

**THE USAGE OF ARTIFICIAL CREAM IN MAKING
DARK CHOCOLATE *MOUSSE***

FINAL PROJECT

Which is proposed as one of the requirements to pass the Associate's
Degree Study Program.



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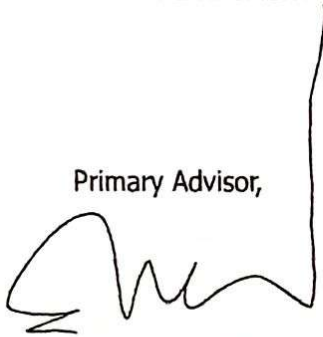
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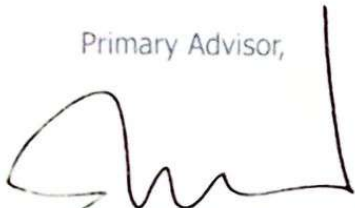
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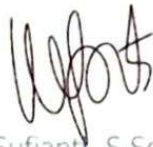
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1. Final Assignment/Final Project entitled: **The Usage Of Artificial Cream In Making Dark Chocolate Mousse.**
This is the result of my own work and research, not the result of plagiarism, quoting, compilation by other people or parties or other methods that are not in accordance with the academic provisions that apply at NHI Bandung Polytechnic Of Tourism and the ethics that apply in the scientific community except direction from the Guidance Team.
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4. Thus, I made this Statement Letter truly to be able to be used as it should be.

Bandung, 19th Of December 2024

He who made the statement,
Marcel Syarif



PREFACE

In the process of making this final project, The author would like to thank God as he has given the capability and understanding to finish and accomplish this very own final project that's titled "The Usage Of Artificial Cream In Making Chocolate *Mousse*". This final project is proposed as it is one of the requirements to graduate from NHI Bandung Polytechnic Of Tourism in order to obtain an associate's degree in the baking and pastry arts study program.

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The author also sincerely hopes that this final project will be of immense use and it will be able to contribute to the advancements and development in the baking and pastry industry and that it is of great relevance as well to the general public by providing solutions for certain culminations and situations.

Bandung, 19th Of December 2024

Marcel Syarif

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REFERENCES

- Agusman (2013). *Pengujian Organoleptik*. From <https://tekpan.unimus.ac.id>. Accessed on the 7th of November 2024. Page 4.
- Barringer (2014). *Handbook Of Food Powders*. "Coating Foods With Powders". Ohio State University, USA, 2014.
- Berdos et al (2020). "Fish Entrails Meal As Feed For Broilers (Gallus Gallus Domesticus) : Its Potential As Dietary Supplements On The Carcass Quality And Meat Organoleptic Evaluation". *Turkish Journal Of Veterinary And Animal Sciences*. Accessed on the 11th of October 2024.
- Bisen, Prakash. (2015). "*An Artificial Liquid Cream For Utilization In Unsweetened Cooking And Applications*". Jiwaji University, India, May 2015. Accessed on the 11th of October 2024.
- Cheng et al (2021). *Trends In Food Science And Technology*. "Starch - based biodegradable packaging materials : A review of their preparation, characterization and diverse applications in the food industry" School Of Food Science And Technology, Jiangnan University, China, 2021.
- Cole & Kramer (2016). *Human Physiology, Biochemistry and Basic Medicine*. "Seeing, Hearing, Tasting, Smelling and Touching". 2016. Chapter 3.5.
- Gafour, Walid & Aly, Esmat (2020). "*Organoleptic, Textural And Whipping Properties Of Whipped Cream With Different Stabilizer Blends*". Food Technology Research Institute, Agricultural Research Center 9 Elgamaa Street, Egypt. 23rd of September 2020.
- Hermawan, Devina (2020). "*Resep Whip Cream! [Tanpa SP, Tanpa Mixer, 100% Sukses]*". By Devina Hermawan. Accessed on the 17th of September 2024. Published on the 14th of August 2020.
- Jiang et al (2014). *Encyclopedia Of Agriculture And Food Systems*. "Food Safety : Food Analysis Technologies/Techniques". 2014.
- Konar et al (2016). *Trends In Food Science & Technology*. "Improving Functionality Of Chocolate : A Review On Probiotic, Prebiotic And/Or Synbiotic Characteristics". 5th of January 2016. Page 35 - 44.

- Kumar & Yaashikaa (2019). [Water In Textiles And Fashion](#). “Introduction - Water”. Department of Chemical Engineering, SSN College of Engineering, Chennai, India. 2019.
- Marlise & Grenha (2015). [Advances In Protein Chemistry And Structural Biology](#). "Polysaccharide Nanoparticles For Protein And Peptide Delivery : Exploring Less - Known Materials". University Of Rio Grande do Sul PUCRS, Porto Alegre, Brazil.
- Matheyambath et al (2015). [Encyclopedia Of Food And Health](#). “Citrus Fruits”. University Of Guelph, Canada, 2015.
- Melisa, Angelina (2022). "[Perbedaan Whipping Cream Dairy vs Whipping Cream Non - Dairy. Wajib Diketahui!](#)" Accessed on the 6th of October 2024. www.media.bakingworld.id.
- Mock, Nancy. (2024). "[What Is Mousse?](#)". Accessed on the 7th of October 2024 on www.tasteofhome.com.
- Nguyen et al. (2015). [Journal Of Food Engineering](#). “Effect Of Thermal Treatment On Physical Properties And Stability Of Whipping And Whipped Cream”. 23rd of April 2025.
- Phillips (2024). "[Candy - Sugar Syrup Temperature Chart](#)". From www.craftybaking.com. Accessed on the 7th of November 2024.
- Rosida, Dedin (2016). [Agriculture And Agricultural Science Procedia 9\(5\): 431 - 439](#). “A Comparative Study Of Non - Dairy Cream Based On The Type Of Leguminosae Protein Source In Terms Of Physico Chemical Properties And Organoleptic”. December 2016.
- Scott (2016). [101 : Chocolate Tempering](#). From www.devilsfoodkitchen.com. Accessed on the 17th of September 2024.
- Scott (2018). "[Chocolate Mousse](#)". From www.devilsfoodkitchen.com. Accessed on the 7th of November 2024.
- Singh & Agarwal (2018). [Trends In Food Science & Technology](#). “Polycyclic Aromatic Hydrocarbons In Diet ; Concern For Public Health”. National Institute of Food Technology Entrepreneurship and Management, India, 2018.

- Stone et al (2020). [Sensory Evaluation Practices \(Fifth Edition\)](#). “Chapter 7 - Affective Testing” Pages 297 - 336. 23rd of October 2020.
- Sulaiman, S, dan Kusherdyana. (2016). *Pengantar Statistika Pariwisata*, CV Alfabeta, Bandung,
- Sullivan, Matthew. (2022). [“Mengenal Apa Itu Mousse Dan Tips Pembuatannya”](#). Accessed on the 7th of October 2024 on www.kioskcokelat.com.
- Suryono, C. dkk. (2018). *Uji Kesukaan dan Organoleptik Terhadap 5 Kemasan dan Produk Kepulauan Seribu Secara Deskriptif*, *Jurnal Pariwisata*, Vol. 5 No. 2.
- Swiers (2024). [“The Historical Connection Between Chocolate Mousse And Toulouse - Lautrec”](#). From www.tastingtable.com. Accessed on the 14th of December 2024.
- Tanner, David (2016). [“Impacts Of Storage On Food Quality”](#). Start Afresh Limited, Mount Maunganui, New Zealand. December 2016.
- Thepkamnoet et al (2021). [ACTA Scientific Nutritional Health \(ISSN:2582-1423\)](#). “Effects Of Alternative Ingredients And Processing Conditions On The Quality Of Liquid Non - Dairy Coffee Creamer: A Review”. Department of Food Technology, Faculty of Food Science and Technology, University Putra Malaysia, Selangor, Malaysia. 21st of December 2021.
- Tomaso (2023). “The Textural Difference Between *Mousse* And Pudding”. From www.mashed.com. Accessed on the 15th of November 2024.
- Webster, Murray & Sell, Jane (2014). [Laboratory Experiments In The Social Sciences \(Second Edition\), Pages 5 - 21](#). “Chapter 1 - Why Do Experiments?”. 11th of July 2014.
- Yapo (2009). [Bioresource Technology](#). “Lemon Juice Improves The Extractability And Quality Characteristics Of Pectin From Yellow Passion Fruit By - Product As Compared With Commercial Citric Acid Extractant”. 28th of February 2009.