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APPENDIX

1. Approval recipe



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

APPROVAL RECIPE

Recipe Name : PUMPKIN SEEDS MILK ICE CREAM
TITLE OF C&D : UTILIZATION OF PUMPKIN SEEDS AS A MILK
SUBSTITUTE IN MAKING LACTOSE-FREE ICE
CREAM
Yield : 3-5 portion
Main Ingredients : 150 g Roasted Pumpkin Seeds
Ingredients :

- Pumpkin Seeds Milk:
 - 150 g Roasted Pumpkin Seeds
 - 300 ml Water
- Lactose-free Ice Cream:
 - 250 ml Pumpkin Seeds Milk
 - 50 g Egg Yolk
 - 4 ml Vanilla Extract
 - 35 g Sugar
 - 1 g Salt
 - 200 ml Non-diary Whipping Cream

Method :

- Pumpkin Seeds Milk:
 1. Add the roasted pumpkin seeds and water to a blender. Blend on high speed for about 2-3 minutes until smooth.
 2. Strain the mixture using cheesecloth for a smoother texture.
 3. Pour the strained liquid into a saucepan and heated it on medium to low heat and stir occasionally. Cooked for about 5-10 minutes.
- Lactose-free Ice Cream:
 1. In a saucepan, heat the pumpkin seed milk over low to medium heat until it is warm but not boiling. Stir occasionally.
 2. In a separate bowl, whisk egg yolk, sugar, salt, and vanilla extract, until the egg mixture turns pale.



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

3. Temper the egg by slowly pour a small amount of the warm pumpkin seeds milk into the egg mixture, whisking constantly.
4. Pour the tempered egg mixture back into the saucepan and heat over medium to low heat, stirring constantly with silicon spatula until the mixture become thicker, and coats the back of a spoon.
5. Remove from the heat and let the mixture cool to room temperature.
6. In a separate bowl, whip the non-dairy whipping cream until stiff peaks, and gently fold the whipped cream into the chilled custard base (cooked egg mixture) until well combines.
7. Pour the mixture into a container and place it in the freezer.
8. After around 30 minutes, stir vigorously with a fork or whisk to break up the ice crystals. Repeat this process until the ice cream texture is smooth.
9. Let the ice cream freeze until firm.

Product Description

This lactose-free pumpkin seed milk ice cream is a dairy-free dessert that made with homemade pumpkin seed milk, egg yolk, and non-dairy whipping cream. It's specifically crafted for individuals with lactose intolerance, dairy allergies, or nut allergies. By using pumpkin seeds milk, this ice cream offers an allergen-friendly option, rich in healthy fats, and nutrition such as fibers, protein, magnesium, and iron which can support heart health and digestion, also it is free from any artificial preservative.

TRIAL PROGRESS

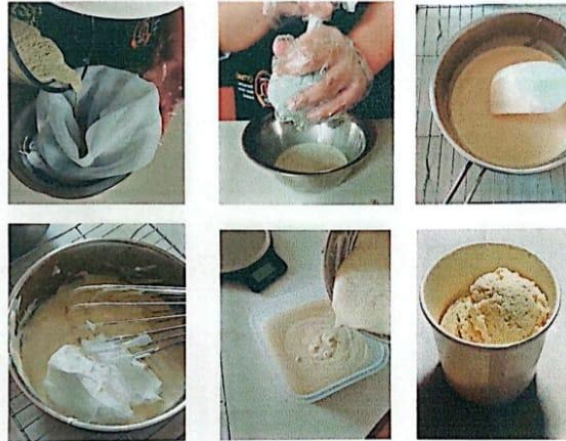
The trial has almost fulfilled the expectation and standart, resulting in a creamy, dairy-free dessert with a unique nutty flavour from the pumpkin seeds. The main issue with the pumpkin seeds milk ice cream was its texture, which was not smooth as expected. This was likely due to the lack of frequent blending after it reached semi-frozen state. Despite this, the ice cream still can be enjoyed. In the



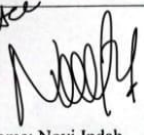
CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

next trial, the blending frequency will be increased to achieve a creamier texture and further enhance the overall quality of the ice cream.

TRIAL DOCUMENTATION



Student Name : Shannon Marilyn Kale
NIM : 2374130010039

Advisor	1 st Examiner	2 nd Examiner
 Name: Elma Sulistiya, S.TP., M.Sc. Date: 21/3 - 2025	 Name: Novi Indah Permata Sari, S.T., M. Sc Date: 22/3/2025	 Name: Chef Arya Putra Sundjaja, S.E. Date: 21/3 - 2025

2. Sensory Test



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CULINARY ARTS, GASTRONOMY, BAKING & PASTRY ARTS

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

DATE : 11 April 2025

NAME : Shannon Marilyn Kale

NIM : 2374130010039

PRODUCT : UTILIZATION OF PUMPKIN SEEDS AS A MILK SUBSTITUTE IN
MAKING LACTOSE-FREE ICE CREAM

ADVISOR : Elma Sulistiya, S.TP., M. Sc

PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	4	4	2	4	4	18
Panelist 2	4	3	5	5	5	22
Panelist 3	4	4	5	5	4	22
Panelist 4	4	4	4	5	5	22
Panelist 5	4	4	4	4	4	20
Panelist 6	4	4	5	5	5	23
Panelist 7	4	4	3	3	3	17
Panelist 8	3	4	2	4	4	17
Panelist 9	5	5	4	5	4	23
Panelist 10	4	4	5	5	4	22
TOTAL	40	40	39	45	42	206

NOTES :

1. slightly too sweet. grainy texture
2. Tidak ada
3. All good, not too sweet, seed flavor is well noted.
4. Considering to change the name into Kwaci Milk Ice Cream
5. sedikit diberi sprinkle sepertinya lebih menarik
6. Good, tetapi baunya kurang keluar
7. Texture is coarse/icy for an ice cream, also has a bit of a starchy mouthfeel
8. Has a bit rough ice crystal texture
9. Overall sudah oke, namun bisa di ulik lagi di bagian tekstur, ketika dia beku sangat keras. Mngkin bisa di coba lsg dengan ratio fat dan sugar content yf berbeda
10. All good



3. Consultation form

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CULINARY ARTS GASTRONOMY BAKING/CAKUP/ARTS

Akademi Kuliner & Patiseri

CONSULTATION FORM
CULINARY INNOVATION AND
NEW PRODUCT DEVELOPMENT

Name : Shannon Maslun Kale

Student Number : 2374130010039

Advisor : MS. Elma Sulistyga S.P., M

No	Date	Topic Consultation	Name/Signature	Advisor Signature
1	23/02	Konsultasi Produk Cereal Cooke dari Ubi Ungu		MS. Elma
2	19/3	Konsultasi Produk Pumpkin Seeds Milk Vagina + Telting hari Trial Produk.		
3	19/3	Hasil trial produk Ice cream & Resep		Elma.
4	2/5	Konsultasi Proposal (Bab 1,2,3)		Elma.
5	6/5	Revisi proposal		Elma.
6	7/5	Revisi Proposal (Bab 1,2,3)		

No	Date	Topic Consultation	Name/Signature	Advisor Signature
7	19/6	Kontul laporan Bab 1-5 + Revisi		Elma.
8	25/6	Kontul laporan Bab 1-5 + Acc		Elma.

4. Systematic Process Documentation

- 1) Blend the roasted pumpkin seeds with water



- 2) Extract the pumpkin seeds milk



- 3) Heat the pumpkin seeds milk



- 4) Mix and cook the custard base with pumpkin seeds milk until the texture thickened



- 5) Whip the non-dairy cream



- 6) Fold the custard base with whipped non-dairy cream



7) Transfer into container



8) When it reached semi-frozen state, stir it with fork



9) Final product

