

LAMPIRAN

Lampiran 1. Perhitungan Penimbangan Bahan

Minyak biji bunga matahari (*Sunflower seed oil*) yang dibutuhkan

$$F(1) = \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$$

$$F(2) = \frac{6}{100} \times 20 \text{ gram} = 1,2 \text{ gram} \times 6 \rightarrow 7,2 \text{ gram}$$

$$F(3) = \frac{9}{100} \times 20 \text{ gram} = 1,8 \text{ gram} \times 6 \rightarrow 10,8 \text{ gram}$$

$$F(4) = \frac{12}{100} \times 20 \text{ gram} = 2,4 \text{ gram} \times 6 \rightarrow 14,4 \text{ gram}$$

Jadi, total seluruh minyak biji bunga matahari (*Sunflower seed oil*) yang dibutuhkan adalah sebanyak 36 gram.

Formula dasar *lotion* (Ariefiani, 2021:28) dengan beberapa penyesuaian.

Shea butter (<i>Butyrospermum parkii</i> butter)	5	%
Magnesium chloride	0,25	%
Stearic acid	15	%
Emulsifying wax	5	%
Gliserin	3	%
Xanthan gum	0,5	%
Triethanolamin (TEA)	1,5	%
Nipagin	0,1	%
Nipasol	0,015	%
Lavender essential oil	q.s	
Aquadest	q.s	

Pada penelitian ini dilakukan 4 (empat) perlakuan yaitu, F1 (minyak biji bunga matahari konsentrasi 3 %), F2 (minyak biji bunga matahari konsentrasi 6 %), F3 (minyak biji bunga matahari konsentrasi 9 %), dan F4 (minyak biji bunga matahari konsentrasi 12 %).

1. F1= Formula *lotion* kombinasi *magnesium oil* dan minyak biji bunga matahari (*Sunflower seed oil*) konsentrasi 3 %

- a. Sunflower seed oil $= \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$
- b. Shea butter $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$
- c. Mg chloride $= \frac{0,25}{100} \times 20 \text{ gram} = 0,05 \text{ gram} \times 6 \rightarrow 0,3 \text{ gram}$
- d. Emulsifying wax $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$
- e. Gliserin $= \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$
- f. Xanthan gum $= \frac{0,5}{100} \times 20 \text{ gram} = 0,1 \text{ gram} \times 6 \rightarrow 0,6 \text{ gram}$
- g. Nipagin $= \frac{0,1}{100} \times 20 \text{ gram} = 0,02 \text{ gram} \times 6 \rightarrow 0,12 \text{ gram}$
- h. Nipasol $= \frac{0,015}{100} \times 20 \text{ gram} = 0,003 \text{ gram} \times 6 \rightarrow 0,018 \text{ gram}$
- i. Lavender essential $= 10 \text{ tetes} \times 6 \rightarrow 60 \text{ tetes}$
- j. Aquadest $= 20 \text{ gram} - (0,6 + 1 + 0,05 + 1 + 0,6 + 0,1 + 0,02 + 0,003) \text{ gram}$
 $= 20 \text{ gram} - 3,373 \text{ gram}$
 $= 16,627 \text{ gram} \rightarrow 17 \text{ ml} \times 6 = 102 \text{ ml}$

2. F2= Formula *lotion* kombinasi *magnesium oil* dan minyak biji bunga matahari (*Sunflower seed oil*) konsentrasi 6 %

- a. Sunflower seed oil $= \frac{6}{100} \times 20 \text{ gram} = 1,2 \text{ gram} \times 6 \rightarrow 7,2 \text{ gram}$
- b. Shea butter $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$
- c. Mg chloride $= \frac{0,25}{100} \times 20 \text{ gram} = 0,05 \text{ gram} \times 6 \rightarrow 0,3 \text{ gram}$
- d. Emulsifying wax $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$
- e. Gliserin $= \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$
- f. Xanthan gum $= \frac{0,5}{100} \times 20 \text{ gram} = 0,1 \text{ gram} \times 6 \rightarrow 0,6 \text{ gram}$
- g. Nipagin $= \frac{0,1}{100} \times 20 \text{ gram} = 0,02 \text{ gram} \times 6 \rightarrow 0,12 \text{ gram}$
- h. Nipasol $= \frac{0,015}{100} \times 20 \text{ gram} = 0,003 \text{ gram} \times 6 \rightarrow 0,018 \text{ gram}$
- i. Lavender essential $= 10 \text{ tetes} \times 6 \rightarrow 60 \text{ tetes}$
- j. Aquadest $= 20 \text{ gram} - (1,2 + 1 + 0,05 + 1 + 0,6 + 0,1 + 0,02 + 0,003) \text{ gram}$
 $= 20 \text{ gram} - 3,973 \text{ gram}$
 $= 16,027 \text{ gram} \rightarrow 16 \text{ ml} \times 6 = 96 \text{ ml}$

3. F3= Formula *lotion* kombinasi *magnesium oil* dan minyak biji bunga matahari (*Sunflower seed oil*) konsentrasi 9 %

a. Sunflower seed oil $= \frac{9}{100} \times 20 \text{ gram} = 1,8 \text{ gram} \times 6 \rightarrow 10,8 \text{ gram}$

b. Shea butter $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$

c. Mg chloride $= \frac{0,25}{100} \times 20 \text{ gram} = 0,05 \text{ gram} \times 6 \rightarrow 0,3 \text{ gram}$

d. Emulsifying wax $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$

e. Gliserin $= \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$

f. Xanthan gum $= \frac{0,5}{100} \times 20 \text{ gram} = 0,1 \text{ gram} \times 6 \rightarrow 0,6 \text{ gram}$

g. Nipagin $= \frac{0,1}{100} \times 20 \text{ gram} = 0,02 \text{ gram} \times 6 \rightarrow 0,12 \text{ gram}$

h. Nipasol $= \frac{0,015}{100} \times 20 \text{ gram} = 0,003 \text{ gram} \times 6 \rightarrow 0,018 \text{ gram}$

i. Lavender essential $= 10 \text{ tetes} \times 6 \rightarrow 60 \text{ tetes}$

j. Aquadest $= 20 \text{ gram} - (1,8 + 1 + 0,05 + 1 + 0,6 + 0,1 + 0,02 + 0,003) \text{ gram}$
 $= 20 \text{ gram} - 5,473 \text{ gram}$
 $= 14,527 \text{ gram} \rightarrow 15 \text{ ml} \times 6 = 90 \text{ ml}$

4. F4= Formula *lotion* kombinasi *magnesium oil* dan minyak biji bunga matahari (*Sunflower seed oil*) konsentrasi 12 %

a. Sunflower seed oil $= \frac{12}{100} \times 20 \text{ gram} = 2,4 \text{ gram} \times 6 \rightarrow 14,4 \text{ gram}$

b. Shea butter $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$

c. Mg chloride $= \frac{0,25}{100} \times 20 \text{ gram} = 0,05 \text{ gram} \times 6 \rightarrow 0,3 \text{ gram}$

d. Emulsifying wax $= \frac{5}{100} \times 20 \text{ gram} = 1 \text{ gram} \times 6 \rightarrow 6 \text{ gram}$

e. Gliserin $= \frac{3}{100} \times 20 \text{ gram} = 0,6 \text{ gram} \times 6 \rightarrow 3,6 \text{ gram}$

f. Xanthan gum $= \frac{0,5}{100} \times 20 \text{ gram} = 0,1 \text{ gram} \times 6 \rightarrow 0,6 \text{ gram}$

g. Nipagin $= \frac{0,1}{100} \times 20 \text{ gram} = 0,02 \text{ gram} \times 6 \rightarrow 0,12 \text{ gram}$

h. Nipasol $= \frac{0,015}{100} \times 20 \text{ gram} = 0,003 \text{ gram} \times 6 \rightarrow 0,018 \text{ gram}$

i. Lavender essential $= 10 \text{ tetes} \times 6 \rightarrow 60 \text{ tetes}$

j. Aquadest $= 20 \text{ gram} - (2,4 + 1 + 0,05 + 1 + 0,6 + 0,1 + 0,02 + 0,003) \text{ gram}$
 $= 20 \text{ gram} - 5,173 \text{ gram}$
 $= 14,827 \text{ gram} \rightarrow 15 \text{ ml} \times 6 = 90 \text{ ml}$

Lampiran 2. Pembuatan Sediaan *Lotion*

Ditimbang
sunflower seed oil
dengan neraca
analitik



Ditimbang *shea butter*
dengan
neraca analitik



Ditimbang
magnesium chloride
dengan
neraca analitik



Ditimbang
emulsifying wax
dengan neraca
analitik



Ditimbang
gliserin dengan
neraca analitik



Ditimbang
xanthan gum
dengan neraca
analitik



Ditimbang nipagin dengan neraca analitik



Ditimbang nipasol dengan neraca analitik



Diukur aquadest dengan gelas ukur



Dileburkan fase minyak dan fase air diatas *hot plate* dengan suhu 70°C



Dicampurkan fase air kedalam fase minyak aduk dengan *hand blend* sampai terbentuk korpus emulsi



Ditambahkan gliserin, *xanthan gum* dan nipagin yang telah digerus homogen kedalam fase minyak dan fase air, lalu aduk sampai terbentuk korpus emulsi



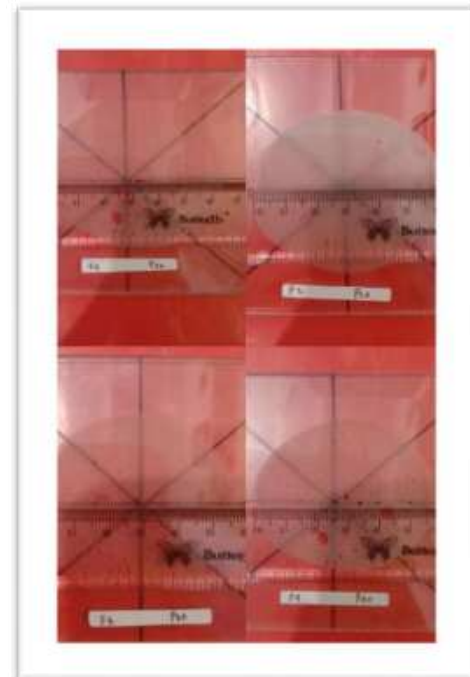
Ditambahkan sisa aquadest kedalam sediaan



Diukur pH terlebih dahulu, jika sudah dalam rentang 4,5-6,5 artinya pH sudah sesuai memenuhi syarat



Ditambahkan *lavender essential oil* secukupnya

Lampiran 3. Evaluasi Sediaan *Lotion*Uji organoleptik sediaan *lotion*Uji homogenitas sediaan *lotion*Uji pH sediaan *lotion*Uji daya sebar sediaan *lotion*

Lampiran 4. Lembar Pengujian Organoleptik

LEMBAR PENGUJIAN ORGANOLEPTIK FORMULASI DAN EVALUASI
LOTION KOMBINASI *MAGNESIUM OIL* DAN MINYAK BIJI BUNGA
 MATAHARI (*Sunflower seed oil*)

Pada kolom warna: 1= Putih, 2= Putih Tulang, 3= Kuning. Pada kolom aroma: 1= Bau Khas Lavender, 2= Tidak Berbau. Pada kolom tekstur : 1= Kental, 2= Kental Cenderung Cair.

Formula <i>lotion</i>		Warna			Aroma		Tekstur	
		1	2	3	1	2	1	2
F1	1	Putih			Bau Khas Lavender		Kental	
	2	Putih			Bau Khas Lavender		Kental	
	3	Putih			Bau Khas Lavender		Kental	
	4	Putih			Bau Khas Lavender		Kental	
	5	Putih			Bau Khas Lavender		Kental	
	6	Putih			Bau Khas Lavender		Kental	
F2	1	Putih			Bau Khas Lavender		Kental	
	2	Putih			Bau Khas Lavender		Kental	
	3	Putih			Bau Khas Lavender		Kental	
	4	Putih			Bau Khas Lavender		Kental	
	5	Putih			Bau Khas Lavender		Kental	
	6	Putih			Bau Khas Lavender		Kental	
F3	1	Putih			Bau Khas Lavender		Kental	
	2	Putih			Bau Khas Lavender		Kental	
	3	Putih			Bau Khas Lavender		Kental	
	4	Putih			Bau Khas Lavender		Kental	
	5	Putih			Bau Khas Lavender		Kental	

	6	Putih			Bau Khas Lavender		Kental	
F4	1	Putih			Bau Khas Lavender			Kental Cenderung Cair
	2	Putih			Bau Khas Lavender			Kental Cenderung Cair
	3	Putih			Bau Khas Lavender			Kental Cenderung Cair
	4	Putih			Bau Khas Lavender			Kental Cenderung Cair
	5	Putih			Bau Khas Lavender			Kental Cenderung Cair
	6	Putih			Bau Khas Lavender			Kental Cenderung Cair

Bandar Lampung, 15 Juli 2024

Peneliti

(Widhawati Muthia Nabila)

Lampiran 5. Lembar Pengujian Homogenitas

LEMBAR PENGUJIAN HOMOGENITAS FORMULASI DAN EVALUASI
 LOTION KOMBINASI *MAGNESIUM OIL* DAN MINYAK BIJI BUNGA
 MATAHARI (*Sunflower seed oil*)

Pada kolom: 1= Homogen, 2= Tidak Homogen.

Formula <i>lotion</i>		Homogenitas	
		1	2
F1	1	Homogen	
	2	Homogen	
	3	Homogen	
	4	Homogen	
	5	Homogen	
	6	Homogen	
F2	1	Homogen	
	2	Homogen	
	3	Homogen	
	4	Homogen	
	5	Homogen	
	6	Homogen	
F3	1	Homogen	
	2	Homogen	
	3	Homogen	
	4	Homogen	
	5	Homogen	
	6	Homogen	
F4	1	Homogen	
	2	Homogen	
	3	Homogen	
	4	Homogen	
	5	Homogen	
	6	Homogen	

Bandar Lampung, 17 Juli 2024
 Peneliti

(Widhawati Muthia Nabila)

Lampiran 6. Lembar Pengujian pH

LEMBAR PENGUJIAN pH FORMULASI DAN EVALUASI *LOTION*
KOMBINASI *MAGNESIUM OIL* DAN MINYAK BIJI BUNGA MATAHARI
(*Sunflower seed oil*)

Uji pH				
Formula <i>lotion</i>		pH	Rata-rata	Keterangan pH (4,5 – 6,5)
F1	1	5,0	5,23	Memenuhi Syarat
	2	5,6		
	3	5,3		
	4	4,9		
	5	5,3		
	6	5,3		
F2	1	5,2	5,18	Memenuhi Syarat
	2	5,2		
	3	5,2		
	4	4,9		
	5	5,2		
	6	5,4		
F3	1	5,1	5,13	Memenuhi Syarat
	2	5,0		
	3	5,1		
	4	4,9		
	5	5,2		
	6	5,5		
F4	1	5,0	4,98	Memenuhi Syarat
	2	4,9		
	3	5,0		
	4	4,7		
	5	5,0		
	6	5,3		

Bandar Lampung, 17 Juli 2024
Peneliti

(Widhawati Muthia Nabila)

Lampiran 7. Lembar Pengujian Daya Sebar

LEMBAR PENGUJIAN DAYA SEBAR FORMULASI DAN EVALUASI
LOTION KOMBINASI *MAGNESIUM OIL* DAN MINYAK BIJI BUNGA
 MATAHARI (*Sunflower seed oil*)

Uji Daya Sebar		
Formula <i>lotion</i>	Diameter (cm)	Rata – rata (5-7 cm)
F1	1	5,0
	2	5,5
	3	6,0
	4	6,1
	5	5,6
	6	5,8
		5,66 cm
F2	1	5,1
	2	6,0
	3	6,3
	4	5,0
	5	5,1
	6	5,3
		5,46 cm
F3	1	5,7
	2	5,9
	3	5,8
	4	5,8
	5	5,8
	6	5,9
		5,81 cm
F4	1	6,4
	2	6,4
	3	6,8
	4	5,8
	5	6,3
	6	6,5
		6,36 cm

Bandar Lampung, 19 Juli 2024
 Peneliti

(Widhawati Muthia Nabila)

Lampiran 8. Certificate of Analysis

A. Sunflower seed oil / Minyak Biji Bunga Matahari

Certificate Of Analysis (COA)

PRODUCT IDENTIFICATION	
Nama	: Sunflower Seed oil
Customer	: April Nature
Batch No	: 110221SSO001

TEST	
Colour	: Yellow Liquid
Relative Density	: 0.922

FATTY ACID COMPOSITION	
Palmitic Acid	: 5.35%
Stearic Acid	: 3.55%
Oleic Acid	: 67.00%
Linoleic Acid	: 21.00%

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


This document has been electronically produced and does not required any signature

DISCLAIMER:

The information contained in this Certificate Of Analisis obtained from current and reliable sources. The information is correct at the time of testing and the result May vary depending on Batch and time of testing. April Nature Organic shall not be liable for any error or delays in the content, or for any action taken in reliance there on. The information remains property of April Nature Organic and should not be propagated or used for any purpose



B. Shea Butter



Analytical Certificate

Delivery	81353757 - 10
Print date	2023-07-27
Your reference	PO00002081
Our reference	Hugo Hamberg
Material	8599-510 LIPEX® Shea
Your material no.	
Date of shipment	2023-07-27

Batch 0002643123 / Quantity 1,600 KG / Prod. date 2023-02-26
 Inspection lot 3128494 / Best before 2026-02-26

Characteristic	Result	Lower Limit	Target	Upper Limit
Acid value(IUPAC 2.201(m)) Acid value	0.05 mg KOH/g			0.50
Colour Lovibond(Lovibond Tintometer) Colour 5 1/4" Red	0.7			2.0
Peroxide value(AOCS Cd 8b-90(m)) Peroxide value	0.2 meq/kg			1.0
Iodine value Wijs(IUPAC 2.205(m)) Iodine value Wijs	68.6	62.0		72.0

Quality Control Manager
AAK Sweden AB

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ZAO K7562 1

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Registered Office: Karlskrona

C. Magnesium Chloride

Certificate of Analysis - This is a digital copy of the original document.

Certificate of Analysis

1.05833.9025 Magnesium chloride hexahydrate for analysis EMSURE® ACS, ISO,
Reag. Ph Eur
Batch A0725033

	Spec. Values		Batch Values	
Assay (complexometric)	99.0 - 101.0	%	100.3	%
Identity	Conforms		Conforms	
Appearance of solution	Passes test		Passes test	
Insoluble matter	≤ 0.005	%	≤ 0.005	%
PH-value (5% water)	5.0 - 6.5		5.5	
Acidity or alkalinity	Passes test		Passes test	
Bromide (Br)	≤ 0.05	%	≤ 0.05	%
Nitrate (NO ₃)	≤ 0.001	%	≤ 0.001	%
Phosphate (PO ₄)	≤ 0.0005	%	≤ 0.0005	%
Sulfate (SO ₄)	≤ 0.002	%	≤ 0.002	%
Total nitrogen (N)	≤ 0.0002	%	≤ 0.0002	%
Heavy Metals (as Pb)	≤ 0.0005	%	≤ 0.0005	%
Al (Aluminium)	≤ 0.0002	%	≤ 0.0002	%
As (Arsenic)	≤ 0.0002	%	≤ 0.0002	%
Ba (Barium)	≤ 0.002	%	≤ 0.002	%
Ca (Calcium)	≤ 0.003	%	≤ 0.003	%
Cu (Copper)	≤ 0.0005	%	≤ 0.0005	%
Fe (Iron)	≤ 0.0005	%	≤ 0.0005	%
K (Potassium)	≤ 0.001	%	≤ 0.001	%
Mn (Manganese)	≤ 0.0005	%	≤ 0.0005	%
Na (Sodium)	≤ 0.001	%	≤ 0.001	%
NH ₄ (Ammonium)	≤ 0.002	%	≤ 0.002	%
Pb (Lead)	≤ 0.0005	%	≤ 0.0005	%
Sr (Strontium)	≤ 0.005	%	≤ 0.005	%
Water	51.0 - 55.0	%	53.0	%

Corresponds to ACS, ISO, Reag Ph Eur

Date of release (DD.MM.YY) 28.02.2014
Minimum shelf life (DD.MM.YY) 28.02.2021
Re-tested Date (DD.MM.YY) 27.02.2019

Dr Manuel Schaffroth
Responsible laboratory manager quality control

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EMD Millipore Corporation - a subsidiary of Merck KGaA, Darmstadt, Germany
290 Concord Road, Billerica, MA 01821, USA, Phone: (978) 715-4321
SALSA Version 808979 / 990000617812 Date: 27.02.2019

D. Emulsfyng Wax / Polawax

CRODA

Certificate of Analysis Repeat printout

Certificate prepared at

Croda Singapore Pte Ltd
30 Seraya Avenue
Singapore 627884

A quality management system registered to the international standard ISO 9001 was used to manufacture and test this material.

Customer details

CV. SUBUR KIMIA JAYA
JL. BABAKAN CIPARAY NO. 217A
BABAKAN CIPARAY
40223 BANDUNG
Indonesia

Customer Ref. P/2024/05/00084
Inspection Lot 040001408337
C of A Printed. 24/05/2024
Croda Order No. 4358691
Croda Del. No. 801034014
Quantity. 150.000
KG

Batch Details

Product Name: SP POLAWAX GP-200 MBAL-PA-(SG)
Product Code: EM80203/0010/8C03
Batch No: 55547

Date of test: 12.04.2024
Date of manufacture: 02.04.2024
Retest date: 02.04.2025

Specification: REV.00 18.02.2016

Quality Control Results

Analytical Test Method No.	Characteristic	Specification Limit		Value	Unit	Status
		Lower	Upper			
AS039010	Addendum 00 APPEARANCE @ 25°C (COLOUR)	PASS OR FAIL OFF WHITE		Pass	-	P
AS039010	APPEARANCE @ 25°C (FORM)	PASTILLES		Pass	-	P
ES001010	ACID VALUE	0.0	1.8	0.5	mg KOH/g	P
AS006010	COLOUR (LOVIBOND)1* CELL RED	0.0	0.5	0.1		P
AS006010	COLOUR (LOVIBOND)1* CELL YELLOW	0.0	1.0	0.8		P
FS031020	EMULSIFYING PROPERTIES (10% W/W)	SMOOTH AND STABLE		Pass	-	P
FS012010	MELTING POINT	47.0	52.0	51.5	°C	P
FS015010	PH (3% AQUEOUS)	6.00	7.00	6.73		P
ES018010	SAPONIFICATION VALUE	7.8	15.0	9.5	mg KOH/g	P
LS007010	RESIDUAL ETHYLENE OXIDE	1.0 PPM MAX		Pass	-	P
LS007010	DIOXANE CONTENT	5.0 PPM MAX		Pass	-	P

This product is offered in compliance with the round table for sustainable palm-mass balance guidelines authorized under certificate number RSPO-SC 00139

Batch Status: Pass

CRODA

Certificate of Analysis

A quality management system registered to the international standard ISO 9001 was used to manufacture and test this material.

Certificate prepared at

Croda Singapore Pte Ltd
30 Seraya Avenue
Singapore 627884

Customer details

CV. SUBUR KIMIA JAYA
JL. BABAKAN CIPARAY NO. 217A
BABAKAN CIPARAY
40223 BANDUNG
Indonesia

Customer Ref. P/2024/05/00094
Inspection Lot 040001408337
C of A Printed. 24/05/2024
Croda Order No. 4358691
Croda Del. No. 801034014
Quantity. 150.000
KG

The quality tests on this batch are reported above. The tests carried out are those necessary to demonstrate compliance with our product specification and are not intended to guarantee the product as suitable for any application beyond those contained in the specification. We recommend you perform your own quality and/or identification checks on receipt.

The name printed at the end of this document is an electronic signature.

Confirmed by

Yin Yew Moke Lead QA Assistant

Date 12.04.2024
Time 08:50:49

E. 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 Pengerinan	≤ 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

=====
Kesimpulan : Memenuhi Syarat

F. Xanthan Gum



Certificate of Analysis

(Representative Sample Certificate)

Product Name: Xanthan Gum, Prehydrated
INCI Name: Xanthan Gum
CAS Number: 11138-66-2
Lot Number: Not available (data may vary slightly with different lots or batches)
Expiration Date: 36 months from production date

Characteristics	Standards	Lab Results	
		Pass	Comments
Bacteriological			
Aerobic Plate Count	<2000 cfu	Yes	<2000 cfu
Total confirmed Coliforms	<30 /g	Yes	<30 /g
E. Coli (Typical)	Negative	Yes	Negative
Salmonella (Typical)	Negative	Yes	Negative
Staph. Aureus-BAM	Negative /10g	Yes	Negative /10g
Yeast and Mold (Typical)	<200 /g	Yes	<200 /g
Particle Size			
SS#80 mesh-ON	80-100	Yes	98.2%
SS#40 mesh-ON	20-65	Yes	26.9%
Physical and Chemical			
Powder Color	Cream	Yes	Cream
Flavor	Typical Bland	Yes	Typical Bland
Moisture	0-15%	Yes	9.29%
Odor	Characteristic	Yes	Characteristic
pH (viscosity solution)	5-8.1	Yes	5.85 pH
Texture (qualitative)	Free flowing powder	Yes	Free flowing powder
Viscosity (1.0%,KCL,LV@60rpm,25° C)	1400-2000 cps	Yes	1710 cps

The above data were obtained using the test indicated and is subject to the deviation inherent in the test method. Results may vary under other test methods or conditions.

This report is not to be signed.

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate as reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising or of use. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use.

G. Nipagin / Methyl Paraben



Certificate of Analysis

Inhibitors • Screening Libraries • Proteins

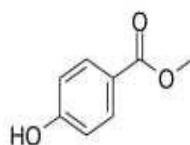
Methyl Paraben

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: $C_8H_8O_3$
 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

H. Nipasol / Propyl Paraben



ALPHA CHEMIKA, 102, 1st Floor, B Wing, Savgan Heights, RTO Road, Four Bungalow, 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 : $C_{10}H_{12}O_3$
 (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)

TESTED BY : HITESH KUNJATHUR	ANALYSED BY : PRITI DURI	CHECKED BY : PRITI DURI
<p>For ALPHACHEMIKA  Auth. Signatory</p> <p>Signed By : _____ (QC Head)</p>		

I. *Lavender essential oil*



CV. Pavettia Wangi Atsiri

Essential Oil Production and Manufacturing

Jl. Wisata Curug Cijalu, Kp Pasirbatang, Ds. Cikujang, Kec. Serangpanjang, Subang - Jabar

Telp./WA 0857-57196097, Email : pavettiaessentialoil@gmail.com

CV. Pavettia Wangi Atsiri

CERTIFICATE OF ANALYSIS

Commodity	: Lavender oil
Species/INCI name	: <i>Lavandula angustifolia</i> (essential oil)
Method of processing	: Steam distillation of fresh flowers
Origin	: Bulgaria
Purity	: 100%
CAS No	: 8000-28-0
FEMA No	: 2622

Specifications	Standard	Result	Remark
Color	colorless to pale yellow	slightly yellow	passed
Specific gravity (25 ^o)	0,875 - 0,890	0,88	passed
Acid value	max. 1	0,6	passed
Refractive index (20 ^o)	1,457 - 1,467	1,462	passed
Optical rotation (α)D	(-3) - (-10)	-6	passed
Solubility in alcohol 75%	1 : 2	1 : 2	passed
Linalool content	min. 35%	35%	passed
Fatty oil	negative	negative	passed

Customer PO	: -
Batch #	: LVN0323
Manufacturing date	: March, 2023
Best used date	: March, 2026

CV. PAVETTIA WANGI ATSIRI

J. Aquadest**CERTIFICATE OF ANALYSIS**

















Product Name	: AQUADEST	Molecular Weight	: 18.02 g/mol
Catalog No.	: A-1078A	Batch No.	: 170621003
Grade	: Laboratory Reagent	Manufacturing Date	: June 17, 2021
Formula	: H ₂ O	Expire Date	: June, 2026
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	≤ 4.3	0.21
3.	pH at 25 °C	-	5.0 - 7.5	6.56
4.	Turbidity	NTU	≤ 0.5	< 0.5
5.	Total Dissolve Solid (TDS)	ppm	≤ 0.5	0.25
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	0.376
10.	Silica (as SiO ₂)	ppm	≤ 0.5	0.0559
11.	Iron (Fe)	ppm	≤ 0.1	0.0499
12.	Aromatic Hydrocarbon	ppm	Free of Hydrocarbon	NIL

Lampiran 9. Lembar Konsultasi Laporan Tugas Akhir

LEMBAR KONSULTASI LAPORAN TUGAS AKHIR

NAMA MAHASISWA : Widhawati Muthia Nabila
 NIM : 2148401087
 DOSEN PEMBIMBING : Yulyuswarni, S.Si,Apt., M.Kes

NO	TANGGAL	KEGIATAN		PARAF	
		MASALAH	PENYELESAIAN	DOSEN	MHS
1.	18 Juli 2023	Penentuan judul LTA	Diskusi, pemberian informasi mengenai E-Book		
2.	20 Juli 2023	Pengajuan judul LTA	Acc judul		
3.	28 Juli 2023	Pengumpulan Latar Belakang	Revisi Latar Belakang		
4.	02 Agustus 2023	Pengumpulan BAB I	Revisi Latar Belakang		
5.	08 Agustus 2023	Pengumpulan Revisi BAB 1	Revisi Rumusan Masalah		
6.	14 Agustus 2023	Pengumpulan Revisi BAB 1	Revisi Rumusan Masalah		
7.	02 Oktober 2023	Pengumpulan BAB I, II, III	Revisi Rumusan Masalah		
8.	30 Oktober 2023	Pengumpulan Revisi BAB I, II, III	Revisi BAB I, II, III		

NO	TANGGAL	KEGIATAN		PARAF	
		MASALAH	PENYELESAIAN	DOSEN	MHS
9.	15 Desember 2023	Pengumpulan Revisi BAB I, II, III	Diskusi dan Revisi BAB I, II, III		
10.	19 Desember 2023	Pengumpulan Revisi BAB I, II, III	Diskusi dan Revisi BAB I, II, III		
11.	21 Desember 2023		kec Sempro		
12.	17 Januari 2024	Pengumpulan Revisi setelah Sempro	Perbaikan setelah Sempro		
13.	26 Juli 2024		kec Semulas		
14.	05 September 2024	Pengumpulan dan bimbingan revisi setelah seminar hasil	Diberikan saran bimbingan pada bab 1-5. Ditambahkan cara kerja evaluasi dengan spesifik		
15.	09 September 2024	Bimbingan Bab 1-5 setelah Semulas	Perbaiki penulisan		
16.	12 September 2024		kec Cetak		

LEMBAR KONSULTASI LAPORAN TUGAS AKHIR

NAMA MAHASISWA : Widhawati Muthia Nabila

NIM : 2148401087

DOSEN PEMBIMBING II : Isnenia, M.Sc., Apt

NO	TANGGAL	KEGIATAN		PARAF	
		MASALAH	PENYELESAIAN	DOSEN	MHS
1.	26 Juli 2024	Konsultasi mengenai Bab 1 lampiran Bab 5	Perbaikan : - Penulisan agar SPK - Penulisan secara italic - Penulisan kutipan - Penulisan daftar pustaka	M	Juf
2.	29 Juli 2024		Acc. Simhas.	M.	Juf
3.	06 September 2024	Konsultasi setelah Seminar hasil	Perbaikan : - Penulisan daftar pustaka - Penulisan secara italic	M	Juf
4.	12 September 2024		Acc turnitin /cetak	M	Juf

Lampiran 10. Lembar Perbaikan Seminar Proposal Tugas Akhir

LEMBAR PERBAIKAN SEMINAR PROPOSAL TUGAS AKHIR

Hari / Tanggal : Kamis, 20 Desember 2023
 Nama Mahasiswa : Widhawati Muthia Nabila
 Judul Proposal Tugas Akhir : Formulasi Dan Evaluasi Lotion Kombinasi
 Magnesium oil Dan Minyak Biji Bunga
 Matahari (Sunflower Seed Oil)

HASIL MASUKAN :


Penguji 1 :

Arah Lotion yg dibuat ke mana? U/lotion p/anti / Anti Oksidan SP
 & gelasnya p/ LB.
~~kegiatan~~ → Urgensi Penelitian & data = kasus kasy kuyala
 stres dll.
 → Organ yg besar & barrier utama → awal latar belakang.
 Pse : & gelaskan Anti Oksidan.
 Payerhan Lotion +

Penguji 2 :
 page 2 : formula krim diganti lotion / tetap?
 (+) Upr. Viscositas, upr. kesukaan ditatalka.


Mengetahui

Penguji 1,

 20/2024

Apt. Elma Violentina S., S.Farm., M.Clin.Pharma
 NIP. 1996 05 05 2022 03 2004

Penguji 2,

 20/2024

Isnenia, M.Sc., Apt
 NIP. 1986 01 19 2021 2 2001

Penguji 3,

 17/01 2024

Yuliuswami, S.Si., Apt., M.Kes
 NIP. 197007182003122003

Lampiran 11. Lembar Perbaikan Seminar Hasil Tugas Akhir

LEMBAR PERBAIKAN
SEMINAR HASIL TUGAS AKHIR

Hari / Tanggal : Selasa, 30 Juli 2024
 Nama Mahasiswa : Wildhawati Muthia Nabila
 Judul Tugas Akhir : Formulasi Dan Evaluasi Lotion Kombinasi
 Magnesium Oil Dan Minyak Biji Bunga
 Matahari (Sunflower Seed Oil)

HASIL MASUKAN :

Penguji 1 :

page 29 : Formulasi dan evaluasi lotion kombinasi
 (+) faktor : penyebab ketidakstabilan emulsi
 (+) ketidakstabilan - F₂ K₁ terpisah
 DP : Depues (2020) → Kemoniles, Erafter → bedakan

Penguji 2 :

Perbaikan Daftar Pustaka dan penulisan Halk

Penguji 3 :

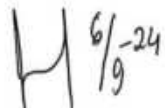
Mengetahui

Penguji 1,



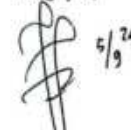
Apt. Elma Valentina S., S.Farm., M.Clin.Pham
 NIP. 199605052022032004

Penguji 2



Isnenia, M.Sc., Apt
 NIP. 198601192012122001

Penguji 3,




Yuliuswani, S.St., Apt., Mkes
 NIP. 197007182003122003

Lampiran 12. Lembar Pengecekan Turnitin

**LEMBAR BUKTI PENGECEKAN SIMILARITY/PLAGIARISM
DENGAN TURNITIN**

Nama : Widhawati Muthia Nabila
 NIM : 2148401087
 Judul LTA : Formulasi dan Evaluasi *Lotion* Kombinasi *Magnesium Oil* dan Minyak Biji Bunga Matahari (*Sunflower seed oil*)
 Prodi : D3 Farmasi

Telah melakukan pengecekan Turnitin sebagai berikut :

Ke-	Tanggal	Hasil (Nilai)	Paraf Pelugas Perpustakaan dan Cap
1	12/10/24 /g	15 %	
2			
3			

Mengetahui,

Pembimbing 1



(Yulyuswarni, S.Si., Apt., M.Kes.)
 NIP. 197007162003122003

Pembimbing 2



(Isnenia, S.Farm., M.Sc., Apt.)
 NIP. 198601192012122001

Catatan : Pengisian kolom tanggal dan hasil ditulis tangan