated in a pot until boiling, removed from heat, and left to rest for 2 minutes. Around 30ml of the water was poured into a bowl, and the matcha powder was

whisked in until no clumps remained. Whey powder and xanthan gum were added and whisked until smooth. The remaining water was poured in and incorporated by whisking. The mixture was carefully poured on top of the koicha layer in the glass.

Foam: water was heated in a pot until boiling and then left to rest for 2 minutes. Approximately half of the water (~105ml) was poured into a bowl, and lecithin and whey powder were whisked in until smooth. Xanthan gum and sucralose were then added, followed by the remaining water. The mixture was refrigerated for approximately 1 hour to cool. Before serving, the mixture was transferred into a siphon fitted with a shaping tip, charged with a nitrous oxide cartridge, and shaken vigorously for about 2 minutes. The foam was then placed on top of the usucha layer in the glass.

Chabana: room temperature water was poured into a bowl, and calcium was whisked in. In a separate bowl, sodium alginate (1g) was combined with 99ml of room temperature water and whisked until dissolved. Sucralose was added and mixed thoroughly. The mixture was divided equally into two bowls: one batch was colored yellow and flavored with flower extract, and the second batch was colored red and flavored with peach extract. Before serving, each mixture was dripped into the calcium bath for approximately 20 seconds. Three spheres of each color were removed using a spoon and carefully placed on top of the foam in the drink.

Yokan Side Dish

Yokan: cold water was poured into a bowl, and agar was whisked in. The mixture was left to rest for 3 minutes, then transferred to a pot and heated until boiling. It was boiled for 2 minutes while stirring continuously. Vanillin was added, and the mixture was removed from heat and allowed to cool for 2 minutes. The mixture was poured into a small tray and left to set for 15 minutes before slicing into clean rectangular shapes. The yokan was then removed from the tray and placed on a serving plate.

Kuromitsu: agave syrup was poured into a bowl, followed by brown malt extract, almond extract, popcorn extract, and 2 drops of cold water. The mixture was whisked until incorporated and then poured evenly over the yokan using a spoon to cover the surface completely.

Kinako: coconut oil, almond extract, popcorn extract, orange food coloring, and 2 drops of cold water were whisked together in a bowl. The coconut oil was then heated in a pot until melted and added to the bowl, whisking to combine. Maltodextrin was gradually incorporated and

whisked until the mixture formed a loose, crumb-like texture. The kinako mixture was then placed next to the top-right corner of the yokan.

Recipe

Matcha Drink

Koicha:

- 150ml water
- 4g matcha powder
- 1.5g xanthan gum
- 1g spirulina powder
- <0.1g sucralose

Usucha:

- 150ml water
- 1.5g matcha powder
- 1g whey powder
- 0.5g xanthan gum

Foam:

- 210ml water
- 18g whey powder
- 3g lecithin powder
- 0.7g xanthan gum
- <0.1g sucralose

Chabana:

Calcium bath:

- 500ml water
- 5g calcium lactate

Sodium alginate spheres:

- 99ml water
- 1g sodium alginate
- 0.1g sucralose

- 1 drop yellow food coloring
- 6 drops flower flavoring
- 1 drop red food coloring
- 6 drops peach flavoring

Yokan Side Dish

Yokan:

- 400ml cold water
- 5g agar
- 3 drops vanilin

Kuromitsu:

- 10ml agave syrup
- 2 drops brown malt extract
- 2 drops almond flavoring
- 2 drops popcorn extract
- 2 drops cold water

Kinako:

- 10g maltodextrin
- 1.5g unflavored coconut oil
- 2 drops almond flavoring
- 2 drops popcorn flavoring
- 1 drop orange food coloring
- 2 drops cold water



Figure 1 – Nutrient Analysis of the Final Dish

The dish contains a total of 199kcal, with a macronutrient composition of 19g carbohydrates (38.3%), 17.5g protein (35.1%), and 5.9g fat (26.6%).

Conclusion

The final dish successfully achieved the objectives of the assignment of creating a note by note dish while reducing production costs and time, lower calories, and maintain flavor. The total cost of €4.05 and preparation time of approximately 1 hour (which could be shortened to 30–45 minutes with optimized chilling) indicate that the dish is practical and feasible for production. Nutritionally, the dish provided 199kcal with a balanced macronutrient profile and high-protein content, aligning with the goal of creating a light, health-conscious option.

References

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