

## LAMPIRAN

## Lampiran 1. Hasil Determinasi Daun Rosemary



**DIREKTORAT PENGELOLAAN KOLEKSI ILMIAH**  
 JL. Raya Jakarta - Bogor KM 46, Cibinong Science Center, Cibinong 16911, Jawa Barat  
 Laman: [www.brin.go.id](http://www.brin.go.id)

Nomor : B-1650/IV/DI.05.07/6/2022 Cibinong, 6 Juni 2022  
 Lampiran : -  
 Perihal : Hasil Identifikasi/Determinasi Tumbuhan

Yth.  
 Bpk./Ibu/Sdr(i). **Rizki Dwi Ramadhani**  
 NIM : 20180311117  
 Universitas Esa Unggul

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Direktorat Pengelolaan Koleksi Ilmiah BRIN Cibinong, adalah sebagai berikut :

No.	No. Kol.	Jenis	Suku
1.	Daun Rosmary	<i>Rosmarinus officinalis</i> Linn.	Lamiaceae

Demikian, semoga berguna bagi Saudara.

Pt. Direktorat Pengelolaan Koleksi Ilmiah,  
 Badan Riset dan Inovasi Nasional

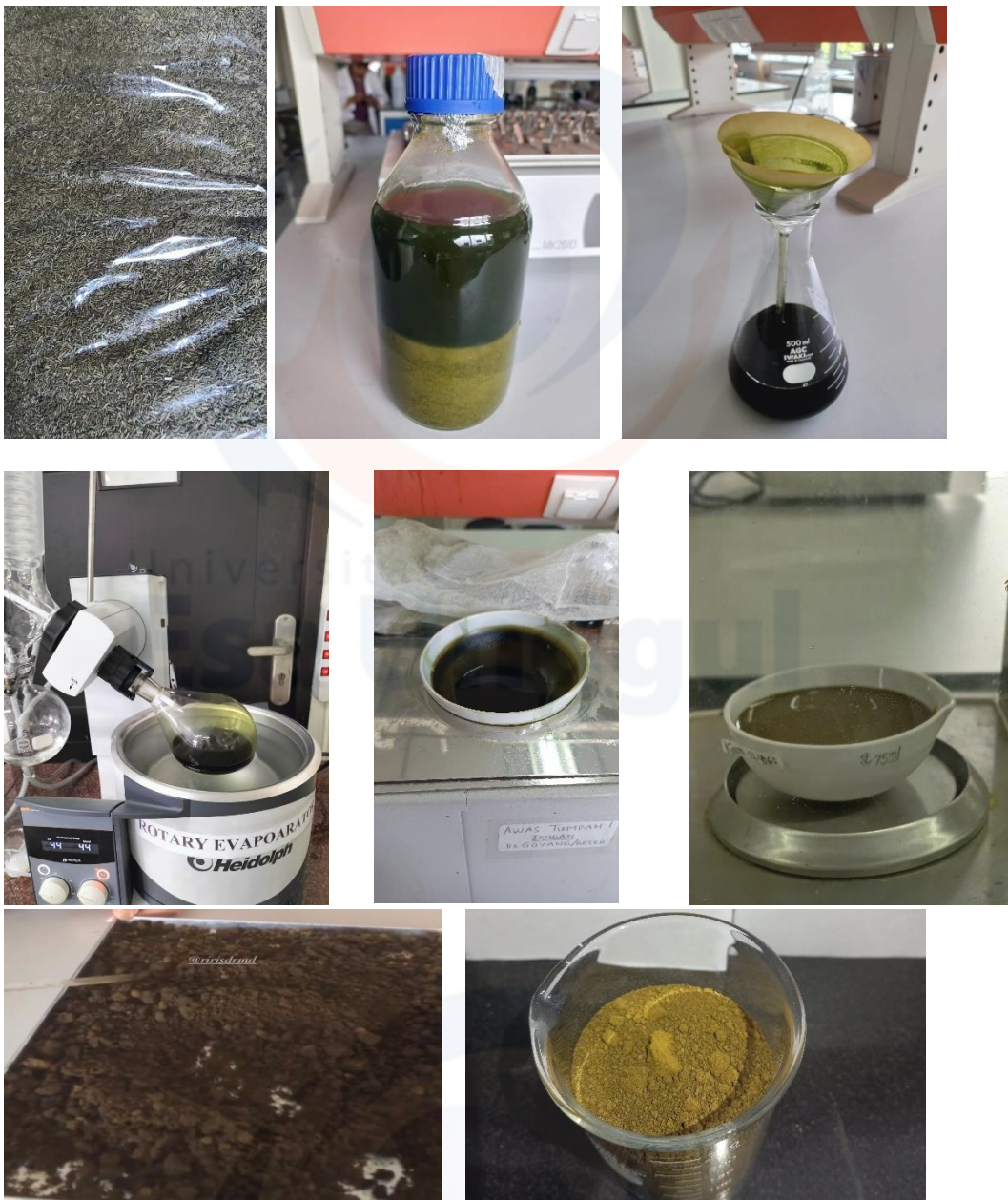


Dr. Ir. Hendro Wicaksono, M.Sc., Eng

Lampiran 2. Pembuatan Ekstrak Daun Rosemary

$$\begin{aligned} \text{Rendemen ekstrak daun rosemary} &= \frac{\text{Bobot ekstrak (akhir)}}{\text{Bobot simplisia (awal)}} \times 100\% \\ &= \frac{544 \text{ gram}}{6.000 \text{ gram}} \times 100\% \\ &= 9,067\% \end{aligned}$$

Pembuatan ekstrak kering



Lampiran 3. Perhitungan Susut Pengeringan Ekstrak Etanol Daun Rosemary

$$\begin{aligned}
 \text{Susut pengeringan ekstrak etanol daun rosemary} &= \frac{A-B}{A} \times 100\% \\
 &= \frac{2,0089-1,9401}{2,0089} \times 100\% \\
 &= \frac{0,0688}{2,0089} \times 100\% \\
 &= 0,03424 \times 100\% \\
 &= 3,424\%
 \end{aligned}$$

Bobot krus kosong



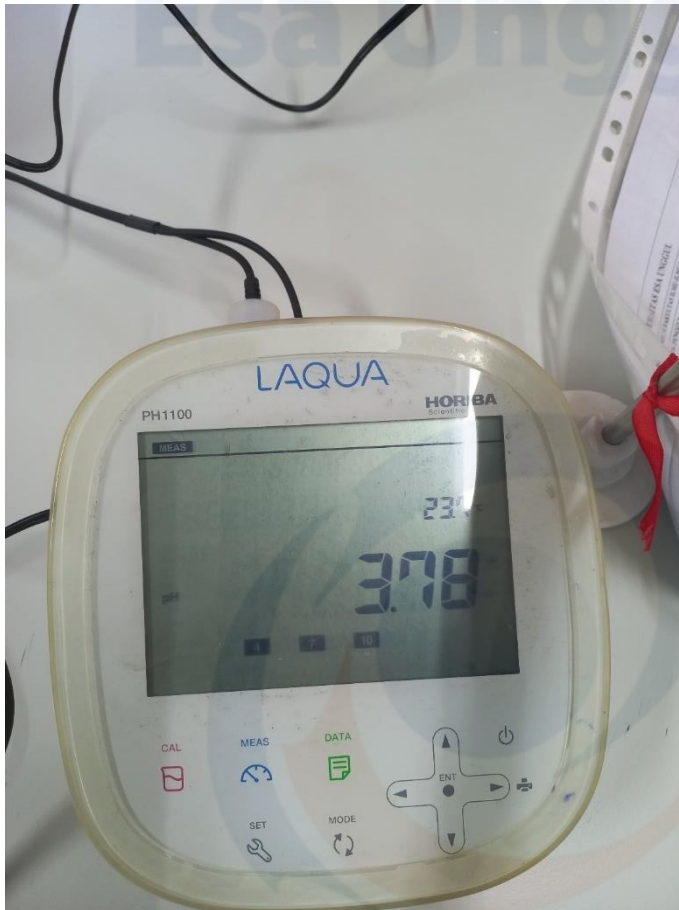
Bobot sampel



Bobot krus+sampel setelah di oven



Lampiran 4. pH Ekstrak Etanol Daun Rosemary



Lampiran 5. Skrining Fitokimia Ekstrak Etanol Daun Rosemary

Alkaloid



Tannin



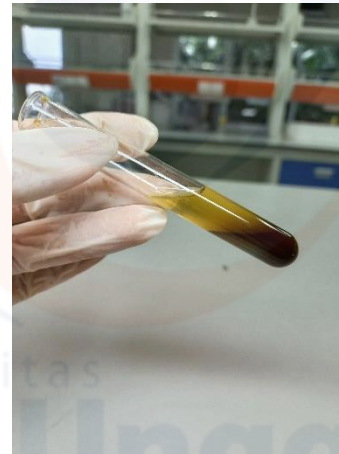
Flavonoid



Saponin



Triterpenoid



Lampiran 6. Uji Organoleptis Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

Hari ke-0

Formula I



Formula II



Formula III



Hari ke-7

Formula I



Formula II



Formula III



Hari ke-14

Formula I



Formula II



Formula III



(Lanjutan)

Hari ke-21

Formula I



Formula II

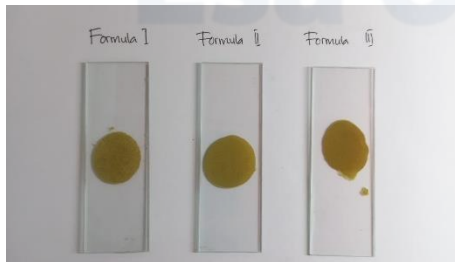


Formula III

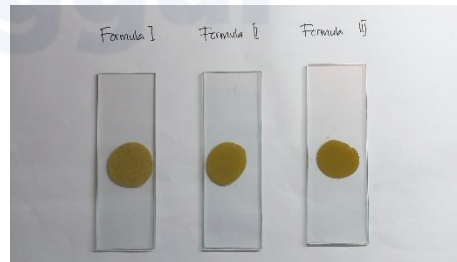


Lampiran 7. Uji Homogenitas Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

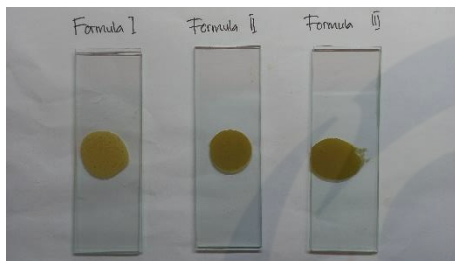
Hari ke-0



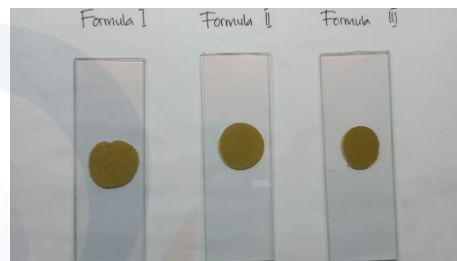
Hari ke-7



Hari ke-14



Hari ke-21





Lampiran 8. Uji pH Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

Hari ke-0

Formula I



Formula II



Formula III

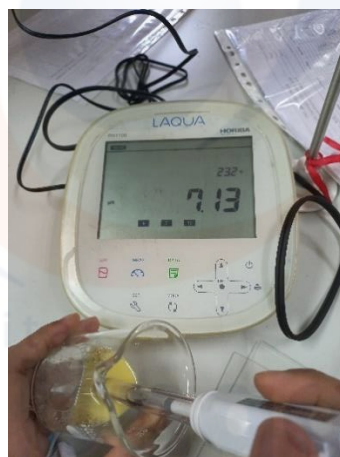


Hari ke-7

Formula I



Formula II

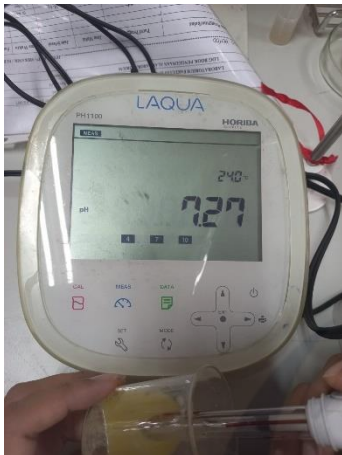


Formula III



Hari ke-14

Formula I



Formula II



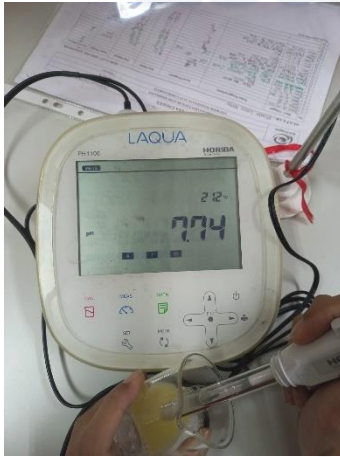
Formula III



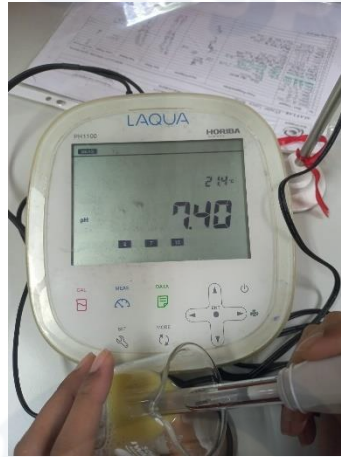
(Lanjutan)

Hari ke-21

Formula I



Formula II



Formula III



Lampiran 9. Uji Viskositas Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

Hari ke-0

Formula I



Formula II



Formula III



Hari ke-7

Formula I



Formula II



Formula III



Hari ke-14

Formula I



Formula II



Formula III



(Lanjutan)

Hari ke-21

Formula I



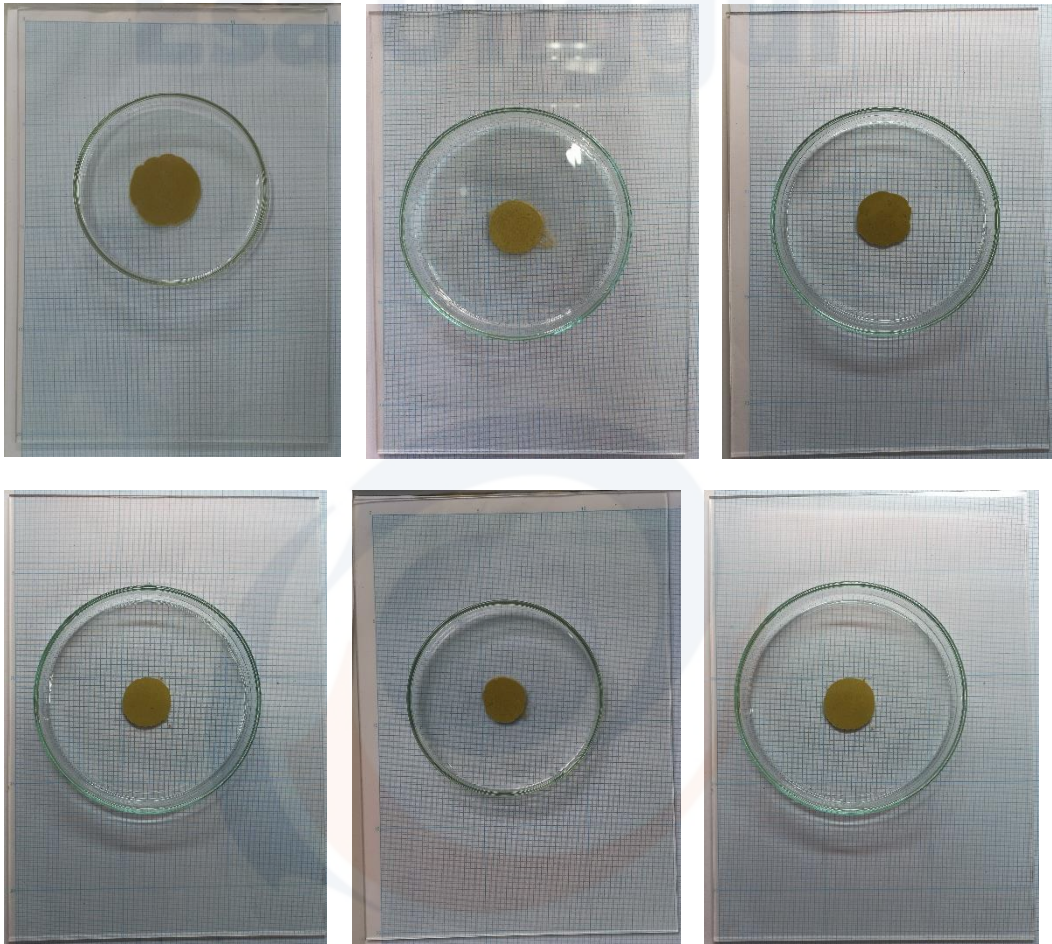
Formula II



Formula III



Lampiran 10. Uji Daya Sebar Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary



Lampiran 11. Uji Stabilitas Dipercepat Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

Penyimpanan di kulkas suhu 4°C



Penyimpanan di oven suhu 40°C



Organoleptis Stabilitas

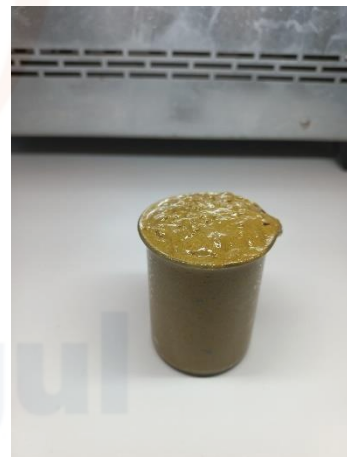
Formula I



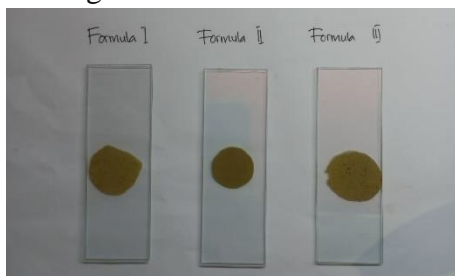
Formula II



Formula III



Homogenitas Stabilitas



(Lanjutan)

pH Stabilitas

Formula I



Formula II



Formula III



Viskositas Stabilitas

Formula I



Formula II

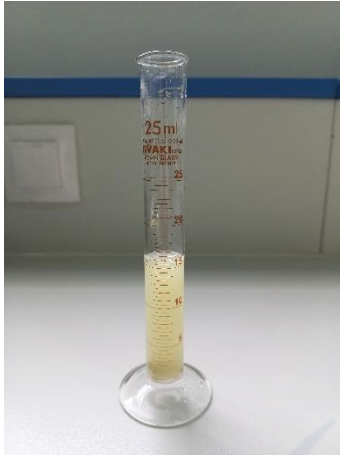


Formula III

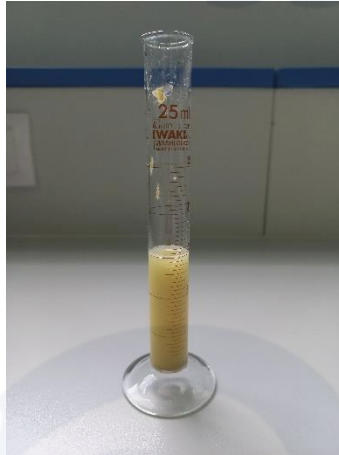


Lampiran 12. Uji Daya Busa Pasta Gigi Herbal Ekstrak Etanol Daun Rosemary

Formula I  
Sebelum dikocok



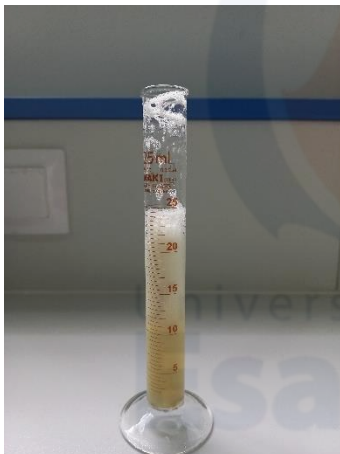
Formula II  
Sebelum dikocok



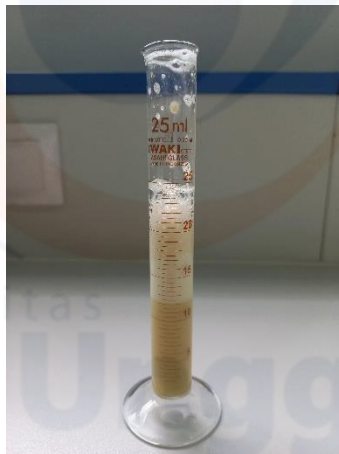
Formula III  
Sebelum dikocok



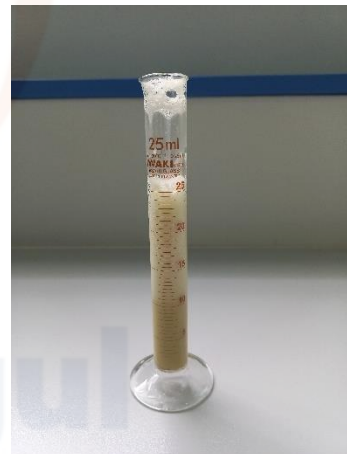
Formula I  
Setelah dikocok



Formula II  
Setelah dikocok

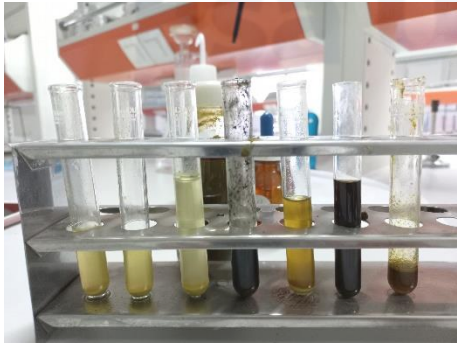


Formula III  
Setelah dikocok





Lampiran 13. Dokumentasi Penelitian



Lampiran 14. Perhitungan Formula Pasta Gigi Herbal Ekstrak Etanol Daun  
Rosemary

Masing-masing formula dibuat sebanyak 600 gram

Bahan	FI (gram)	FII (gram)	FIII (gram)
Ekstrak kering etanol daun rosemary	90	120	150
Kalsium karbonat	210	210	210
Natrium lauril sulfat	9	9	9
Gliserin	180	180	180
Metil selulosa	6	6	6
Natrium sakarin	1,5	1,5	1,5
Metil paraben	0,6	0,6	0,6
Propil paraben	0,12	0,12	0,12
Titanium dioksida	3	3	3
Minyak permen	6	6	6
Akuades (ml)	94,23	64,23	34,23

Kelarutan:

1. Natrium lauril sulfat : mudah larut dalam air (1-10)
2. Metil selulosa : larut dalam air dingin (10-30)
3. Natrium sakarin : larut dalam 1,5 bagian air
4. Nipagin : larut dalam 60 bagian gliserol (36)
5. Nipasol : larut dalam 140 bagian gliserol (16,8)

Lampiran 15. *Certificate of Analysis*

Kalsium karbonat

**LABH AGRO TRADECOM**

Date: 04/10/2020

**CERTIFICATE OF ANALYSIS**

Product Name Calcium Carbonate

BATCH NO. LAT1004/2020

Mfg. Date. 04/10/2020

Exp. Date. 03/10/2025

[A] Chemical Properties: -

Sr. No	Tests	Unit	Spec. Test Value
1	Appearance	-	White
2	Calcium Carbonate (CaCO <sub>3</sub> )	96% Min	96.47
3	Magnesium Carbonate (MgCO <sub>3</sub> )	%	1.3
4	CaO	%	54.43
5	MgO	%	0.28
6	Iron (Fe <sub>2</sub> O <sub>3</sub> )	%	0.009
7	pH( Of 10% Solution)	%	8
8	Brightness	%	96
9	Bulk Density (g/100g)	0.800 to 0.900	0.84

[B] Physical Properties: -

Sr. No	Tests	Unit	Spec. Test Value
1	Particle Size		20 micron
2	Tope Cut		Round

For LABH AGRO TRADECOM

HEAD QA

(Lanjutan)

Natrium lauril sulfat



## Certificate of Analysis

**Product Name/Grade:**

Sodium Laureth Sulfate / SLES 70%

**Product Specifications/Analysis**

Parameter	Specifications/Content
Appearance	White to yellowish paste
Odor	No Strong Odors
Active matter, %	70±2
Unulfated matter, %( relative to 100% active matter)	Max2.0
Sodium sulfate, % (relative to 100% active matter )	max1.5
pH value (1% a. m.)	7.0~9.0
Color, Hazen (5% a. m.)	max20
Conclusion	Approved



CAMACHEM (Part of CAMAL Group), 3F Jinlong East Beijing Station Road  
Chaoyang District, Beijing, China  
[www.camachem.com](http://www.camachem.com)

(Lanjutan)

Gliserin

**wilmar** PT. WILMAR NABATI INDONESIA **KAN**  
 FWINA-QC-10-011 Quality Control Department KAN  
 Kertajati, Cirebon  
 47161

Date: 24/February/2022

**CERTIFICATE OF ANALYSIS**

Product: REFINED GLYCERINE 99.7%  
 Manufactured Date: FEBRUARY 23, 2022  
 Best Before: FEBRUARY 23, 2023  
 Date of Received: FEBRUARY 23, 2022  
 Date of Analysis: FEBRUARY 23, 2022  
 Lot No: G220223-5W

Parameter	Unit	Result	Specification	Test Method
Appearance (*)		Transparent	Transparent	Visual
Identification A (IR)		Conform	Conform	USP 43 : 2020 (137 F)
Identification B (*)				
- Diethylene Glycol	%	<0.10	0.1 max	USP 43 : 2020 (P.1967)
- Ethylene Glycol	%	<0.10	0.1 max	USP 43 : 2020 (P.1967)
Identification C (GC)		Conform	Conforms	USP 43 : 2020 (P.1987)
Glycerine Content	%	99.8	99.7 min	USP 43 : 2020 (221)
Chloride	ppm	<10	10 max	USP 43 : 2020 (221)
Sulfate	ppm	<20	20 max	USP 43 : 2020 (221)
Residue on Ignition	%	0.002	0.01 max	USP 43 : 2020 (281)
Related Compounds				
Chlorinated Compounds (*)	ppm	<30	30 max	USP 43 : 2020 (P.1958)
Color (mL FeCl3 *)		<0.4	0.4 max	USP 43 : 2020 (P.1966)
Specific Gravity @ 25		1.2614	1.2612 min	USP 43 : 2020 (841)
Moisture Content	%	0.10	0.3 max	USP 43 : 2020 (821)
Color (APHA) (*)		3	10 max	AOCS Ea 9-65
Heavy Metals Pb	ppm	<5	5 max	USP 41 : 2018 (231)

Remark:  
 \*) not accredited parameter

The results of these tests relate only to the sample(s) submitted

\* Certified Correct  
 24/02/2022  
 Riko Julianty  
 QC Head General Lab

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Page 1 Of 1  
 Factory :  
 J. Kapten Darius Sugianda No. 25  
 Gresik - 61124 - East Java - Indonesia  
 Tel : +6231-3949101 Fax : +6231-3275322

(Lanjutan)

Metil selulosa

**spectrum**  
chemicals & laboratory products


**Certificate Of Analysis**

Item Number	ME136	Lot Number	1BF0093
Item	Methylcellulose, 400 cP, USP		
CAS Number	9004-67-5		
Molecular formula		Molecular Weight	
Test	Specification min max	Result	
ASSAY (as METHOXY GROUPS, -OCH <sub>3</sub> )	26.0 - 33.0 %	29.50%	
VISCOSITY	320 - 480 cP <sub>a.s.</sub>	370 cP <sub>a.s.</sub>	
LOSS ON DRYING	5.00%	2.60%	
RESIDUE ON IGNITION	1.50%	0.50%	
HEAVY METALS (as Pb)	20 PPM	<20 ppm	
pH	5.0 - 8.0	7.5	
IDENTIFICATION	TO PASS TEST	PASSES TEST	
RETEST DATE		17-May-19	
RESIDUAL SOLVENTS	TO PASS TEST	NO RESIDUAL SOLVENTS USED	
APPEARANCE		OFF-WHITE POWDER	
MANUFACTURE DATE		18-May-24	

RESIDUAL SOLVENTS: USP, Chapter 467 limits the residual solvent content of a drug product to the permitted daily exposure (PDE) level given in that chapter. This Spectrum Certificate of Analysis reports any residual solvents that are likely to be present in the material as a result of manufacturing and/or processing. Residual solvents of Class 1 are identified and quantified when present in the material. Residual solvents of Class 2 or Class 3 are identified and the maximum limit is reported unless Class 2 solvents are present at levels greater than Option 1 limits or Class 3 solvents are present at levels greater than 0.5%. It is the responsibility of the producer of a finished dosage form to ensure that the aggregate residual solvent content meets applicable requirements set forth in USP, Chapter 467.

Spectrum Chemical Mfg. Corp  
14422 South San Pedro Street  
Gardena, 90248 CA

Certificate of Analysis Results Certified By:



Adan Hernandez  
Quality Control Manager  
Spectrum Chemicals & Laboratory Products

(Lanjutan)

Natrium sakarin

**CERTIFICATE OF ANALYSIS**  
**“ SODIUM SACHARIN”**

Items	Specification	Results
Appearance	Colorless crystal	Conforms
Assay	≥99 %	99.66%
Water (dried weightlessness)%	13% ~ 15%	14.02%
Melting point	226-230 °C	228.30 °C
Heavy metals	≤10ppm	2.0ppm
Arsenic salt	≤2ppm	1.0ppm
Mesh size	20-40	Conforms

Checker	Xu Dong	Rechecker	Lu Xiaoping	Approval	Du Yi
Conclusion	The Quality of the above said is in conformity with BP1998 standard.				
COA Issuer	Quality Control Team-Technology Department of Hefei TNJ Chemical Industry Co.,Ltd.				





LAB TEST CENTER

刘斌

(Lanjutan)

Metil paraben

CIN No: U24110TG1978PTC002255  
 GSTIN No. : 36AACCS8670F1Z5

ISO 9001:2015

## SALICYLATES AND CHEMICALS PRIVATE LIMITED

### CERTIFICATE OF ANALYSIS

Product	SALIGIN MP		
Chemical Name	METHYL PARABEN METHYL HYDROXY BENZOATE BP		
Batch / Lot No.	336/MP/1019	A.R. No.	19MP1608
Mfg. Date	OCT, 2019	Total Batch Qty.	1000 KGS
Exp. Date	SEP, 2024	Dispatch / Sample Qty.	1000 KGS

TEST	SPECIFICATIONS	RESULTS
Appearance	White or almost white, crystalline powder, or colourless crystals.	Complies
Solubility	Very slightly soluble in water, freely soluble in ethanol (96%) and in methanol	Complies
Identification	A - 125°C to 128°C B - Infrared Absorption Spectro - Photometry C - Chromatograms Spot - To Comply	127.2°C Positive Complies
Appearance of Solution	Solution S is clear and not more intensely coloured than reference solution BY6	Complies
Acidity	Not more than 0.1 ml of 0.1 M Sodium Hydroxide is required to change the colour of the indicator to blue	0.06 ml of 0.1M NaOH is required
Related Substances	Impurity A - NMT 0.5% Unspecified impurity - NMT 0.5% Total impurity - NMT 1.0%	0.1% Not detected 0.1%
Residual Solvents	Methanol - 3000 ppm	< 3000 ppm
Organic Volatile Impurities	As per USP<467> To meet the requirements	Complies
Sulphated Ash	Max 0.1%	0.02%
Assay	98.0% to 102.0%	99.6%

Remark: The above batch complies with the prescribed standards of quality as per BP Standard.

<i>Rathiba</i>	<i>[Signature]</i>	<i>N. S. S.</i>
PREPARED BY	CHECKED BY	APPROVED BY
QUALITY CONTROL	QUALITY CONTROL	QUALITY ASSURANCE
09/10/2019	09/10/2019	09/10/2019

A-25, Road No. 18, IDA Nacharam, Hyderabad - 500 073, Telangana, INDIA  
 Tel.: +91-40-27171550, 27174691, Fax: +91-40-27171248





(Lanjutan)

Propil paraben

3/28/2019 155 PP 1018 - Copy #99

CIN No. U24110TG1978PTC002255  
GSTIN No. : 36AACC88670F125

## SALICYLATES AND CHEMICALS PRIVATE LIMITED

### CERTIFICATE OF ANALYSIS

<b>Product Chemical Name</b>	SALIGIN PP PROPYL PARABEN PROPYL HYDROXY BENZOATE BP		
<b>Batch No.</b>	155/PP/1018	<b>A.R. No.</b>	13PP1869
<b>Mfg. Date</b>	OCT, 2018	<b>Total Batch Qty.</b>	1000 KGS
<b>Exp. Date</b>	SEP, 2023	<b>Dispatch Qty.</b>	500 KGS

TEST	SPECIFICATIONS	RESULTS
Appearance	White or almost white, crystalline powder.	Complies
Solubility	Very slightly soluble in water. Freely soluble in ethanol (96%) and in methanol	Complies
Identification		
A) Melting Point	96°C to 99°C	96.9°C
B) IR	Infrared absorption Spectrophotometry: Positive	Positive
C) TLC	Chromatograms Spot: Complies	Complies
Appearance of Solution	Solution S is clear and not more intensely coloured than reference solution BY6.	Complies
Acidity	Not more than 0.1ml of 0.1M Sodium Hydroxide is required to change the color of the indicator to blue.	0.05 ml of 0.1M NaOH is required
Related Substances	Impurity A – NMT 0.5% Unspecified impurity – NMT 0.5% Total impurity – NMT 1.0%	0.18% Not detected 0.18%
Residual solvents	n-Propanol 3000 ppm	< 3000 ppm
Organic Volatile Impurities	As per USP <467> To meet the requirements	Complies
Sulphated Ash	Max. 0.1%	0.02%
Assay	98.0% to 102.0%	99.73%

*Remark: The above batch complies with the prescribed standards of quality as per BP Standard.*

DATE OF COMPILATION DD/MM/YY	<i>Harish</i> Analyst C HARISH	<i>Chm</i> QC Head KRISHNA R PAREDI	<i>Sanjeev</i> QA Head DR SANJEEV JADHAV
	PREPARED BY	CHECKED BY	APPROVED BY
DATE	06.11.2018	06.11.2018	06.11.2018

(Lanjutan)

Titanium dioksida

**ARROW FINE CHEMICALS**

Plot No. G-1023, Road 1-A, Kishan Gate, Lodhika G.I.D.C.,  
Kalawad Road, Metoda. Dist. : Rajkot - 360 021.

Phone : +91 - 2827 - 287878  
Fax : +91 - 2827 - 287178  
e-mail : [info@arrowfinechemicals.com](mailto:info@arrowfinechemicals.com)  
Website : [www.arrowfinechemicals.com](http://www.arrowfinechemicals.com)

### Certificate of Analysis

#### Specification of Titanium Dioxide - Rutile Grade

Sr No.	Characteristics	Specifications
1	Molecular Formula	TiO <sub>2</sub>
2	Mol Wt	79.87
3	Description	White powder
4	TiO <sub>2</sub> content (%)	98 min
5	Whiteness	> 97%
6	Reducing strength	180 min
7	LOI (%)	0.5 max
8	Oil absorption (ml)	20 max
9	Rutile content	97 % min

For any further clarification in this regards please do feel free to contact us at any point of time at [info@arrowfinechemicals.com](mailto:info@arrowfinechemicals.com).

Assuring you great attention at all times.

For Arrow Fine Chemicals

Quality Assurance Department

\*\* Note : This is a computer generated report hence not needed to sign.



An ISO 9001 : 2008 Company

(Lanjutan)

Minyak permen



fern&amp;petal

### Certificate of Analysis

Peppermint Oil (*MENTHA PIPERITA*)

Product Name	Peppermint Oil
Scientific Name	Mentha Piperita
Extraction Method	Steam Distillation
Origin	India
Product Code	EOPT
Batch Number	51304-01

#### TESTING RESULTS

Analytic Test	Specification Range	Result
<b>Appearance</b>	Colourless to Light Yellow Liquid	Conforms
<b>Odour</b>	Characteristic	Conforms
<b>Relative Density @ 20°C</b>	0.890 - 0.916	0.899
<b>Refractive Index @ 20°C</b>	1.458 - 1.465	1.462
<b>Optical Rotation @ 20°C (Degrees)</b>	-30° to -14°	-18.7°

#### STABILITY

Manufacturing Date:	12/2021
Testing Date:	01/2022
Commercial Expiry Date:	02/2024