BIOLUMINESCENT OCEAN

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Materials & Methods

Product Composition Overview

Using the note-by-note principles, in which dishes are developed from pure compounds or mixtures thereof (This, 2014), Bioluminescent Ocean is composed of five elements:

- Passionfruit jelly insert
- Coconut mousse
- Mango fluid gel
- Cardamom crumble
- Ginger sea foam

Table 1. Final formula of Bioluminescent Ocean

Element	%	g/plate
Mango fluid gel	45.45	40
Cardamom crumble	20.45	18
Coconut Mousse	14.77	13
Ginger sea foam	11.36	10
Passionfruit jelly insert	7.95	7
Total	**100.00**	**88**

Passionfruit Jelly Insert

Materials

Table 2.Passionfruit Jelly Insert Formula

Ingredient	%	g/plate	Brand
Water	87.35	6.11	-
Erythritol	5	0.35	PURE VIA
Agave syrup	5	0.35	Joey's
Agar agar	1	0.07	Special Ingredients
Citric acid	0.4	0.03	Louis Francois
Malic acid	0.2	0.01	MSK
Blue color	0.8	0.06	mallard ferriere
Blue glitter	0.1	0.01	EDIBLE GLITTER
Passionfruit Flavor	0.15	0.01	Sosa
Total	100	7	

Equipment

Stainless steel mixing bowls, Whisk, Saucepan, Spherical silicon molds (4 cm of diameter), Pocket Food scale, Stand mixer.

Method

1. Weigh the acids together in a bowl. In a separate bowl, weigh the colour and glitter.
2. Weigh and combine erythritol with agar agar, mixing with a whisk to ensure uniform distribution and to facilitate dissolution.
3. Weigh the water into a mixing bowl and gradually incorporate the erythritol and agar agar mixture while whisking continuously to avoid the formation of lumps.
4. Add the agave syrup and mix until fully combined.
5. Transfer the mixture to a saucepan and bring to a boil whilst stirring. Maintain for one minute.
6. Remove from heat. Add the colour, glitter, acids and passionfruit flavour, mixing thoroughly until fully incorporated.
7. Pour the mixture into spherical silicone molds and allow to set at room temperature before transferring to refrigeration. The jelly inserts are stored in the fridge until required to use with the coconut mousse.

It was observed during previous weeks that adding the color before heating caused a significant loss of intensity in the blue colorant. Therefore, the color, glitter, acids and flavoring were incorporated after removal from the heat.

Coconut Mousse

Material

Table 3. Coconut mousse formulation

Ingredient	%	g/ plate	Brand
Cold phase			
Water 1	50.73	6.60	-
Powdered egg whites	1.00	0.13	Louis Francois
Sucrose 1	7.00	0.91	Gem
Hot phase			
Water 2	30.27	3.94	-
Inulin (hot)	6.50	0.85	Sosa
Erythritol	2.00	0.26	PURE VIA
Agar agar	1.20	0.16	Special Ingredients
Guar gum	0.20	0.03	Sosa
Xanthan gum	0.10	0.01	Sosa
Bamboo Charcoal powder	0.67	0.09	Taketora
Coconut flavour	0.13	0.02	Sosa
Marshmallow flavour	0.18	0.02	MSK
TOTAL	**100.00**	**13.00**	**-**

Equipment

Stainless steel mixing bowls, Whisk, Saucepan, Spherical silicon molds (7 cm of diameter), Pocket Food scale, Stand mixer, Blast chiller.

Method

1. Combine all dry ingredients of the hot phase (inulin, erythritol, agar agar, guar gum, xanthan gum and bamboo charcoal powder) and mix thoroughly with a whisk to ensure uniform distribution.
2. In a separate bowl, combine and whisk the cold phase (Water 1, powdered egg whites and sucrose. Allow to hydrate for five minutes.
3. Transfer to a stand mixer and begin whipping. The whipping process takes approximately 15 minutes to reach stiff peaks.
4. Whilst the cold phase is whipping, gradually incorporate the dry hot phase mixture into Water 2, stirring constantly to avoid the formation of lumps. Transfer to a saucepan and bring to a simmer. Maintain for one minute. Remove from heat and allow to cool to 40°C.
5. Once the cold phase has reached stiff peaks and the hot phase is at 40°C, reduce the mixer speed to low and slowly pour the hot phase into the whipped mix.
6. Add the coconut and marshmallow flavorings and fold gently to incorporate without deflating the foam.
7. Pour the mousse into the spherical silicone molds. Place the passionfruit jelly insert in the center of each mold.
8. Refrigerate for one hour. Transfer to a blast chiller for 15 minutes prior to unmolding.

Cardamom Crumble

Material

Table 4. Cardamom crumble

Ingredient	%	g/plate	Brand
Potato Starch	41.6	7.49	Family Elephant
Erythritol	11	1.98	PURE VIA
Trehalose	11	1.98	Sosa
Gluten	5	0.90	Biotiva
Coconut oil	24	4.32	KTC
Cold water	4	0.72	-
Agave syrup	2	0.36	Joey's
Bamboo Charcoal powder	1	0.18	Taketora
Cardamom flavour	0.4	0.07	SOSA
TOTAL	**100**	**18.00**	-

Equipment

Stainless steel mixing bowls, Whisk, Spatula, Pocket Food scale, Oven, Baking Tray with parchment paper.

Method

1. Combine potato starch, erythritol, trehalose, gluten and bamboo charcoal powder in a bowl, mixing thoroughly to obtain a uniform dry mixture.

2. Add the coconut oil and combine using a spatula until all dry ingredients are fully coated, forming a wet sand texture.
3. Add cold water, agave syrup and cardamom flavor and mix until irregular clumps form.
4. Spread the mixture onto a baking tray with parchment paper
5. Bake at 180°C for 15 minutes until the edges are golden.
6. Allow to cool completely. Once cooled, break into irregular pieces to achieve rock like appearance.

Mango Fluid gel

Material

Table 5 Mango fluid gel formulation

Ingredient	%	g/ plate	Brand
Water	87.45	34.98	-
Erythritol	5	2	PURE VIA
Agave syrup	5	2	Joey's
Agar agar	0.6	0.24	Special Ingredients
Xanthan gum	0.4	0.16	SOSA
Citric acid	0.4	0.16	Louis Francois
Malic acid	0.2	0.08	MSK
Color blue	0.8	0.32	mallard ferriere
Blue glitter	0.1	0.04	EDIBLE GLITTER
Mango flavour	0.05	0.02	Sosa
TOTAL	**100**	**40**	**-**

Equipment

Stainless steel mixing bowls, Whisk, Saucepan, Pocket Food scale, Ice bath.

Method

1. Weigh the acids together in a bowl. In a separate bowl, weigh the colour and glitter.
2. Weigh and combine erythritol with agar agar and xanthan gum, mixing with a whisk to ensure uniform distribution and to facilitate dissolution.
3. Weigh the water into a mixing bowl and gradually incorporate the erythritol and agar agar mixture while whisking continuously to avoid the formation of lumps.
4. Add the agave syrup and mix until fully combined.
5. Transfer the mixture to a saucepan and bring to a boil whilst stirring. Maintain for one minute.
6. Remove from heat. Add the color, glitter, acids and mango flavor, mixing thoroughly until fully incorporated.
7. Pour the mixture into a bowl and place over an ice bath. Whisk the mixture continuously over the ice bath until it thickens and reaches a fluid gel consistency. Reserve for plating.

Ginger Sea Foam

Material

Table 6. Ginger foam formulation

Ingredient	%	g/ plate	Brand
Water	89.45	8.945	-
Acacia gum	5	0.5	Special Ingredients
Xanthan gum	0.4	0.04	SOSA
Erythritol	5	0.5	PURE VIA
Ginger flavour	0.15	0.015	SOSA
TOTAL	**100**	**10**	**-**

Equipment

Beaker, Immersion blender, Pocket food scale.

Method

Combine acacia gum, xanthan gum and erythritol in a bowl, whisk to ensure even distribution of the dry ingredients.

1. Add the water to a mixing beaker and gradually incorporate the dry mixture, stirring to avoid the formation of lumps.
2. Add the ginger flavor and mix until fully incorporated.
3. Agitate for five minutes to incorporate air and develop the foam structure.

Assembly

The dish was assembled on a black ceramic plate following the proportions from **Table 1.** First, the mango fluid gel was portioned onto the center of the plate and spread decoratively using a spoon to create the base of the composition, evoking the luminescent surface of the ocean. The cardamom crumble was then spread across the fluid gel. The coconut mousse, containing the passionfruit jelly insert at its center, was carefully unmolded and placed on the center of the plate. Additional crumble was distributed around the mousse to complete the ocean desired effect. Finally, the ginger sea foam was placed on top of the fish.

Nutritional Information

The nutritional profile of "Bioluminescent Ocean" was calculated using the sofwate Nutritics. Each of the five elements was entered individually into the software using their respective formulations mentioned previously. The total dish composition was calculated by considering the percentage contribution of each element to the final plate weight of 88g, as presented in **Table 1.**

The Nutritics database was the primary source of nutritional data. Where specific entries were unavailable, nutritionally equivalent substitutes were applied. Inulin was entered as a distinct entry given its caloric value of approximately 1.5 kcal/g, which differs from conventional dietary fibre. Malic acid was considered equivalent to citric acid, as both are organic acids.

Food colors, edible glitter and flavoring compounds were excluded from the calculation, as their doses are below 0.5% in the assembled dish, their caloric contribution is negligible. Furthermore, full nutritional data were not provided for these flavors.

Cost Analysis

The cost of a single portion of "Bioluminescent Ocean", with a total plate weight of 88g, was calculated based on ingredient prices available in the kitchen order. Some ingredients were sourced outside of the institutional order; agave syrup and erythritol were priced from Tesco Ireland, and the edible blue glitter was priced from Amazon. Flavoring compounds supplied as samples by Sosa and MSK were obtained on the respective supplier websites. As not of them were available, an estimation was applied; this information should therefore be handled with care and considered as a reference.

Water was not included in the cost calculation. Operating costs, energy consumption and labor were also excluded from this calculation. The cost estimation was limited to raw materials costs only. The unit cost of each ingredient was calculated by applying the percentage contribution of each compound to the total portion weight of 88g.

Final Dish and Sensory Evaluation

The five elements were successfully assembled into the final dish "Bioluminescent Ocean". The dish can be observed in **Figure 1**. The visual objective was fully achieved; the luminescent blue fluid gel resembling the ocean, the black crumble scattered across the plate resembling small rocks, the dark spherical mousse with the insert gel, and the white sea foam together produced a representation of a bioluminescent ocean.

The sensory evaluation of the assembled dish regarding the flavor and sweetness, conducted by the author, is presented in **Table 7**. Each element, except the foam performed adequately when evaluated individually; however, the overall flavor balance of the assembled dish affected by the foam, was not fully achieved. The sea foam, distributed across the entire plate, was poor in flavor, sweetness and affected the overall sensory experience due to its density and insufficient sweetness. The intended purpose of the foam was to contribute a subtle, airy note to the dish; however, the foam was not achieved successfully.

Figure 1. Final dish assembled

Table 7. Sensory description

Element	Sensory description
Passion fruit insert gel	Well-achieved flavor profile. Good acidity balance, sweetness well

	perceived.
Coconut mousse	Sweet coconut notes clearly perceived. Marshmallow flavoring contributed to the body of the flavor. Sweet and pleasant.
Crumble	Well-balanced flavor. Cardamom aroma clearly perceived. Sweetness well perceived.
Fluid gel	Good balance between acidity and sweetness. Mango notes present and pleasant.
Ginger Sea Foam	Ginger notes too strong and bitter. Poor sweetness. Flavor balance not achieved. Requires further development.
Assembled dish	Individual elements evaluated positively. Overall flavor balance not fully achieved due to the dominant flavor of the sea foam.

Nutritional analysis

In the figure below, the nutritional analysis calculated with Nutritcs v6.23. The values are per 100g and per dish, 88g.

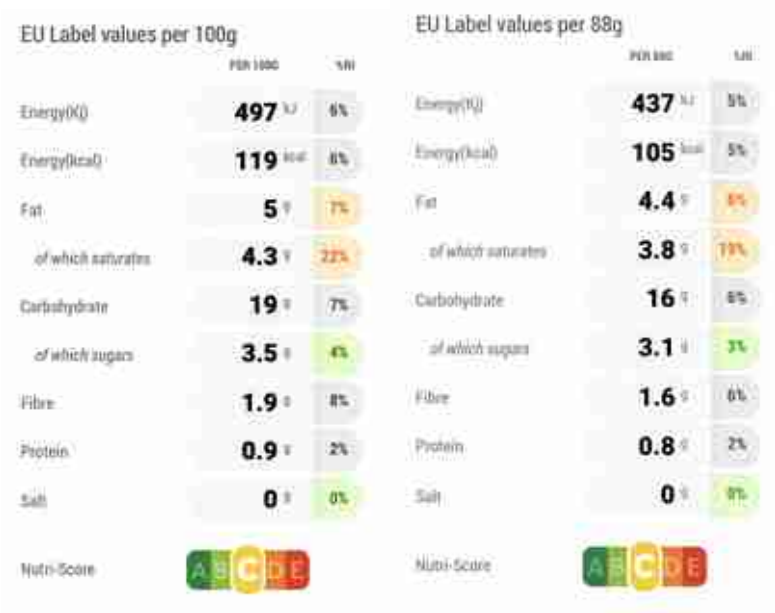

Figure 2. Nutritional Analysis of Bioluminescen Ocean

Cost of recipe

Below, **Table 8** shows the detailed cost breakdown per ingredient. The total ingredient cost for a single portion of "Bioluminescent Ocean" of 88g was calculated at **€0.84**.

Table 8. Cost of ingredients

Ingredient	%	g/ Portion	Price	Quantity	Price EUR/g	Price EUR/plate
Agar agar	0.53	0.47	26.90	300.00	0.09	0.04
Xanthan gum	0.24	0.21	5.62	104.00	0.05	0.01
Guar gum	0.03	0.03	0.41	10.00	0.04	0.00
Acacia gum (Arabic gum)	0.57	0.50	0.01	0.10	0.10	0.05
Erythritol	5.80	5.09	5.00	250.00	0.02	0.10
Agave syrup	2.68	2.35	4.00	250.00	0.02	0.04
Trehalose	2.26	1.98	45.00	700.00	0.06	0.13
Sucrose	1.04	0.91	1.69	1000.00	0.00	0.00
Citric acid	0.21	0.19	0.08	4.00	0.02	0.00
Malic acid	0.20	0.17	4.65	102.00	0.05	0.01
Blue colour (spirulina-based)	0.43	0.38	11.40	20.00	0.57	0.21
Blue edible glitter (pearl mica)	0.05	0.05	12.00	15.00	0.80	0.04
Bamboo charcoal powder	0.30	0.27	11.80	300.00	0.04	0.01
Inulin	0.96	0.85	5.00	250.00	0.02	0.02
Potato starch	8.54	7.49	1.26	350.00	0.00	0.03
Gluten (wheat)	1.03	0.90	1.55	50.00	0.03	0.03
Coconut oil	4.92	4.32	3.29	300.00	0.01	0.05
Powdered egg whites	0.15	0.13	19.78	350.00	0.06	0.01
Passionfruit flavour (Sosa)	0.01	0.01	24.48	50.00	0.49	0.01
Coconut flavour (Sosa)	0.02	0.02	14.88	50.00	0.30	0.01
Mango flavour (Sosa)	0.02	0.02	24.48	50.00	0.49	0.01
Ginger flavour (Sosa)	0.02	0.02	24.48	50.00	0.49	0.01
Cardamom flavour (Sosa)	0.08	0.07	14.88	50.00	0.30	0.02
Marshmallow flavour (MSK)	0.03	0.02	19.61	30.00	0.65	0.02
Sum Ingredientes	30.1	26				**0.84 EUR**
Water	69.9	61				
TOTAL	100.00	88				

Conclusions

"Bioluminescent Ocean" was successfully developed with five elements under the note-by-note principes with the theme of the 14th International Contest for Note-by-Note Cuisine.

The caloric content of the dish was calculated at 105 kcal per portion of 88g. This reduction was achieved primarily through the substitution of sucrose with erythritol, the use of inulin as a low-calorie texturizing agent and the use of hydrocolloids. The total ingredient cost per portion was calculated at €0.84.

Regarding production time, all five elements were successfully produced in a kitchen session of three hours. All ingredients were reviewed under Regulation (EC) No 1333/2008 and were found to be compliant.

Three elements were successfully achieved: the mango fluid gel, passionfruit jelly insert and cardamom crumble were considered the most successful elements of the dish, achieving the intended visual, textural and flavor objectives.

The coconut mousse and ginger sea foam require improvement in the formulation; the mousse presented syneresis and instability at room temperature, and the sea foam did not achieve the intended lightness and flavor balance.

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APPENDIX

APPENDIX A. Ingredients Specification and EU Regulation

Ingredient	E Number	%	g per portion of 88g	EU max permitted level	EU Regulation	Compliance
Agar agar	E406	0.53	0.47	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Xanthan gum	E415	0.24	0.21	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Guar gum	E412	0.03	0.03	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Acacia gum (Arabic gum)	E414	0.57	0.50	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Erythritol	E968	5.80	5.09	*Quantum satis*	Reg. (EC) 1333/2008 Annex II IDA: 0.5kg/kg body weight	Yes
Agave syrup	-	2.68	2.35	Natural ingredient. No additive	-	Yes
Trehalose	-	2.26	1.98	Novel food, authorized EU	Reg. (EC) 258/97 Novel Foods	Yes
Sucrose	-	1.04	0.91	Natural ingredient No additive regulation	-	Yes
Citric acid	E330	0.21	0.19	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Malic acid	E296	0.20	0.17	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Blue colour (Made from spirulina and apple. Processed with water, sucrose syrup, maltodextrin, and citric acid.)	-	0.43	0.38	Spirulina extract*: Quantum satis* Apple: ingredient	Reg. (EC) 1333/2008 Annex II	Yes
Blue edible glitter (pearl mica)	E555/ E559 Not declared .	0.05	0.05	The label states ¨edible¨, but this claim alone is insufficient; further declaration/documentation is	EFSA 2020 re-evaluation	Yes

				required to substantiate food-grade status and EU compliance.		
Bamboo charcoal powder Vegetable carbon	E153	0.30	0.27	*Quantum satis*	Reg. (EC) 1333/2008 Annex II	Yes
Inulin. Inulin (hot). Fiber from chicory root. Soluble fiber content 96.7%.	-	0.96	0.85	Prebiotic fibre, not classified as food additive	-	Yes
Potato starch	-	8.54	7.49	Natural ingredient. No modified starch.	-	Yes
Gluten (wheat)	-	1.03	0.90	Natural ingredient. Allergen declaration required	Reg. (EU) 1169/2011	Yes
Coconut oil	-	4.92	4.32	Natural ingredient	-	Yes
Powdered egg whites	-	0.15	0.13	Natural ingredient. Allergen declaration required.	Reg. (EU) 1169/2011	Yes
Passionfruit natural flavor (Sosa) invert sugar syrup, natural flavor, emulsifier: glycerin (e422), aroma	-	0.01	0.01	*Quantum satis*	Reg. (EC) 1334/2008	Yes
Coconut flavor (Sosa)	-	0.02	0.02	*Quantum satis*	Reg. (EC) 1334/2008	Yes
Mango maduro natural flavour (Sosa) Invert sugar syrup, natural flavor, emulsifier: glycerin (e422), aroma	-	0.02	0.02	*Quantum satis*	Reg. (EC) 1334/2008	Yes
Ginger flavour (Sosa)	-	0.02	0.02	*Quantum satis*	Reg. (EC) 1334/2008	Yes
Cardamom natural flavor (Sosa)	-	0.08	0.07	*Quantum satis*	Reg. (EC) 1334/2008	Yes
Marshmallow flavor (MSK) Marshmallow (Natural) Flavour Drops (water soluble).	-	0.03	0.02	*Quantum satis*	Reg. (EC) 1334/2008	Yes

APPENDIX B. Brand ingredients and price

	%	g/ portion	Brand	Details	Price	Quantity	Price EUR/g	Price EUR/ plate
GELLING & TEXTURISING AGENTS								
Agar agar	0.53	0.47	Special Ingredients	Ingredients: Agar Agar (E406) 	26.90	300.00	0.09	0.04
Xanthan gum	0.24	0.21	Sosa	Ingredients: xanthan gum (e415) 	5.62	104.00	0.05	0.01
Guar gum	0.03	0.03	Sosa	Ingredients: guar gum (e412) 	0.41	10.00	0.04	0.00
Acacia gum (Arabic gum)	0.57	0.50	Special Ingredients	Acacia Powder (E414) 	0.01	0.10	0.10	0.05
SWEETENERS & SUGARS								
Erythritol	5.80	5.09	PURE VIA		5.00	250.00	0.02	0.10

Agave syrup	2.68	2.35	Joey's		4.00	250.00	0.02	0.04
Trehalose	2.26	1.98	Sosa		45.00	700.00	0.06	0.13
Sucrose	1.04	0.91	Gem Gaster Sugar		1.69	1000.00	0.00	0.00
ACIDULANTS								
Citric acid	0.21	0.19	Louis Francois		0.08	4.00	0.02	0.00
Malic acid	0.20	0.17	MSK		4.65	102.00	0.05	0.01
COLORANTS								
Blue colour (spirulina-based)	0.43	0.38	mallard ferriere	Ref 13648. Made from spirulina and apple. Processed with water, sucrose syrup, maltodextrin, and citric acid. 	11.40	20.00	0.57	0.21
Blue edible glitter (pearl	0.05	0.05	EDIBLE GLITTER	Based on food grade pearl mica	12.00	15.00	0.80	0.04

mica)								
Bamboo charcoal powder	0.30	0.27	Taketora		11.80	300.00	0.04	0.01
FUNCTIONAL ADDITIVES & NATURAL INGREDIENTS								
Inulin	0.96	0.85	Sosa	Inulin (hot). Fiber from chicory root. Soluble fiber content 96.7%. 	5.00	250.00	0.02	0.02
Potato starch	8.54	7.49	Family Elephant	Native starch 	1.26	350.00	0.00	0.03
Gluten (wheat)	1.03	0.90	Biotiva	Gluten from wheat 	1.55	50.00	0.03	0.03
Coconut oil	4.92	4.32	KTC	Premium coconut oil odourless	3.29	300.00	0.01	0.05

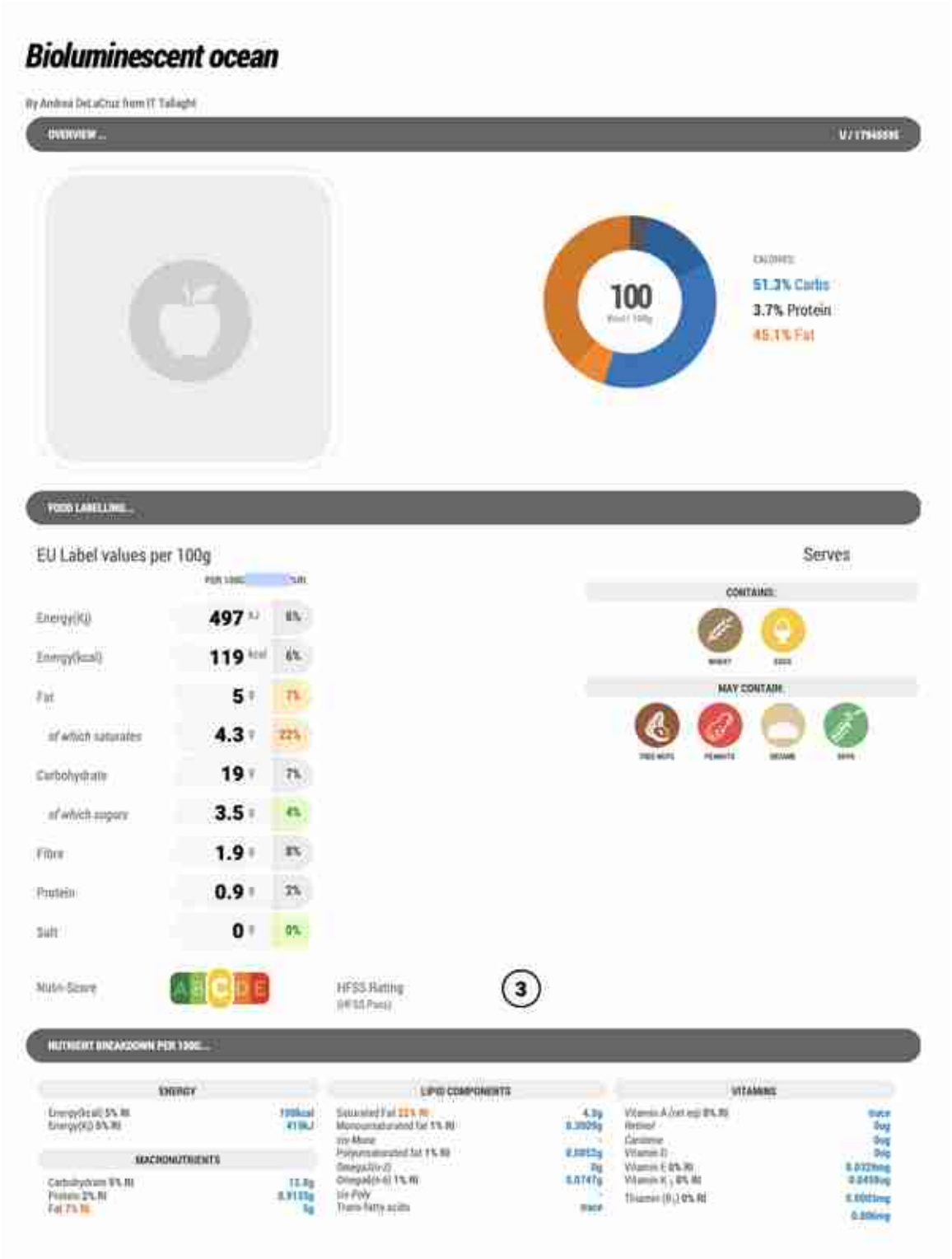
								
Powdered egg whites	0.15	0.13	Louis Francois		19.78	350.00	0.06	0.01
FLAVOURINGS								
Passionfruit flavour (Sosa)	0.01	0.01	Sosa	Invert sugar syrup, natural flavor, emulsifier: glycerin (e422), aroma 	24.48	50.00	0.49	0.01
Coconut flavour (Sosa)	0.02	0.02	Sosa	#103 	14.88	50.00	0.30	0.01
Mango flavour (Sosa)	0.02	0.02	Sosa	Invert sugar syrup, natural flavor, emulsifier: glycerin (e422), aroma	24.48	50.00	0.49	0.01

								
Ginger flavour (Sosa)	0.02	0.02	Sosa		24.48	50.00	0.49	0.01
Cardamom flavour (Sosa)	0.08	0.07	Sosa	#19 	14.88	50.00	0.30	0.02
Marshmallow flavour (MSK)	0.03	0.02	MSK	Marshmallow (Natural) Flavour Drops (water soluble). No specification available 	19.61	30.00	0.65	0.02

APPENDIX C. Equipment Details

Equipment	Brand
Oven	Electrolux
Stove	Electrolux
Imersion blender	Immersion blender (robot coupe, mini mp 160 v.v.
Standing mixer	Kitchen aid 
Blast chiller	Sagi 
Silicon molds	Gastroflex 
Pocket scale	Vitafit 

APPENDIX D. Detailed Nutritional Analysis



Water	79g
Water from Drinks	0g
Alcohol (0% ABV)	0g

CARBOHYDRATE

Starch	9.3g
Oligosaccharide	-
Fibre 7% RI	1.9g
NSP	1.5g
Sugars 4% RI	2.2g
Glucose	trace
Galactose	0g
Fructose	trace
Sucrose	0g
Maltose	0g
Lactose	0g

Cholesterol	0mg

MINERALS & TRACE ELEMENTS

Sodium 0% RI	3.6mg
Potassium 0% RI	4.6mg
Chloride 1% RI	4.1mg
Calcium 1% RI	5.7mg
Phosphorus 0% RI	3.2mg
Magnesium 1% RI	3.8mg
Iron 1% RI	0.1667mg
Zinc 1% RI	0.0943mg
Copper 2% RI	0.0245mg
Manganese 1% RI	0.0231mg
Selenium 1% RI	0.5029ug
Iodine 0% RI	0.0448ug

Riboflavin (B_2) 0% RI	
Niacin total (B_3) 0% RI	0.0321mg
Niacin 0% RI	0.0018mg
Tryptophan	1.9mg
Pantothenic Acid (B_5) 0% RI	0.0033mg
Vitamin B_6 0% RI	0.0005mg
Folates (B_9) Total 0% RI	0.1130ug
Vitamin B_{12} 0% RI	0.0037ug
Biotin (B_7) 0% RI	0.0032ug
Vitamin C	0mg

OTHER

GI (estimated)	3.0
GL	0.7163
Caffeine	-

RECIPE INGREDIENTS ...		QUANTITY:	DESCRIPTION:	METHOD:
Mango fluid gel..	U	**40g**	0.4 x Recipe Total	unchanged
Cardamom Crumble..	U	**18g**	0.18 x Recipe Total	unchanged
Ginger Sea Foam..	U	**10g**	0.1 x Recipe Total	unchanged
Coconut mousse..	U	**13g**	0.13 x Recipe Total	unchanged
Passion Fruit Jelly..	U	**7g**	0.07 x Recipe Total	unchanged

PRODUCTS / PACK SIZES ...

1 Serving

88g / 105kcal

1.0

INGREDIENT LIST (GIVEN) ...

Mango Fluid Gel (45.5%) [Water (88.6%), Pure Via 100% Erythritol Nature Sweet 250g (5.1%) [Erythritol], Joey's Organic Agave Syrup 250ml (5.1%) [100% Organic Blue Agave], Citric Acid, E330, Anhydrous (0.68%), Agar (0.61%)], Cardamom Crumble (20.5%) [Mintons Good Food Potato Starch 500g (42.2%) [Potato Starch], Coconut Oil (24.3%), Pure Via 100% Erythritol Nature Sweet 250g (11.2%) [Erythritol], Trehalose (11.2%), **Wheat Gluten** (5.1%), Water (4.1%), Joey's Organic Agave Syrup 250ml (2%) [100% Organic Blue Agave]], Coconut Mousse (14.8%) [Water (81.8%), Sugar (7.1%), Beglan Roitc Balance Inulin 250g (6.6%) [Native Chicory (Cichorium Intybus) Inulin], Pure Via 100% Erythritol Nature Sweet 250g (2%) [Erythritol], Agar (1.2%), Dried **Eggs** (1%), Gum, Guar, Food Additive E412 (0.2%), Gum, Xanthan, Food Additive E415 (0.1%)], Ginger Sea Foam (11.4%) [Water (89.6%), Acacia Gum (5%) [Native Chicory (Cichorium Intybus) Inulin], Pure Via 100% Erythritol Nature Sweet 250g (5%) [Erythritol], Gum, Xanthan, Food Additive E415 (0.4%)], Passion Fruit Jelly (8%) [Water (88.2%), Pure Via 100% Erythritol Nature Sweet 250g (5%) [Erythritol], Joey's Organic Agave Syrup 250ml (5%) [100% Organic Blue Agave], Agar (1%), Citric Acid, E330, Anhydrous

(0.68%)]
May contain traces of **Tree Nuts, Peanuts, Sesame, Soya**
ALLERGY ADVICE: For allergens, see ingredients in **Bold**

COOKING INSTRUCTIONS & NOTES

INGREDIENTS

- **18g** Cardamom Crumble (0.18 x Recipe Total)
- **13g** Coconut mousse (0.13 x Recipe Total)
- **10g** Ginger Sea Foam (0.1 x Recipe Total)
- **40g** Mango fluid gel (0.4 x Recipe Total)
- **7g** Passion Fruit Jelly (0.07 x Recipe Total)

METHOD

No Cooking Instructions

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Conclusions

The five components of the *Bioluminescent Ocean* dish were successfully produced and are considered ready for the final session. Overall, the formulations are mostly validated, with only minor issues observed in the crumble and mousse stability.