

# Non-dairy cereal-based cream dessert:

# Rouina



« Babar's Light sweets » Group:

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### **Executive summary**

Bebar's light sweets is going to lunch a new Non-dairy cerealbased cream dessert called Rouina. This product is 100% natural with no added food additives. Rouina product is very healthy because it is only made of cereals (whole grain), These cereals are known for their high calorie content, which will help people to match the daily intake of calories required per day.

#### 1.Description of the Product:

Rouina- Non-dairy cream dessert, 100% natural, composed mainly of cereals and without preservatives.

#### 2. Presentation of the project:

Rouina is a nutritional formulation of cereal-based dessert cream. It is a 100% natural product of vegetable origin. It is composed of cereals mainly wheat, lentils, sesame, oats, corn and another mixture of cereals with approved health benefits. It is a potentially energetic product, intended for all consumers. It does not present any risk to human health since it does not contain any additives or chemical preservatives.

The product that we want to produce is a product inspired by an old traditional Tunisian recipe. This creamy dessert is a mixture of cereals that are combined with an oil mixture (olive oil and vegetable oil). As for the sweetness, it is provided by brown sugar, known for its richness in vitamin B and minerals (calcium, potassium and iron), moreover it is less caloric compared to white sugar.

The objective of the development of this product is to allow consumers to taste a dessert that is both high in energy and healthy. What we propose is to provide to different types of consumers with an energy product that can be eaten in the morning, so that they can start their day in a determined way. It can also be consumed by breastfeeding women because it has been proven to help them increase their milk production.

Our product can therefore be positioned in the health segment because the communication of our product will be based on the following criteria: It is free of chemical ingredients, 100% natural, and exclusively vegetable in origin.

#### **3.Dossier of the Project**

3.1. Originality, creativity and innovative aspects of the product

It is a food product that will be consumed as a non-dairy cream dessert. It is composed only of natural ingredients. It is a very beneficial and energetic product. This product is inspired by a traditional Tunisian recipe. This product does not exist in the Portuguese market. Also, in Tunisia is not produced on an industrial scale.

#### 3.2. Marketing Plan

#### **Concept test**

The concept test allows us to evaluate the marketing acceptability of our product to see if it corresponds to a major expectation, to identify areas of improvement or reformulation, to discern the targets most receptive to the idea and to predetermine the positioning and the axes of promotion of our new product. To do this, we have established an interview guide via google form that was the way to interview the persons we considered to be our targets (See appendix 1). The collected results were analyzed. The survey was conducted online because of the health conditions.

The sample surveyed (N= 32) was composed of 10 men representing 31.3% and 22 women corresponding to 68.8%. The age of the individuals who participated in the survey is mainly between 25 and 35 years, they represent 37.4% of the respondents. Regarding employment, the majority were employees. Regarding the first question "Do you eat dessert creams?", all respondents had indicated that they consume dessert creams.

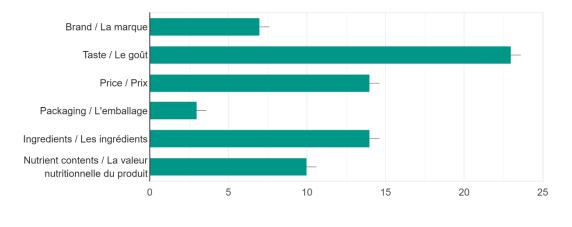
Since the number of pages is limited, we can't detail all the questions, we will only analyze the questions that can help us establish our marketing strategies. The results of the other questions will be included in Appendix 1.

#### Question: What are the most important criteria for you when choosing dessert cream?

The respondents stated that the main criteria for choosing a cream dessert were its taste.

Secondly, the participants are interested in the ingredients as well as the price.

What are the most important criteria for you when choosing dessert cream ? / Quels sont les critères les plus importants pour choisir une crème dessert ? 32 réponses



#### Figure 1.Criteria for choosing a cream dessert

# Question : Please specify your purchase intention for the cereal-based, sugar-free cream dessert ? / Veuillez préciser votre intention d'acheter la crème dessert à base de céréales et sans sucre?

The results show that there are 46.9% of the respondents' said that they will certainly buy Rouina product, while only 6,3% of the respondents stated that they probably will not buy this product. The result implies that our product has a big chance that to be patronized by the consumers based on the resulting findings.

Please specify your purchase intention for the cereal-based, sugar-free cream dessert ? / Veuillez préciser votre intention d'acheter la crème dessert à base de céréales et sans sucre ? <sup>32&nbsp;réponses</sup>

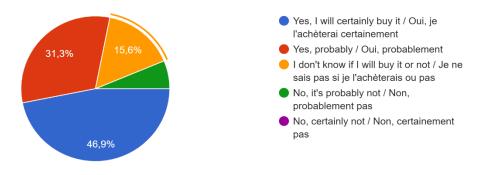


Figure 2. Rouina Product Purchase intention

# Question: What price would you be willing to pay for this product? (25 gr) / Quel prix seriez-vous prêt à payer pour ce produit ? (25 gr)

The majority of our respondents (68.8%) have declared that they are willing to pay between 1-2 euros to acquire the product Rouina.

Figure 3. Willing to pay

#### **Marketing Objectives**

Setting marketing objectives is an essential step in launching a new food product. In our case, we are dealing with a food product that does not exist in the Portuguese market, therefore we aim to achieve the following objectives:

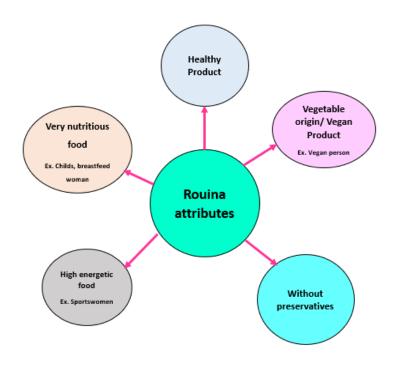
-To be in the mind of the targeted customer as a producer of healthy and tasty products

-To penetrate in the market against the existing competitors

#### **Marketing mix tactics**

#### > Product

Rouina product will be suitable for all types of consumers with the exception of people suffering from cereal allergies, because wheat and oat are ingredients of the product. In the following figure, the positive attributes of Rouina are indicated.



#### Figure 4. Rouina positive attributes

#### **Product solution:**

-Rouina product will provide a solution by giving consumers a nutritious food that can be eaten in breakfast.

-It covers a large part of our daily calorie needs

- It is a product both delicious and beneficial.

#### > Price

As already mentioned, the product will be intended for all consumers, so we must take into consideration the purchasing power of Portuguese consumers.

On the other hand, we will opt for the strategy of "<u>Competitive pricing</u>", meaning that the price will be fixed according to the price range of our competitors.

### Place (Distribution)

We are planning two possible distribution channels:

-The first distribution channel is a direct channel. We will ensure the product delivery. The consumer can place his/her order through our website, where he/she can personalize the product, they want to acquire and compose it according to his/her preferences. This channel allows us to contact the customer directly, letting us to collect feedback from our customers and data about their buying habits.

- The second distribution channel is a short distribution channel. The advantage of this way is that it facilitates the sale of a large number of products. In addition, it gives us the opportunity to be known by a large number of consumers. In the following figure, the different distribution channels are shown.

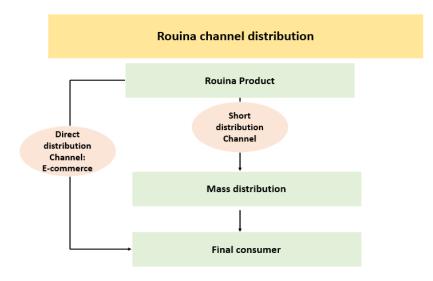


Figure 5. Rouina Channel distribution

#### Promotion

#### Social Media marketing

We will create an account on Instagram and a page on Facebook to promote Rouina product. For example, by publishing videos in which we talk about the benefits of this product.

#### Influencer marketing:

We will use a well-known social media influencer with a healthy lifestyle to promote the Rouina product while highlighting its attributes and functional properties.

#### **Market presentation**

This product is very innovative because there is no non-dairy dessert on the Portuguese market made only of cereals and natural ingredients. Also, in the Tunisian market there is no such product manufactured on an industrial scale.

Moreover, since the product can be consumed at breakfast as a substitute for yogurt or another dairy dessert, we will focus on the dairy segment.

#### Demand analysis

According to a study conducted by (Business plan France, 2020), lactose-free products represent 19% of the total milk market sales in value in Portugal. Nowadays, the Portuguese consumer prefers more natural products and is willing to pay more to satisfy his/her new demands.

The same source has indicated that 9% of the Portuguese population follows a vegan diet.

#### > Supply analysis

The main competitors in the cream desserts and mousses market are:

#### Table 1. Main competitors

Competitor	Product
Reina	PROTEINAS 131 & D
Docereina - Sobremesas, Lda	



#### **SWOT** analysis

We also used the SWOT analysis to define our strengths and weaknesses. Moreover, it allowed us to analyze the external environment that can influence our project, that is to say, the threats or opportunities that can be meet.

#### Our strengths:

- The product is intended for all consumers except people suffering from cereal product allergies (Undifferentiated marketing strategy).
- ✓ Creation of a platform to give consumers the ability to personalize their product.
- ✓ Uncomplicated manufacturing process
- ✓ 100% natural product made from cereals and without additives

#### Our weaknesses:

- ✓ Limited product line.
- The communication of our product will be based solely on social media and influential marketing.

#### **Opportunities**

 $\checkmark$  The cost price is relatively low.

Lack of competitors with the same product offer (a dessert cream of exclusively vegetable origin and without chemical preservatives).

#### **Threats**

- ✓ The raw material will be brought from Tunisia, we may have problems during customs clearance.
- ✓ Penetration of new competitors.

# **3.3.** Technical study: formulation process and process flow chart Innovation techniques

Rouina product is inspired by a traditional Tunisian recipe. We aim to develop this product on an industrial scale with some modifications.

According to Business Dictionary, "product innovation" is defined as "the development and market introduction of a new, redesigned, or substantially improved good or service." It's not only about developing something new and original, it's also about taking what's already there and making it much better.

The original recipe is based on wheat/barley, fennel, lentils, marjoram, and they are mixed only with olive oil. To give more nutritional value to our product, we have added to this traditional recipe, sesame, chickpeas, carob, and oats. These cereals are crushed until obtaining a powder of small particles. The creamy aspect is given by the mixture of two oils (v/v; vegetable oil and olive oil).

As already mentioned, the traditional recipe does not contain sugar. We were afraid that the Portuguese consumers would not appreciate this hard and bitter taste, so we thought of adding brown sugar.

#### Sensory analysis

Twenty-seven consumers (men, women) were invited to participate in the Rouina product acceptance test at the Bragança polytechnic institute. Their main age is 28 years. The respondents were asked to rate their acceptability of the product's attributes using a scale ranging from 1: don't like at all to 5: like it very much. Evaluated attributes are: appearance, Taste, Smell, Spoonable Texture and texture in month. Finally, the respondents were also asked to evaluate the overall product (See Appendix 2).

Now, let's go on to the analysis of the results received. As shown in the figure (5), the attribute least appreciated by respondents was appearance (3.15) while smell was the most appreciated attribute (3.89). The average score given by the participants evaluating the overall product was 3.93. We deduce that our product is appreciated by consumers. Nerveless, we need to make improvements in the product appearance.

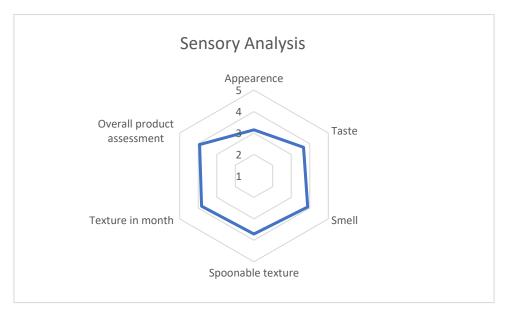


Figure 6. Sensory analysis Product

#### Packaging

For the packaging, we will choose an ecofriendly packaging. The carton package is ecological because it is rapidly biodegradable and recyclable.

This package is made of carton with a PET cover. The carton package is ecological because it is rapidly biodegradable and recyclable.



Figure 7.Packaging

#### Microbiological quality of the product

We recorded a water activity equal to 0.27 which allows us to deduce that our product is stable and does not constitute a favorable environment for microbial proliferation. Therefore, with good hygiene practices, the shelf life Rouina product will be long.

We pass now to expose the nutritional properties of our product.

#### Nutritional propriety

As already mentioned, the Rouina product is a very healthy and energetic product. This is due to the fact that it contains ingredients with approved beneficial effects. In the table below we will talk about the effect of each ingredient.

Ingredient	Health Effect	
C C		
Wheat		
	Prevents Metabolic Disorders	
	Improves Metabolism	
	Promotes Women's Health	
Chickpea	Support Blood Sugar Control	
	Protect Against Certain Chronic Diseases	
Lens	Prevents chronic diseases and several cancers	
Oats	Reduces cholesterol	
Fennel seeds	Reduce inflammation	
	Helps in weight loss	
Carob	Lowers cholesterol	
	Improves digestion	
Marjoram	Boost immune system	
	Prevents anemia	
Olive Oil	Superior skin	
	Fight depression	
	Constant Research Interfere	

#### Table 2.Health Benefits of each ingredient

Source : Personal design

Using the data from the INSA\_pt website, we were able to establish an estimate of the nutritional value of our product. The results are shown in table 2.

Ingredient	Quantity (g)	Alcohol	Carbohydrates (g)	Total sugars(g)	Sucrose(g)	Lipids(g)	Saturated fatty acids(g)	Fiber, total dietary(g)	Organic acids, total(g)	Protein, total(g)	Water (g)	Other (g)
Wheat	8,375	0	6,172375	0,175875	0,025125	0,125625	0,025125	0,276375	0	0,711875	1,013375	0,075375
Chikpea	5	0	2,57	0,14	0,13	0,25	0,025	0,675	0	0,95	0,4	0,155
Lens	2,5	0	1,19	0,03	0,0275	0,0175	0,0025	0,295	0	0,63	0,2575	0,11
Oats	2,5	0	1,425	0,0325	0,0225	0,1825	0,0175	0,1425	0	0,3625	0,3	0,0875
Sesame	2,5	0	0,16	0,01	0,005	1,375	0,2025	0,1375	0	0,5525	0,12	0,155
Fennel seeds	1,375	0	0,03575	0,03575	0	0,0055	0,001375	0,045375	0	0,0385	1,2375	0,012375
Carob	2,5	0	2,14	1,05	0	0,0075	0	0,125	0	0,08	0,08	0,0675
Marjoram	0,25	0	0,10625	0,10625	0	0,0175	0,003	0,0175	0	0,03175	0,019	0,03025
Olive Oil	10	0	0	0	0	9,99	1,44	0	0	0	0	0,1
Vegetable oil	10	0	0	0	0	9,95	1,44	0	0	0	0	0
Sugar Brown	8	0	7,8	7,8	780	0	0	0	0	0	0,16	0,04
Total	53	0	21,599375	9,380375	780,210125	21,921125	3,157	1,71425	0	3,357125	3,587375	0,833

## Table 3.Estimation of the Nutritional Value of Rouina product

Source: Our study,2021

### 3.4. Technological study: simulation of the production on an industrial scale

#### Potential suppliers for industrial production

#### Table 4. Main suppliers

Item	Suppliers
Cereals	Ben Yaghlane, Tunisie
Olive oil and oil	JOSE RODRIGUES FILHOS AZEITES LDA, Braganca, Portugal
Packaging	Copopallhinhas, Portugal

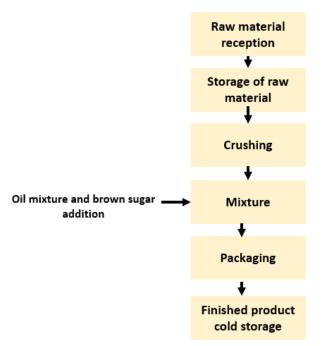
Source: Our study,2021

#### Product process

The manufacturing process of Rouina product on an industrial scale includes the following steps:

- Raw material reception: Once received, the raw material undergoes moisture content measurement and an organoleptic control (we check the smell and the general aspect of the different cereal grains). Before further processing, grains are cleaned.
- Storage: Separate storage of cereals in silos to protect them from humidity.
- > **Crushing**: The grain mixture is crushed in a cereal mill.
- Mixture: To this powder obtained, we first add the brown sugar and then the oil mixture. And we blend the whole thing in a mixer.
- > **Packaging**: The creamy product obtained is packaged in jars using a packaging machine.
- Finished product cold storage: The already packaged product is then transported to the refrigerator for storage. The following figure illustrates our manufacturing process of Rouina product.





#### Figure8.Rouina product process Flow chart (Our study,2021)

The development of the HACCP diagram is essential to guarantee food safety. The HACCP diagram of Rouina product is illustrated in the figure 9.

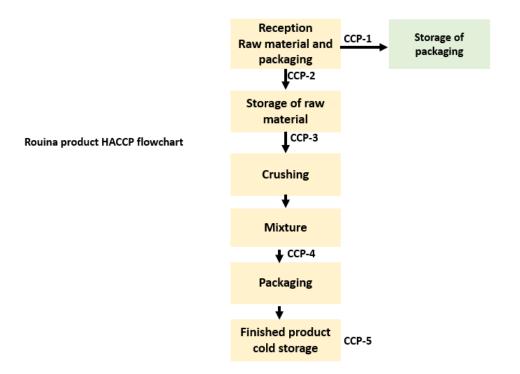


Figure9.Flow chart for Rouina processing showing the critical control points (CCP) that can affect this product (Our study, 2021)

In the following table (table 5), we will detail the different critical points, their nature and the immediate/preventive corrective measures

ССР	Nature of the Hazard	Corrective action
CCP-1 Reception Of raw material	Biological hazards: Presence of mold Chemical Hazard: Presence of pesticide residue Physical Hazard: Presence of glass debris or metals	Return the order
CCP-2 Reception of packaging	Biological hazards: Presence of pathogenic microorganisms on packaging materials Chemical Hazard Packaging material is unsuitable for human consumption/ Contains chemical material harmful to human health	Return the order
	Physical Hazard Presence of hazardous foreign materials (metallic and/or non-metallic) due to improper supplier handling. Biological Hazard	
CCP-3 Storage of raw material	Mold growth due to improper storage: High humidity Chemical Hazard Contamination from cleaning chemical residues that may exist on silo surfaces.	-Drying of cereals by cereal dryers. -Good inventory management: Application of the first-in-first-out system (FIFO) - Monitor the time and temperature of
	Physical Hazard Contamination of cereals with hazardous extraneous materials (metallic and/or non- metallic) Biological Hazard	storage
CCP-4 Final product packaging	Contamination by pathogenic microorganisms due to the presence of contaminated air <b>Chemical Hazard</b> Cereal contamination by the inks used to	
	indicate the expiration date of consumption Physical Hazard	

## Table 5.HACCP plan Template

	Penetration of glass fragments or metals	
	into the finished product	
CCP-5	Biological Hazard	-Monitor the time and temperature of
Final product cold storage	-Microbial growth due to inadequate cold	storage
	storage	
	-Storage beyond the expiry date of	
	consumption.	
	Biological Hazard	- Monitor the time and temperature of
	Microbial growth due to inadequate cold	storage during transport
60D C	storage during transport	-Use tertiary packaging that perfectly
CCP-6	Physical Hazard	protects the jars containing the products
Distribution	Crushing of the pots	

Source: Our study,2021

In addition to these corrective/preventive measures, it is essential to train the employees in good hygiene practices.

#### 3.5. Regulatory study

Food labelling: Regulation1169/2011:

Food safety: Regulation 852/2004

## 3.6. Financial study

This part of the report discusses the financial aspects of the study. All data will be presented in tables.

## Table 6.Revenue Projection

Sales	2022	2023	2024	2025	2026	2027
Quantity of (Rouina Product)	10 080 000,00 €	10 795	11 339 782,27	12 847 973,31	13 625 275,70	15 124 056,03
how you will sell		680,00€	€	€	€	€
Quantities sold	6720000	6854400	7128576	7342433,28	7709554,944	8557605,988
Sales growth rate (quantity)		0,02	0,04	0,03	0,05	0,11
Unit price	1,50€	1,58€	1,59€	1,75 €	1,77€	1,77€
TOTAL	10080000	10795680	11339782,27	12847973,31	13625275,7	15124056,03
VAT (Sales) 0,06	604800	647740,8	680386,9363	770878,3989	817516,542	907443,3616
TOTAL Revenues + VAT	10684800€	11443420,8€	12020169,21€	13618851,71€	14442792,24€	16031499,39€

#### Table 7.Investisments costs

Investment per year 2022	
Investment properties	
Land and natural resources	2000€
Buildings and other constructions	1000€
Other investment properties	
Total investment properties	<b>3000</b> €
Tangible fixed assets	
Land and natural resources	1000€
Buildings and other constructions	1500€
Basic equipment	13798,8€
Transport Equipment	5000€
Office equipment	2000€
Biological assets	1000€
Packaging	5000€
Other	1500€
Total Tangible Fixed Assets	30798,8€
Intangible assets	
Goodwill	0€
Development projects	1000€
Software	2000€
Industrial property	1000€
Promotion costs	2000€
Total Intangible Assets	6000€
Total Investment	<b>39798,8</b> €
VAT 0,06	2387,928€

Table 6. Equipment costs						
Equipment	Costs (€)					
	289.40					
Industrial fridge						
	1815.00					
Industrial mixer						
	1295.00					
Packaging machine						
	3000.00					
Semi-automatic labelling machine	4110.74					

### Table 8. Equipment costs

Grain storage silos	
	657.72*5=3288.6
Total	13798.8

Source: Our study,2021

Table 9.Raw material costs

Ingredient	Price of 1 Kg (TND)	Price in euro for 1000g of each ingredient	Quantity to produce the final product in g (formulation)	Price of final product (€)
Chickpea	3,8	1,13772455	5	0,00568862
wheat	1,5	0,4491018	8,375	0,00376123
Lens	5	1,49700599	2,5	0,00374251
Oats	8	2,39520958	2,5	0,00598802
Sesame	11,8	3,53293413	2,5	0,00883234
Fennel seed	20	5,98802395	1,375	0,00823353
Carob	6	1,79640719	2,5	0,00449102
Marjoram	3	0,89820359	0,25	0,00022455
Olive oil(900g)		4,09	10	0,0409
Vegetable oil (900g)		1,04	10	0,0104
Sugar brown		1,99	8	0,01592
Total			53	0,10818183

TND: is the currency of Tunisia. We note that 1 euro is suitable for 3.34 euros.

### Source: Our study,2021

As shown in Table 9, the raw material cost of a unit of product is very low.

#### Table 10.Human resources costs

Position	Number	Cost	Cost per month	Cost Per annual
Manager and Marketing executive	1	2000	2000	24000
Production worker	3	1200	3600	43200
Quality manager	1	1500	1500	18000
Stock manager	1	1200	1200	14400
Total	6	-	8300	99600

Source: Our study,2021

## 3.7. The eco-innovative aspects of Rouina product

The eco-innovative we consider are checked below.

Eco-innovative Aspects	(X)	Theme	Description (Examples)
1 - Raw materials		Production mode	(Biological Agriculture, etc.)
-		Acquisition / Provisioning	(Transport, route, etc.)
-		Subproducts valorization	(Not used vegetable and animal parts, etc.)
2- Production Mode		Energy and water used	(Quality/Quantity, etc.)
	3	Subproducts valorization	(Creation of a secondary circuit, etc.)
-		Wastes management	(Implemented actions, etc.)
3 - Packaging		Used materials	(Secondary sector, use of recycled material, etc.)
		Packaging shape	(Transport logistics, linear positioning, etc.)
	5	Global packaging	(Primary Packaging, Secondary Packaging, etc.)
		End life	(Reuse, recycle, etc.)
4 – Distribution	X	Distribution method	(Local, national, etc.)
	$\times$	Marketing strategy	(Advertisement, announcements, etc.)
5 – Enterprise Politics		Norms and certifications	(ISO, BRC, IFS, GLOBAL G.A.P., etc.)
-		Social and environmental responsibility	(Carbon footprint, ACV, RSE, etc.)
6 - Others	5	Others	()

## Photos

## Raw material preparation



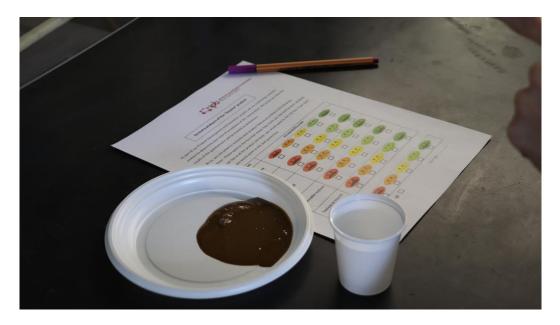


## Rouina Final Product preparation





Sensorial analysis

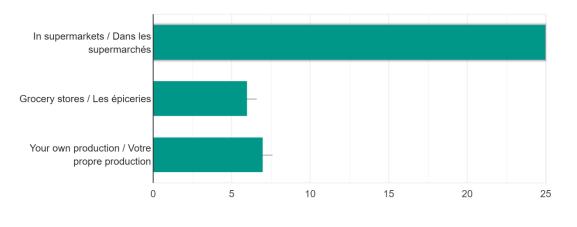




#### Appendix 1:Results of the online survey

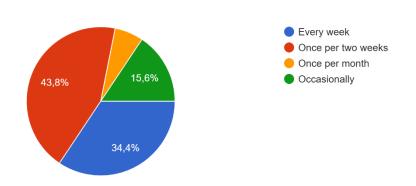
From where do you buy the cream dessert you eat? / D'où achetez-vous les crèmes dessert que vous mangez ?

32 réponses

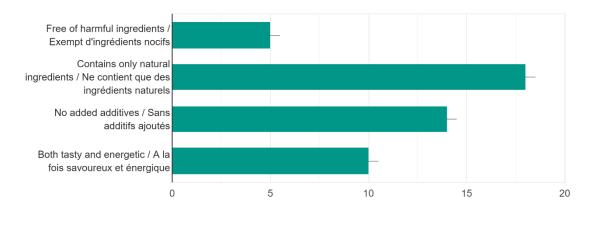


If you find cereal-based and sugar-free cream dessert and at a good price, how often will you buy it?

32 réponses

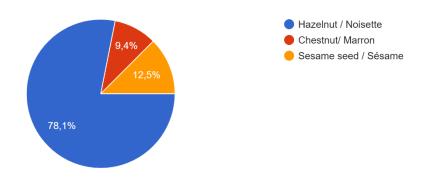


What encourages you the most to buy this new product? / Qu'est-ce qui vous incite le plus à acheter ce nouveau produit ? 32 réponses

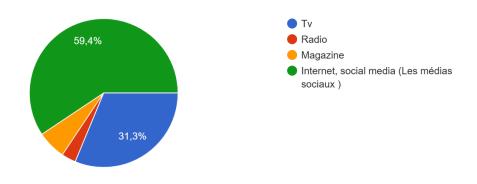


Which taste do you prefer the most of this cream dessert ? / Quel goût préférez-vous pour cette crème dessert ?

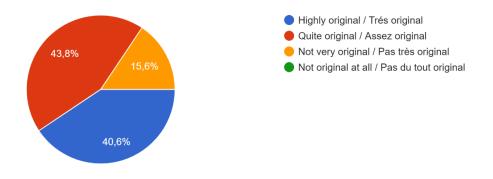
32 réponses



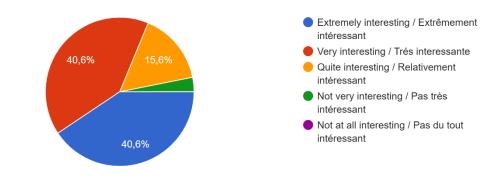
In general, how would you prefer to be informed by this product? / En général, comment préférez-vous être informé par ce produit ? 32 réponses



Compared to other dessert creams available on the market, would you consider this product to be...? / Par rapport aux autres crèmes dessert disp...es sur le marché, diriez-vous que ce produit est...? 32 réponses



What do you think about creating an online platform that will allow you to buy this product (cereal-based and sugar-free cream dessert) and...mposer votre crème dessert comme vous voulez ? 32 réponses



#### Appendix 2: Sensory analysis sheet



## Sensory analysis of the "Rouina" product

As part of our Development of product and Innovation project, we are conducting a sensory analysis to determine your level of acceptance of this new product. We assure you that the results of this questionnaire will be treated as anonymous.

In order to do so, you are asked to evaluate each product feature according to the following instructions: Please point to the face that shows how much you like each product attribute. If you do not like at all the product attribute, you would point to the red face. If you like it very much, you would point to the dark green face.

Attributes	Acceptability scale				
Appearance					
Taste					
Smell					
Spoonable texture					
Texture in month					

Your	gender:	F	
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Your age: .....