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LAMPIRAN

Lampiran 1 . *Certificate of Analysis* (COA) Minyak Atsiri Cengkeh (*Syzygium aromaticum*)



Importer of Essential Oils, Absolutes, and Carrier Oils
Jakarta, Indonesia Customessentialoil@gmail.com Phone 081295037988

Certificate of Analysis

Product	: Clove Bud Organic Essential Oil	
Batch No	: 50006002091	
Best Before	: May, 2025	
Properties	Specifications	Results
Appearance	: Pale yellow to yellow clear liquid.	Complies
Odor	: Characteristic clove, fresh odor.	Complies
Solubility	: Soluble in alcohol and oils. Insoluble in water.	Complies
Specific Gravity	: 1.0300 to 1.0800 @ 20°C	1.0447
Optical Rotation	: -1° to +2° @ 20°C	-0.59°
Refractive Index	: 1.5000 to 1.5500 @ 20°C	1.5297
Eugenol	: 60 - 95 %	74.70
B-caryophyllene	: 9 - 18 %	9.46
Eugenol Content	: 1 - 9 %	7.09

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Storage: Store in air tight containers; in a cool dry area; away from direct sunlight.

Lampiran 2 . Certificate of Analysis (COA) Methyl Paraben**Certificate of Analysis**

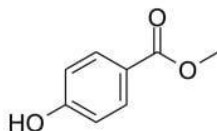
Inhibitors • Screening Libraries • Proteins

Methyl Paraben

Cat. No.: HY-N0349
CAS No.: 99-76-3
Batch No.: 33250
Chemical Name: Benzoic acid, 4-hydroxy-, methyl ester

PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula: C₈H₈O₃
Molecular Weight: 152.15
Storage: Powder -20°C 3 years
4°C 2 years
In solvent -80°C 6 months
-20°C 1 month

Chemical Structure:**ANALYTICAL DATA**

Appearance: White to off-white (Solid)
¹H NMR Spectrum: Consistent with structure
Purity (HPLC): 99.71%
Conclusion: The product has been tested and complies with the given specifications.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

Lampiran 3 . Certificate of Analysis (COA) Propyl Paraben



Alpha Chemika
ISO 9001 Quality System certified Organization
House Of Unlimited Chemicals



euroTECH
CERTIFIED ISO 9001:2015

ALPHA CHEMIKA, 102, 1st Floor, B Wing, Savgan Heights, RTO Road, Four Bunglow, Andheri (W), Mumbai 400 053. Maharashtra (India)
Tel: +91 22 65218147 ● +91 22 26317055 ● +91 22 26330745 ● TeleFax : 91-22-26317055 ● Mobile : +91 9820 385757 ● +91 9769 472001
Skype ID : tanmay1977 ● Email: info@alphachemika.co.in / sales@alphachemika.co.in

CERTIFICATE OF ANALYSIS

Name Of Item : PROPYL-P-HYDROXY BENZOATE **Formula :** C₁₀H₁₂O₃
(Propyl Paraben)

M.W. : 180.21 **Batch No. :**

CAS NO. : 94-13-3 **Cat. No. :** AL3848 05000

Date Of Mfg. : **Date of Analysis :**

Type Of Test	Standard	Observed
Description	White crystalline powder	White crystalline powder
Assay	99.5 - 100.5%	99.60%
Impurities reacting acid	Passes test	Passes test
Lead (Pb)	<0.001%	0.0008%
Copper (Cu)	<0.0025%	<0.0025%
Zinc (Zn)	<0.0025%	0.002%
Arsenic (As)	<0.0003%	0.0002%
Loss on drying at 60°C/2hrs	<0.5%	0.4%
Sulphated ash	<0.05%	0.048%

Results : The above product complies with LR grade

Registered Under Small Scale Industries Maharashtra (India)

Lampiran4 . Certificate of Analysis (COA) Gliserin



CERTIFICATE OF ANALYSIS

Nama Bahan : Glycerin PH
 Batch : J 0373/18
 (8085038811)
 Ex : P & G Chemicals, Singapura
 ED : 10/2024
 Grade : Farma

<i>Jenis Pemeriksaan</i>	<i>Persyaratan FI IV</i>	<i>Hasil</i>
Pemerian	Cairan, jernih, tidak berwarna, tidak berbau, rasa manis diikuti rasa hangat, higroskopik	Sesuai
Kelarutan	Dapat bercampur dengan air dan etanol, praktis tidak larut dalam kloroform dan dalam eter	Sesuai
Identifikasi	Panaskan dengan kalium bisulfat P; terjadi uap merangsang	Positif
pH	5,5 – 7,5	5,8
Index Bias	1,471-1,474	1,472
Susut Pengeringan	≤ 2,0 %	0,00%
Bobot jenis	1,255 g/ml – 1,260 g/ml sesuai dengan kadar 98,0% – 100,0%	1,260 g/mL

Lampiran 5 . Certificate of Analysis (COA) Triethanolamine (TEA)

Specification

8.22341.5000 Triethanolamine EMPLURA®

Specification		
Assay (GC, area%)	≥ 99.0	% (a/a)
Density (d 20 °C/ 4 °C)	1.122 - 1.125	
Water (K. F.)	≤ 0.30	%
Identity (IR)	passes test	

Due to its specific melting range the product may be solid, liquid, a solidified melt or a supercooled melt.

Dr. Oliver Schramel
Responsible laboratory manager quality control

This document has been produced electronically and is valid without a signature.

Lampiran 6. Certificate of Analysis (COA) Vitamin E



Certificate of Analysis
Vitamin E

Test Items	Specifications	Test Results
Physical & Chemical Data		
Color	brownish red	Complies
Odour	Mild characteristic	Complies
Appearance	liquid	Complies
Analytical Quality		
Acidity	$\leq 1\text{ml}$	0.67 ml
Identification	To conform USP 30	Complies
Specific Rotation	$\geq +20^\circ$	+24.6°
Content of total tocopherols	$\geq 96.0\%$	96.35%
Alpha tocopherol		7%
(Beta+Gamma) tocopherol		55.55%
Delta tocopherol		32.8%
D-(Beta+gamma +Delta) tocopherol in total tocopherols	$\geq 80.0\%$	85.48%
Contaminants		
Heavy metals	$\leq 10\text{ppm}$	Complies

From GMO-free soybeans.

Lampiran 7 . Certificate of Analysis (COA) Asam Stearat



HASIL PEMERIKSAAN

Nama Bahan : Acid Stearic Lokal
 Batch : JT 0024/18 (B 180104-22 W)
 Ex : Wilfarin (PT. Wilmar Nabati Indonesia)
 ED : 04-2025
 Grade : Teknis

Jenis pemeriksaan	Persyaratan usp nf 19	Hasil
Pemerian	Zat padat mengkilat menunjukkan susunan hablur, putih atau kuning pucat, mirip lemak lilin	granul bulat, putih mengkilap
Kelarutan	Praktis tidak larut dalam air, larut dalam kloroform, larut dalam ethanol 95% dan dalam eter	sesuai
Bilangan asam	194-212 ml KOH/gr	204.22 mg KOH/gr
Bilangan sabun	200-220 ml KOH/gr	207.96 mg KOH/gr

Kesimpulan : Memenuhi syarat

Cikarang, 10 – 02 – 2018

Pemeriksa

Aptria Wariski
Staff QC

Penanggung Jawab



Dra. Tri Hartati
Apoteker
SIK.3836/B

HEAD OFFICE	: J. Cikarang Barat No. 78, Jakarta Pusat 10150, Telp. (021) 3522736 (hunting) Fax. : (021) 3522734, E-mail : brataco@brataco.com
BRANCH OFFICE	<ul style="list-style-type: none"> • JAKARTA : J. Mangga Besar V No.5, Jakarta 11180 Telp. (021) 6290113 (hunting 3 lines) Fax. (021) 6292430 • BANDUNG : J. Boulevard Raya Blok TSD No. 5, Jakarta 14240 Telp. (021) 4564992-94 Fax. (021) 4532615 • KALITING HI. 8, Bandung Telp. (022) 8077126, 8030638 Fax. (022) 8031978 • TANGERANG : J. Torsten Jakarta No. 773, Bandung Telp. (022) 7101277, 7210309-309 Fax. (022) 7210310 • SEMARANG : J. Brigjen. Katsmo No. 19 Telp. (024) 8415272, 8415999 Fax. (024) 8414980 • YOGYA : J. Bhyangkara No. 45, Yogya Telp. (0274) 543048, 515390 Fax. (0274) 543349 • SURABAYA : J. Tidar No. 89, Surabaya Telp. (031) 5322887, 5325057 Fax. (031) 5310485 • MEDAN : J. Iskandar Muda no. 40 B, Medan Telp. (061) 4148272, 4523150 Fax. (061) 4525986
SUB BRANCH OFFICE	: TANGERANG, BOGOR, CIKARANG, CIREBON, TASIKMALAYA, SOLO, PURWOKERTO, TEGAL, MALANG, SIDOARJO, DENPASAR, PALEMBANG, MAKASSAR

The Nationwide Chemicals and Ingredients Distributor

Lampiran 8. Certificate of Analysis (COA) Cetyl Stearyl Alkohol



TFA
บริษัท ไทยฟัตตี้แอลกอฮอล์ จำกัด
Thai Fatty Alcohols Co., Ltd.

Head office: 555/1 Energy Complex Building A, 15th Fl., Vibhavadi-Rangsit Rd.,
Chomphon, Chatuchak, Bangkok 10900 Thailand.
Tel: +66 (0) 2265 8400 Fax: +66 (0) 2265 8125
Factory: 10 Soi G.12, Eastern Industrial Estate, Pakorn Songkhrao-Rat Rd.,
Tambon Map Ta Phut, Amphur Muang Rayong, Rayong 21150
Tel: +66 (0) 38994000 Fax: +66 (0) 38977444
Visit our website: www.thaifatty.com

Certificate of Analysis

Product: ThaiOL 1618
Description: Cetyl-Stearyl Alcohol
Batch No: 1217042008
Tank No: 3200T009B
Lab Report No: LAR-C4-1704-01440

Characteristics	Analysis Method	Specification	Result
Appearance	Visual check	White solid or Pastilles	White solid/ Pastilles
Colour, APHA	In house Method Base on ISO 6271-1:2004 (E)	0- 10	3
Acid value, mg KOH/g	In house Method Base on DIN EN ISO 660-1996	0- 0.1	0.02
Sap. value, mg KOH/g	In house Method Base on ISO 3657:2002 (E)	0- 1.0	0.4
Hydroxyl value, mg KOH/g	In house Method Base on ASTM E 1899-02	210-220	215.7
Water content, %	ASTM E203-01	0- 0.3	0.068
Chain distribution, %	In house Method Base on Reference No.970059-0		
C14		0-3	0.02
C16		22-32	26.77
C18		66-76	72.47
C20		0-3	0.11
Iodine value, g Iodine/100g	ISO 3961-1996	0-0.5	0.04
Solidification range, °C	ISO 3841-1997	50-54	53.4
Hydrocarbon, %	In house Method Base on Reference No.970059-0	0-0.5	<0.01
Carbonyl Number, mg/kg	In house Method Base on Reference No.980144-01	150 max.	60

We hereby verify the analysis of the sample as shown above.
Agornsri Thavornchan
Senior Technical Support Engineer (QA)

(This is a computer generated document and will not bear any signature)

Manufacturing Date: 20 April 2017

Expiry Date: 19 April 2019

The test values listed above were determined from selected, representative samples taken from the batch(es) to be delivered.
The above information only applies to material directly after production. It does not release the purchaser from conducting his own incoming inspection and does not release a guarantee of certain characteristics, or of the suitability of the product for a certain



Lampiran 9. Certificate of Analysis (COA) Setil Alkohol

AKÖMA™

FROM THE HEART

CERTIFICATE OF ANALYSIS CETYL ALCOHOL

DESCRIPTION

Product: Cetyl Alcohol 98%
 INCI Name: Cetyl Alcohol
 CAS No: 36653-82-4
 EINECS No: --

CHARACTERISTICS

Test	Analysis	Specification
Appearance	Complies	Waxy flakes
Solubility & Clarity (Molten)	Complies	Complies
Colour, (APHA)	5	20 maximum
Acid Value (mg KOH/g)	<0.01	1.0 maximum
Saponification Value (mg KOH/g)	0.20	2.0 maximum
Iodine Value, gI-/100g	<0.04	2.0 maximum
Hydroxyl Value (mg KOH/g)	233.0	218 - 238
Moisture Content, %	0.118	0.3 maximum
Solidification Point, °C	49.0	46.0 - 52.0 maximum
Chain Length Distribution (%)		
C14	0.09	3.0 maximum
C16	99.00	95.0 maximum
C18	0.050	3.0 maximum

This product has been tested and passes EP monograph for Cetyl Alcohol

We confirm that the above is a true copy of the original manufacturer's/supplier's COA.

We believe the information herein to be reliable. However, no warranty, express or implied, is made as to its accuracy or completeness, and none is made as to the fitness of this material for any purpose.

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Page 1 of 1

Akoma International (UK) LTD

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 Nottingham Road
 Derby
 DE21 6AS

Tel: +44 (0) 1332 613 967

E-mail: support@akoma.zcndesk.com

Cetyl Alcohol - COA

Lampiran 10. Certificate of Analysis (COA) Vanilin



Importer of Essential Oils, Absolutes, and Carrier Oils
 Jakarta, Indonesia Customessentialoil@gmail.com Phone 081295037988

Certificate of Analysis

Issued Date : 08 February 2022

Name : Vanilla Butter Fragrance Oil

Sensory & Analytical Data

Document/Batch Number : 211202/691108
 Production Date : 02 December 2021
 Best Before : 02 December 2023
 Shelf Life : 24 Months in fully sealed containers

Test Item	Specification	Test Method	Result
Color	Yellow	Organoleptic	Passed
Physical State	Clear Mobile Liquid	Organoleptic	Passed
Density	1.0813 – 1.1217	Density Meter	1.1089
Specific Gravity (@20°C)	1.0833 – 1.1237	Refractometer	1.1109
Refractive Index (@20°C)	1.5177 – 1.5581	Refractometer	1.5511

Storage Condition : Store unopened containers with temperature between 10°C to 25°C

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#1/20210009

Lampiran 11 . Certificate of Analysis (COA) Aquadest

CERTIFICATE OF ANALYSIS

Product Name	: AQUADEST	Molecular Weight	: 18.02 g/mol
Catalog No.	: A-1078	Batch No.	: 110518007
Grade	: Laboratory Reagent	Manufacturing Date	: May 11, 2018
Formula	: H ₂ O	Expire Date	: May, 2023
Cas No	: 7732 - 18 - 5		

NO.	ITEM TEST	UNITS	SPECIFICATION	RESULT
1.	Appearance	-	Clear and free of visible particulate	Passes test
2.	Conductivity at 25 °C	uS/cm	≤ 1.0	0.18
3.	pH at 25 °C	-	5.0 - 7.5	7.1
4.	Turbidity	NTU	≤ 0.5	< 0.5
5.	Total Dissolve Solid (TDS)	ppm	≤ 0.5	0.09
6.	Residu on evaporation	ppm	≤ 1.0	NIL
7.	Total Organic Carbon (TOC)	ppm	≤ 50	< 50
8.	Total Hardness	ppm	≤ 0.1	NIL
9.	Chloride (Cl)	ppm	≤ 0.5	0.35
10.	Silica (as SiO ₂)	ppm	≤ 0.5	< 0.1
11.	Iron (Fe)	ppm	≤ 0.1	0.0375
12.	Aromatic Hydrocarbon	ppm	Free of Hydrocarbon	NIL

Lampiran 12. Dokumentasi Penimbangan Bahan

No.	Dokumentasi	Keterangan
-----	-------------	------------



1.

(a)

(b)

Penimbangan Asam
stearat sebanyak:

- a. asam stearat 5gram
- b. asam stearat 10gram
- c. asam stearat 15gram
- d. asam stearat 20gram



(c)

(d)

2.



Minyak atsiri cengkeh
ditimbang sebanyak 0,1
gram

3.



Penimbangan setil
alkohol sebanyak 1 gram

4.



Penimbangan stearil
alkohol sebanyak 1 gram

5.



Penimbangan metil
paraben sebanyak 0,05
gramram

6.



Penimbangan propil
paraben sebanyak 0,02
gram

7.



Penimbangan gliserin
sebanyak 10 gram

8.



Penimbangan tea
sebanyak 1 gram

9.






Penimbangan tokofenol
sebanyak 1 gram

10.



Penimbangan parfum /
pewangi vanilin
sebanyak 0,01 gram

Lampiran 13. Pembuatan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Dokumentasi	Keterangan
	<p>Lakukan Penimbangan bahan</p>
	<p>Panaskan Bahan yang termasuk Fase air (gramiserin, metil paraben, tea dan aquadest) diatas penangas air dengan suhu 65-70 ° C</p>
	<p>Bahan yang termasuk fase minyak (asam stearat, setil alkohol, stearil alkohol, dan propil paraben dileburkan pada suhu 65- 70 ° C</p>



Mortir dihangatkan menggunakan air panas.



Jika face air sudah panas, maka masukan kedalam mortir yang sudah dihangatkan lalu gerus perlahan.





Tambahkan fase minyak sedikit demi sedikit kedalam mortir yang berisi fase air dengan proses digerus secara perlahan hingga kedua fase tercampur dengan baik hingga membentuk basis *krim*.



Tambahkan minyak atsiri cengkeh (*Syzigium aromaticum*) selama 5 menit gerus hingga homogen.







Tambahkan pewangi (vanilin) dan homogenkan.

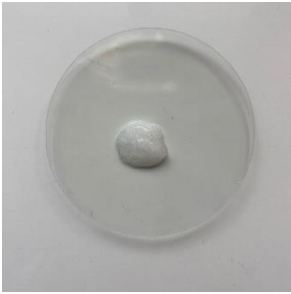
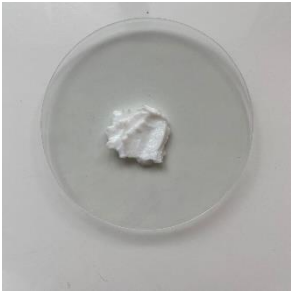

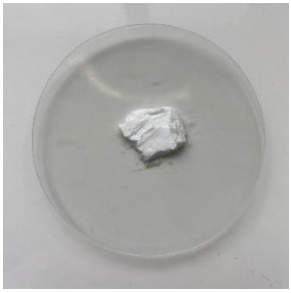



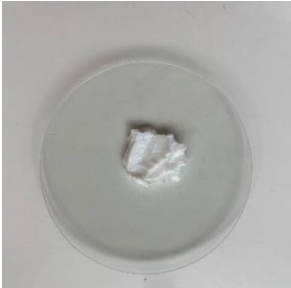
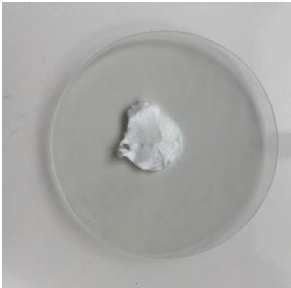
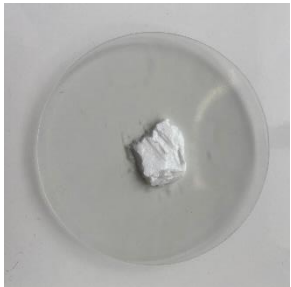
Pindahkan kedalam wadah penyimpanan & lakukan evaluasi sediaan.

Lampiran 14. Hasil dokumentasi Formulasi Sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)









Formulasi	Dokumentasi Formulasi & Replikasi
F1	
F2	
F3	
F4	

Lampiran 15. Dokumentasi uji organoleptik sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Formulasi	Hasil Pengamatan Sebelum <i>Cyling test</i>			
	Warna	Bau	Bentuk	Dokumentasi
F1	Putih	Khas vanilin	Semi padat	
F2	Putih	Khas vanilin	Semi padat	
F3	Putih	Khas vanilin	Semi padat	
F4	Putih	Khas vanilin	Semi padat	

Formulasi	Hasil Pengamatan Sesudah <i>Cyling test</i>			
	Warna	Bau	Bentuk	Dokumentasi
F1	Putih	Khas vanilin	Semi padat	
F2	Putih	Khas vanilin	Semi padat	
F3	Putih	Khas vanilin	Semi padat	
F4	Putih	Khas vanilin	Semi padat	

Lampiran 16. Dokumentasi uji pH seiaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Formulasi	Replikasi	Dokumentasi	
		Sebelum <i>Cyling test</i>	Sesudah <i>Cyling test</i>
F1	R1		
	R2		
	R3		
F2	R1		

R2



R3











F3

R1


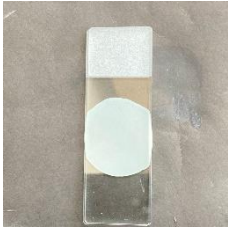

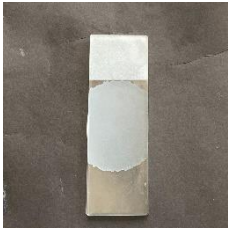






R2

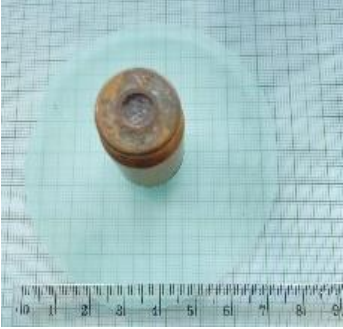



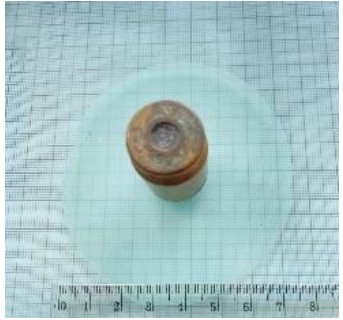





R3	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid. The digital display shows a reading of 6.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid. The digital display shows a reading of 5.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.
F4 R1	 A yellow digital pH meter is held by a hand. The digital display shows a reading of 6.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid with orange slices. The digital display shows a reading of 5.1. The meter has 'pH' printed at the top and 'ATC' at the bottom.
R2	 A yellow digital pH meter is held by a hand. The digital display shows a reading of 6.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid with orange slices. The digital display shows a reading of 5.1. The meter has 'pH' printed at the top and 'ATC' at the bottom.
R3	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid. The digital display shows a reading of 6.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.	 A yellow digital pH meter is shown in a glass beaker containing a yellow liquid. The digital display shows a reading of 5.5. The meter has 'pH' printed at the top and 'ATC' at the bottom.

Lampiran 17. Dokumentasi Uji Homogenitas sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Formulasi	Sebelum <i>cyling test</i>		Sesudah <i>Cyling test</i>	
	Keterangan	Dokumentasi	Keterangan	Dokumentasi
F1	Homogen		Homogen	
F2	Homogen		Homogen	
F3	Homogen		Homogen	
F4	Homogen		Homogen	

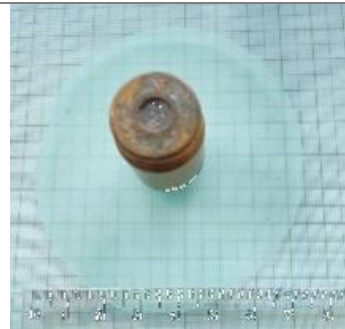
Lampiran 18. Dokumentasi Uji daya sebar sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Formulasi	Replikasi	Dokumentasi	
		Sebelum <i>Cyling test</i>	Sesudah <i>Cyling test</i>
F1	R1		
	R2		
	R3		
F2	R1		

R2

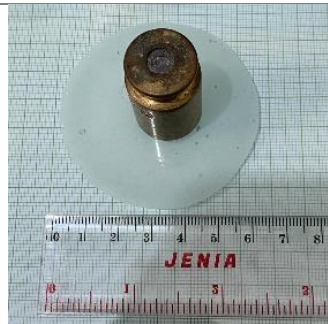


R3

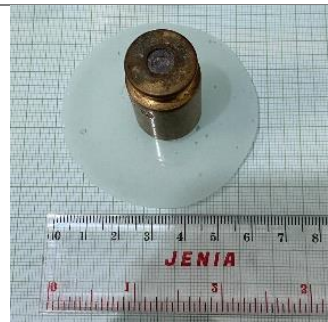


F3

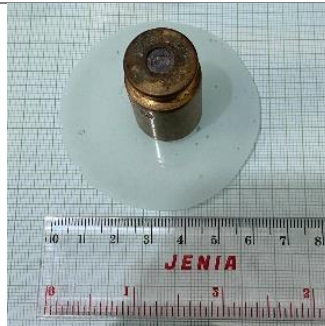
R1



R2

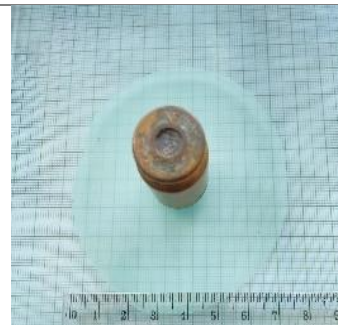


R3



F4

R1







R2





R3



Lampiran 19. Dokumentasi Uji Tipe *krim* sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

No.	Formulasi	Keterangan	Dokumentasi
1.	F1	M/A (Minyak dalam air)	
2.	F2	M/A (Minyak dalam air)	
3.	F3	M/A (Minyak dalam air)	
4.	F4	M/A (Minyak dalam air)	

Lampiran 20. Dokumentasi Uji Viskositas sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)

Formulasi	Replikasi	Dokumentasi	
		Sebelum <i>Cyling test</i>	Sesudah <i>Cyling test</i>
F1	R1		
	R2		
	R3		
F2	R1		

R2

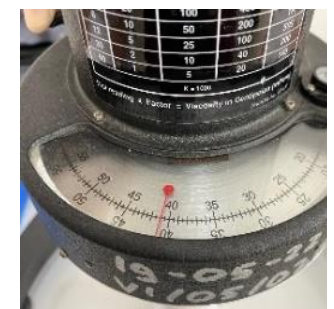


R3



F3

R1



R2



R3



F4

R1



R2



R3



Lampiran 21. Dokumentasi Uji daya lekat sediaan *krim* antioksidan minyak atsiri cengkeh (*Syzigium aromaticum*)



Lampiran. Dokumentasi Uji *Cyling test*

Pengukur suhu Ruang



Suhu Ruang



Pengatur suhu lemari dingin 4°C



Suhu dingin 4°C



Lampiran 22. Perhitungan bahan pembuatan *krim* antioksidan

1. Perhitungan Formula 1

- a. Minyak atsiri 0,1 % $= \frac{0.1}{100} \times 100 \text{ ml} = 0,1 \text{ g}$
- b. Asam stearate 5% $= \frac{5}{100} \times 100 \text{ ml} = 5 \text{ g}$
- c. Setil alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- d. Stearat alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- e. Metil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- f. Propil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- g. Gliserin 10% $= \frac{10}{100} \times 100 \text{ ml} = 10 \text{ g}$
- h. Trietanolamin (TEA) 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- i. Tokofenol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- j. Vanilin 0,01 % $= \frac{0.01}{100} \times 100 \text{ ml} = 0,01 \text{ g}$

2. Perhitungan Formula 2

- a. Minyak atsiri 0,1 % $= \frac{0.1}{100} \times 100 \text{ ml} = 0,1 \text{ g}$
- b. Asam stearate 10% $= \frac{10}{100} \times 100 \text{ ml} = 10 \text{ g}$
- c. Setil alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- d. Stearat alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- e. Metil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$

- f. Propil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- g. Gliserin 10% $= \frac{10}{100} \times 100 \text{ ml} = 10 \text{ g}$
- h. Trietanolamin (TEA) 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- i. Tokofenol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- j. Vanilin 0,01 % $= \frac{0,01}{100} \times 100 \text{ ml} = 0,01 \text{ g}$

3. Perhitungan Formula 3

- a. a. Minyak atsiri 0,1 % $= \frac{0,1}{100} \times 100 \text{ ml} = 0,1 \text{ g}$
- b. Asam stearate 15% $= \frac{15}{100} \times 100 \text{ ml} = 15 \text{ g}$
- c. Setil alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- d. Stearat alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- e. Metil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- f. Propil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- g. Gliserin 10% $= \frac{10}{100} \times 100 \text{ ml} = 10 \text{ g}$
- h. Trietanolamin (TEA) 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- i. Tokofenol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- j. Vanilin 0,01 % $= \frac{0,01}{100} \times 100 \text{ ml} = 0,01 \text{ g}$

4. Perhitungan Formula 4

- a. Minyak atsiri 0,1 % $= \frac{0,1}{100} \times 100 \text{ ml} = 0,1 \text{ g}$
- b. Asam stearate 20% $= \frac{20}{100} \times 100 \text{ ml} = 20 \text{ g}$
- c. Setil alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- d. Stearat alkohol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- e. Metil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- f. Propil paraben 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- g. Gliserin 10% $= \frac{10}{100} \times 100 \text{ ml} = 10 \text{ g}$
- h. Trietanolamin (TEA) 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- i. Tokofenol 1% $= \frac{1}{100} \times 100 \text{ ml} = 1 \text{ g}$
- j. Vanilin 0,01 % $= \frac{0,01}{100} \times 100 \text{ ml} = 0,01 \text{ g}$

Lampiran 23. Perhitungan viskositas sediaan *krim*

A. Perhitungan viskositas awal sebelum *cyling test*

Rumus: **Viskositas** (μ) = (skala x faktor perkalian) Cps

Keterangan : Spindel 64

Kecepatan 12 Rpm = 500

F= Formulasi

R = Replikasi

1. Perhitungan Viskositas Formulasi 1

- a. $F_1 R_1 = (\mu) = (29 \times 500) \text{ Cps}$
= 14.500 Cps
- b. $F_1 R_2 = (\mu) = (29 \times 500) \text{ Cps}$
= 14.500 Cps
- c. $F_1 R_3 = (\mu) = (28,5 \times 500) \text{ Cps}$
= 14.250 Cps

2. Perhitungan Viskositas Formulasi 2

- a. $F_2 R_1 = (\mu) = (38 \times 500) \text{ Cps}$
= 19.000 Cps
- b. $F_2 R_2 = (\mu) = (29 \times 500) \text{ Cps}$
= 14.500 Cps
- c. $F_2 R_3 = (\mu) = (28,5 \times 500) \text{ Cps}$
= 14.250 Cps

3. Perhitungan Viskositas Formulasi 3

- a. $F_3 R_1 = (\mu) = (52 \times 500) \text{ Cps}$
= 26.000 Cps
- b. $F_3 R_2 = (\mu) = (52,5 \times 500) \text{ Cps}$
= 26.250 Cps
- c. $F_3 R_3 = (\mu) = (53,5 \times 500) \text{ Cps}$
= 26.750 Cps

4. Perhitungan Viskositas Formulasi 4

- a. $F_4 R_1 = (\mu) = (57,5 \times 500) \text{ Cps}$
= 28.500 Cps
- b. $F_4 R_2 = (\mu) = (55 \times 500) \text{ Cps}$
= 27.500 Cps
- c. $F_4 R_3 = (\mu) = (54 \times 500) \text{ Cps}$
= 27. 000Cps

B. Perhitungan viskositas Akhir setelah *cyling test*

Rumus: **Viskositas** (μ) = (skala x faktor perkalian) Cps

Keterangan : Spindel 64

Kecepatan 12 Rpm = 500 faktor perkalian

F= Formulasi

R = Replikasi

1. Perhitungan Viskositas Formulasi 1

$$\begin{aligned} \text{a. } F_1 R_1 = (\mu) &= (15 \times 500) \text{ Cps} \\ &= 7.500 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{b. } F_1 R_2 = (\mu) &= (13 \times 500) \text{ Cps} \\ &= 6.500 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{c. } F_1 R_3 = (\mu) &= (13 \times 500) \text{ Cps} \\ &= 6.500 \text{ Cps} \end{aligned}$$

2. Perhitungan Viskositas Formulasi 2

$$\begin{aligned} \text{a. } F_2 R_1 = (\mu) &= (34 \times 500) \text{ Cps} \\ &= 17.000 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{b. } F_2 R_2 = (\mu) &= (35 \times 500) \text{ Cps} \\ &= 17.500 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{c. } F_2 R_3 = (\mu) &= (37 \times 500) \text{ Cps} \\ &= 18.500 \text{ Cps} \end{aligned}$$

3. Perhitungan Viskositas Formulasi 3

$$\begin{aligned} \text{a. } F_3 R_1 = (\mu) &= (40 \times 500) \text{ Cps} \\ &= 20.000 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{b. } F_3 R_2 = (\mu) &= (36 \times 500) \text{ Cps} \\ &= 18.000 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{c. } F_3 R_3 = (\mu) &= (37,5 \times 500) \text{ Cps} \\ &= 18.750 \text{ Cps} \end{aligned}$$

4. Perhitungan Viskositas Formulasi 4

$$\begin{aligned} \text{a. } F_4 R_1 = (\mu) &= (51,5 \times 500) \text{ Cps} \\ &= 25.750 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{b. } F_4 R_2 = (\mu) &= (52 \times 500) \text{ Cps} \\ &= 26.000 \text{ Cps} \end{aligned}$$

$$\begin{aligned} \text{c. } F_4 R_3 = (\mu) &= (50 \times 500) \text{ Cps} \\ &= 25.000 \text{ Cps} \end{aligned}$$

Lampiran 24 . Hasil data hasil uji evaluasi PH *krim*

Formulasi	Replikasi	Nilai pH		Syarat	Keterangan	
		Awal	Akhir			
F1	1	6,5	5,0	Berdasarkan SNI pH <i>krim</i> diperbolehkan yaitu direntang 4,5 – 6,5 (Kurniawati <i>et al.</i> , 2019)	Memenuhi syarat	
	2	6,5	5,1			
	3	6,5	5,1			
Rata- rata		6,5	5,1			
F2	1	6,4	5,1			Memenuhi syarat
	2	6,5	5,1			
	3	6,5	5,0			
Rata-rata		6,5	5,1			
F3	1	6,5	5,4			Memenuhi syarat
	2	6,4	5,5			
	3	6,5	5,5			
Rata- rata		6,5	5,5			
F4	1	6,6	5,6		Memenuhi syarat	
	2	6,5	5,4			
	3	6,5	5,5			
Rata-rata		6,5	5,5			

Lampiran 25. Hasil data hasil uji evaluasi daya sebar *krim*

Formulasi	Replikasi	Nilai hasil uji		Syarat	Keterangan	
		Awal	Akhir			
F1	1	7,1 cm	7,6 cm	Menurut Tari & Indriani (2023) Daya sebar <i>krim</i> yang baik antara 5- 7 cm.	Tidak Memenuhi syarat	
	2	7,0 cm	7,3 cm			
	3	6,9 cm	7,5 cm			
Rata-rata		7,0 cm	7,5 cm			
F2	1	6,6 cm	7,1 cm			Tidak Memenuhi syarat
	2	6,8 cm	7,2 cm			
	3	6,7 cm	7,1 cm			
Rata- rata		6,7 cm	7,1 cm			
F3	1	6,5 cm	6,9 cm			Memenuhi syarat
	2	6,5 cm	6,7 cm			
	3	6,4 cm	6,8 cm			
Rata-rata		6,5 cm	6,8 cm			
F4	1	5,5 cm	5,9 cm		Memenuhi syarat	
	2	5,3 cm	5,7 cm			
	3	5,6 cm	5,8 cm			
Rata-rata		5,5 cm	5,8 cm			

Lampiran 26. Hasil uji evaluasi daya lekat *krim*

Formulasi	Replikasi	Hasil Uji		Syarat	Keterangan		
		Awal	Akhir				
F1	1	01,92	01, 57	Menurut Tari & Indriani (2023) Syarat nilai uji daya lekat yang baik untuk <i>krim</i> adalah 2-300 detik.	Tidak memenuhi syarat		
	2	01,84	01, 76				
	3	01,94	01, 63				
Rata- rata		01.90	01,70				
F2	1	02,67	02, 56		Menurut Tari & Indriani (2023) Syarat nilai uji daya lekat yang baik untuk <i>krim</i> adalah 2-300 detik.	Memenuhi syarat	
	2	03, 45	02, 73				
	3	02,75	02, 35				
Rata-rata		03.00	02,50				
F3	1	03, 67	03,58			Menurut Tari & Indriani (2023) Syarat nilai uji daya lekat yang baik untuk <i>krim</i> adalah 2-300 detik.	Memenuhi syarat
	2	03, 82	03, 42				
	3	03, 76	03,15				
Rata- rata		03,80	03,40				
F4	1	03,82	04,30	Menurut Tari & Indriani (2023) Syarat nilai uji daya lekat yang baik untuk <i>krim</i> adalah 2-300 detik.			Memenuhi syarat
	2	04,52	04,20				
	3	04, 39	03,78				
Rata- rata		04,20	04,10				

Lampiran 27 . Hasil uji evaluasi viskositas *krim*

Formulasi	Replikasi	Hasil uji		Syarat	Keterangan		
		Awal	Akhit				
F1	1	14.500 cps	7.500 cps	Berdasarkan SNI 16-4399-1996 viskositas standar pada <i>krim</i> adalah 2.000-50.000 cps (Mailana, 2016).	Memenuhi syarat		
	2	14.500 cps	6.500 cps				
	3	14.250 cps	6.500 cps				
Rata- rata		14.416 cps	6.833 cps				
F2	1	19.000 cps	17.000 cps		Berdasarkan SNI 16-4399-1996 viskositas standar pada <i>krim</i> adalah 2.000-50.000 cps (Mailana, 2016).	Memenuhi syarat	
	2	18.750 cps	17.500 cps				
	3	18.500 cps	18. 500 cps				
Rata- rata		18.750 cps	17.666 cps				
F3	1	26.000 cps	20.000 cps			Berdasarkan SNI 16-4399-1996 viskositas standar pada <i>krim</i> adalah 2.000-50.000 cps (Mailana, 2016).	Memenuhi syarat
	2	26.250 cps	18.000 cps				
	3	26.750 cp	18.750 cps				
Rata-rata		26.333 cps	18.916 cps				
F4	1	28.500 cps	25.750 cps	Berdasarkan SNI 16-4399-1996 viskositas standar pada <i>krim</i> adalah 2.000-50.000 cps (Mailana, 2016).			Memenuhi syarat
	2	27.500 cps	26.000 cps				
	3	27.000 cps	25.000 cps				
Rata- rata		27.666 cps	25.583 cps				

Lampiran 28. Hasil Uji SPSS

1. UJI NORMALITAS DAN HOMOGENITAS FORMULA

Tests of Normality							
	Formula	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PH	F1	.319	6	.056	.710	6	.008
	F2	.307	6	.080	.734	6	.014
	F3	.302	6	.093	.753	6	.021
	F4	.301	6	.094	.787	6	.044
Daya_Sebar	F1	.183	6	.200*	.940	6	.660
	F2	.270	6	.197	.892	6	.331
	F3	.251	6	.200*	.927	6	.557
	F4	.121	6	.200*	.983	6	.964
Daya_Lekat	F1	.166	6	.200*	.920	6	.508
	F2	.335	6	.034	.847	6	.148
	F3	.188	6	.200*	.928	6	.564
	F4	.208	6	.200*	.897	6	.356
Viskositas	F1	.308	6	.079	.733	6	.014
	F2	.312	6	.069	.878	6	.259
	F3	.294	6	.115	.804	6	.064
	F4	.187	6	.200*	.974	6	.921

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
PH	26.852	3	20	.000
Daya_Sebar	.759	3	20	.530
Daya_Lekat	.621	3	20	.610
Viskositas	63.897	3	20	.000

2. UJI KRUSKAL WALIS PADA FORMULA PH DAN VISKOSITAS

Ranks

	Formula	N	Mean Rank
PH	F1	6	11.25
	F2	6	10.33
	F3	6	13.17
	F4	6	15.25
	Total	24	
Viskositas	F1	6	3.50
	F2	6	10.42
	F3	6	16.00
	F4	6	20.08
	Total	24	

Test Statistics^{a,b}

	PH	Viskositas
Chi-Square	1.820	18.652
df	3	3
Asymp. Sig.	.611	.000

a. Kruskal Wallis Test

b. Gramouping Variable: Formula

3. UJI ONE WAY ANOVA PADA FORMULA DAYA SEBAR DAN DAYA LEKAT

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Daya_Sebar	Between Gramoups	8.621	3	2.874	50.938	.000
	Within Gramoups	1.128	20	.056		
	Total	9.750	23			
Daya_Lekat	Between Gramoups	19.362	3	6.454	81.725	.000
	Within Gramoups	1.579	20	.079		
	Total	20.941	23			

4. Post Hoc Daya Sebar dan Daya Lekat

Multiple Comparisons

Dependent Variable: Daya_Sebar

Tukey HSD

(I) Formula	(J) Formula	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
F1	F2	.3000*	.0882	.038	.018	.582
	F3	.5333*	.0882	.001	.251	.816
	F4	1.5333*	.0882	.000	1.251	1.816
F2	F1	-.3000*	.0882	.038	-.582	-.018
	F3	.2333	.0882	.110	-.049	.516
	F4	1.2333*	.0882	.000	.951	1.516
F3	F1	-.5333*	.0882	.001	-.816	-.251
	F2	-.2333	.0882	.110	-.516	.049
	F4	1.0000*	.0882	.000	.718	1.282
F4	F1	-1.5333*	.0882	.000	-1.816	-1.251
	F2	-1.2333*	.0882	.000	-1.516	-.951
	F3	-1.0000*	.0882	.000	-1.282	-.718

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

Dependent Variable: Daya_Lekat

Tukey HSD

(I) Formula	(J) Formula	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
F1	F2	-1.05667*	.23497	.009	-1.8091	-.3042
	F3	-1.85000*	.23497	.000	-2.6025	-1.0975
	F4	-2.34333*	.23497	.000	-3.0958	-1.5909
F2	F1	1.05667*	.23497	.009	.3042	1.8091
	F3	-.79333*	.23497	.039	-1.5458	-.0409
	F4	-1.28667*	.23497	.003	-2.0391	-.5342
F3	F1	1.85000*	.23497	.000	1.0975	2.6025
	F2	.79333*	.23497	.039	.0409	1.5458
	F4	-.49333	.23497	.232	-1.2458	.2591
F4	F1	2.34333*	.23497	.000	1.5909	3.0958
	F2	1.28667*	.23497	.003	.5342	2.0391
	F3	.49333	.23497	.232	-.2591	1.2458

*. The mean difference is significant at the 0.05 level.

5. UJI NORMALITAS UNTUK UJI STABILITAS

Hasil Analisis Data untuk Stabilitas Fisik

Uji Normalitas pada Stabilitas pH

1. Normalitas

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1_Sebelum	.	3	.	.	3	.
F2_Sebelum	.385	3	.	.750	3	.000
F3_Sebelum	.385	3	.	.750	3	.000
F4_Sebelum	.	3	.	.	3	.
F1_Sesudah	.385	3	.	.750	3	.000
F2_Sesudah	.385	3	.	.750	3	.000
F3_Sesudah	.385	3	.	.750	3	.000
F4_Sesudah	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

2. Wilcoxon

	Test Statistics ^a			
	F1_Sesudah - F1_Sebelum	F2_Sesudah - F2_Sebelum	F3_Sesudah - F3_Sebelum	F4_Sesudah - F4_Sebelum
Z	-1.633 ^b	-1.604 ^b	-1.604 ^b	-1.604 ^b
Asymp. Sig. (2- tailed)	.102	.109	.109	.109

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Uji Normalitas Pada Stabilitas Daya Sebar

1. Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1_Sebelum	.175	3	.	1.000	3	1.000
F2_Sebelum	.175	3	.	1.000	3	1.000
F3_Sebelum	.385	3	.	.750	3	.000
F4_Sebelum	.253	3	.	.964	3	.637
F1_Sesudah	.253	3	.	.964	3	.637
F2_Sesudah	.385	3	.	.750	3	.000
F3_Sesudah	.175	3	.	1.000	3	1.000
F4_Sesudah	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

2. Paired Test

Paired Samples Test

	Mean	Std. Deviation	Paired Differences			t	df	Sig. (2-tailed)
			Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 F1_Sebelum - F1_Sesudah	-.4667	.1528	.0882	-.8461	-.0872	-5.292	2	.034
Pair 2 F2_Sebelum - F2_Sesudah	-.4667	.0577	.0333	-.6101	-.3232	-14.000	2	.005
Pair 3 F3_Sebelum - F3_Sesudah	.3333	.1155	.0667	-.6202	-.0465	-5.000	2	.038
Pair 4 F4_Sebelum - F4_Sesudah	.3333	.1155	.0667	-.6202	-.0465	-5.000	2	.038

Uji Normalitas pada Stabilitas Daya Lekat

1. Uji Normalitas

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1_Sebelum	.314	3	.	.893	3	.363
F2_Sebelum	.352	3	.	.826	3	.178
F3_Sebelum	.219	3	.	.987	3	.780
F4_Sebelum	.320	3	.	.884	3	.335
F1_Sesudah	.262	3	.	.957	3	.600
F2_Sesudah	.195	3	.	.996	3	.884
F3_Sesudah	.234	3	.	.979	3	.720
F4_Sesudah	.317	3	.	.888	3	.348

a. Lilliefors Significance Correction

2. Uji Paired test

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	F1_Sebelum - F1_Sesudah	.24667	.14572	.08413	-.11531	.60865	2.932	2	.099
Pair 2	F2_Sebelum - F2_Sesudah	.41000	.30512	.17616	-.34797	1.16797	2.327	2	.145
Pair 3	F3_Sebelum - F3_Sesudah	.36667	.26160	.15103	-.28318	1.01651	2.428	2	.136
Pair 4	F4_Sebelum - F4_Sesudah	.15000	.56454	.32593	1.25238	1.55238	.460	2	.691

Uji Normalitas pada Stabilitas Viskositas

1. Normalitas

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1_Sebelum	.385	3	.	.750	3	.000
F2_Sebelum	.175	3	.	1.000	3	1.000
F3_Sebelum	.253	3	.	.964	3	.637
F4_Sebelum	.253	3	.	.964	3	.637
F1_Sesudah	.385	3	.	.750	3	.000
F2_Sesudah	.253	3	.	.964	3	.637
F3_Sesudah	.232	3	.	.980	3	.726
F4_Sesudah	.292	3	.	.923	3	.463

a. Lilliefors Significance Correction

2. Paired Test

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	F1_Sebelum - F1_Sesudah	7583.333	520.416	300.463	6290.547	8876.120	25.239	2	.002
Pair 2	F2_Sebelum - F2_Sesudah	1083.333	1010.363	583.333	-1426.547	3593.214	1.857	2	.204
Pair 3	F3_Sebelum - F3_Sesudah	7416.667	1233.221	712.000	4353.177	10480.157	10.417	2	.009
Pair 4	F4_Sebelum - F4_Sesudah	2083.333	629.153	363.242	520.431	3646.236	5.735	2	.029

DAFTAR RIWAYAT HIDUP



Peneliti bernama Sthefany Sumandana, lahir di Kota Palangka Raya pada tanggal 13 Mei 2001 dengan berjenis kelamin perempuan beragama Kristen Protestan. Lahir sebagai anak pertama dari dua bersaudara, dari pasangan bapak Markus Kristian dan ibu Alisnawati. Penulis bertempat tinggal di RT/RW 008/001 kelurahan Panarung, Kecamatan Pahandut, Kota Palangkaraya, Provinsi Kalimantan Tengah. Peneliti menyelesaikan pendidikan Sekolah Dasar di SDN-1 Tumbang Labehu, Pendidikan Sekolah Menengah Pertama di SMPN-1 Sanaman Mantikei, Sekolah Menengah Atas di SMAN- 4 Kota Palangka Raya. Pendidikan D-III Farmasi di Universitas Muhammadiyah Palangkaraya, dan melanjutkan Pendidikan tinggi S-1 Alih Jenjang di Universitas Borneo Lestari selama 2 tahun sebagai salah satu syarat memperoleh gelar sarjana farmasi pada tahun 2024. Peneliti melakukan penelitian dan penyusunan skripsi dengan judul: “Formulasi dan Uji Sediaan *Krim* Antioksidan Minyak Atsiri Cengkeh (*Syzigium aromaticum*)” Dibawah bimbingan Ibu apt. Fairuz Yaumil Alfra., M.Farm dan Ibu Norhayati., M. Farm.