

LAMPIRAN

Lampiran 1. Surat Determinasi



Yogyakarta, 31 Januari 2025

No. : 31/LHD/01/25
Hal : Hasil Determinasi

Kepada Yth.
Ulayya Zhafirah
NPM : 211FF03010
Fakultas Farmasi Universitas Bhakti Kencana

Dengan hormat,
Bersama ini disampaikan hasil determinasi tumbuhan sesuai permintaan sebagai berikut:

No.	Nama jenis	Nama Lokal
1	Dadap (<i>Erythrina subumbrans</i>)	Dadap

Kunci Determinasi :
1b, 2b, 3b, 4b, 6b, 7b, 9b, 10b, 11b, 12b, 13b, 14a, 15b,.....(Gol 9. Tumbuhan dengan daun-daun majemuk tersebar)
197b, 208b, 220b, 224b, 225b, 227b, 229b, 230a, 231a, 232b, 233b, 1c, 13b, 23a, 24b, 25b, 26b, 27b, 28c, 29b, 32b, 39a, 40b, 50b, 51a, 52a, 53a, 54a, 1b, 3a, 4a, 5b, 7b, 8a, 9a.

Backer, C.A. & van den Brink, R.C.B., 1963. *Flora of Java*, Vol. 1. Groningen: N.V. P. Noordhoff.

Klasifikasi :
Kingdom : Plantae
Sub Kingdom : Tracheobionta
Superdivisi : Spermatophyta
Divisi : Magnoliophyta
Class : Magnoliopsida
Sub Class : Rosidae
Ordo : Fabales
Famili : Fabaceae
Genus : Erythrina
Species : *Erythrina subumbrans* (Hassk.) Merr

Demikian semoga berguna bagi saudara.

Divisi Teknik Galenika


Apriyani Susilowati, S.Si.

Lampiran 2. *Certificate of Analysis* ekstrak daun dadap serep

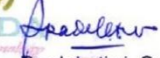


SERTIFIKAT HASIL UJI

Nomor : 250133202b
 Nama Sampel : Ekstrak Etanol 70% Daun Dadap (*Erythrina subumbrans*)
 Uji : Kualitatif Flavonoid
 Metode : Thin Layer Chromatography
 Tanggal : 31 Januari 2025
 Permintaan : Ulayya Zhafirah
 NPM : 211FF03010
 Institusi : Fakultas Farmasi Universitas Bhakti kencana

Hasil Uji

Parameter Uji	Hasil Uji	Metode
Kualitatif Flavonoid	Positif	TLC

Divisi Teknis

 Pradekatiwi, S.Si.

Lampiran 3. Surat Prosedur Ekstraksi Laboratorium

 jasaekstraksi.com		LEMBAR KERJA EKSTRAKSI LABORATORIUM PENGUJIAN	
Nama sampel	Daun Dadap (<i>Erythrina subumbrans</i>)	Tanggal disusun	31 Januari 2025
Kode sampel	250133202	Metode	Maserasi, TLC

Prosedur ekstraksi

- Sortasi daun
- Cuci dalam air mengalir
- Keringkan dalam oven pada suhu 40°C selama 12 jam
- Giling menggunakan diskmill dengan ayakan 60 mesh
- Masukkan ke dalam kontainer ekstraktor
- Tambahkan solvent ethanol 70%
- Ekstraksikan dengan ultra turax pada kecepatan 1.000 rpm selama 2 jam
- Maserasikan selama 48 jam
- Filtrasi dengan corong buchner, sedot dengan mesin vakum
- Residu diekstraksi ulang seperti diatas
- Filtrat pertama dan kedua dievaporasi dengan vakum rotary evaporator pada suhu 40°C tekanan vakum
- Tuang ekstrak ke dalam cawan porselin
- Uapkan sisa solvent dengan penangas air waterbatch
- Timbang ekstrak yang diperoleh.

Uji Kualitatif Flavonoid

- Timbang ekstrak sejumlah 50 mg.
- Masukkan kedalam labu, tambahkan 10 ml asam chlorida 4 N.
- Hidrolisis/refluk dengan pendingin balik selama 30 menit.
- Ekstraksi dengan 5 ml dietileter.
- Ambil fase dietileter, uapkan dengan gas nitrogen
- Spotting sampel sebanyak 10 µl pada plate silikagel GF₂₅₄, sertakan pembanding.
- Masukkan plate ke dalam chamber jenuh fase
- Eluasikan hingga batas.
- Keringkan plate, amati di bawah sinar UV 254 nm dan 365 nm.
- Semprot dengan pereaksi aluminium chloride.

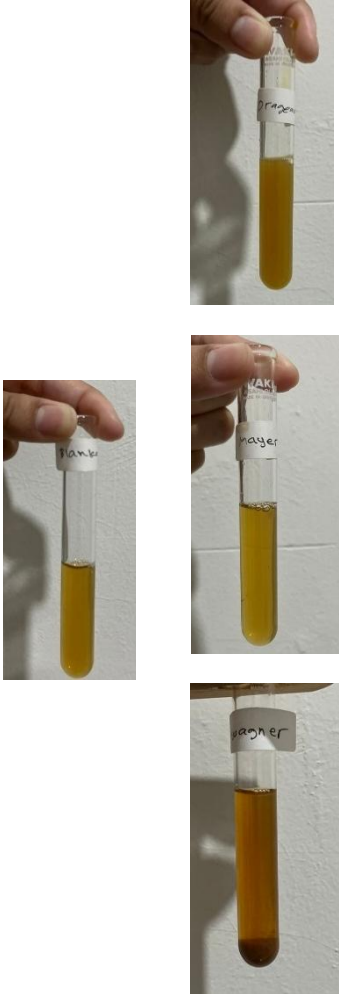
Spray reagent :
1% ethanolic solution of aluminium chloride.

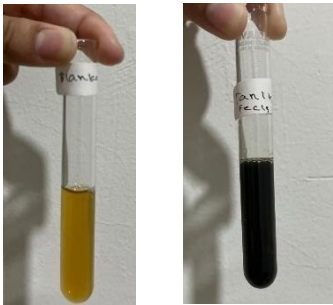
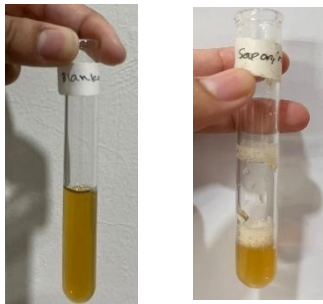
Chemicals:
Aluminium chloride hexahydrate extra pure Ph Eur, USP, Ord. No. 1.01084
Ethanol absolute GR ACS, ISO, Ord. No. 1.00983

Kompilasi Data Ekstraksi :

Berat daun segar	:	3.470	g	3,47	kg
Berat serbuk daun dadap	:	773,8	g	0,7738	kg
Volume solvent ethanol 70%	:	5.670	mL	5,67	L
Berat ekstrak	:	130,65	g	130,65	g

Lampiran 4. Skrining Fitokimia Ekstrak Daun Dadap

No	Pengujian	Hasil	Keterangan
1.	Alkaloid		(+) Alkaloid • (-) Tidak ada endapan merah bata (Dragendorff) • (-) Tidak ada endapan putih (Mayer) • (+) Terbentuk endapan merah-coklat (Wagner)
2.	Flavonoid		(+) Flavonoid Terbentuk warna merah/jingga pada lapisan amil alkohol

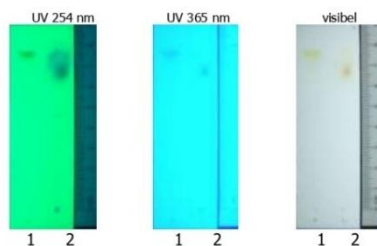
3.	Tanin		(+) Tanin Terbentuknya warna biru/hijau kehitaman (FeCl_3 1%)
4.	Saponin		(+) Saponin Terbentuk busa (HCL 2 N)

Uji Kualitatif Flavonoid

Sampel	Hasil Uji Kualitatif
Ekstrak Daun Dadap (<i>Erythrina subumbrans</i>)	Positif

TLC PROFILE

Sample number : 250133202b
 Sample detail : Ekstrak Daun Dadap (*Erythrina subumbrans*)
 Analysis : Flavonoid
 Adsorbent : Silicagel 60 F₂₅₄ (Al - Sheet)
 Mobile Phase : Butanol : Asam Asetat: Air (4:1:5)
 Detection : Aluminium Chloride



1 : Comparator Quercetin
 2 : Ekstrak Daun Dadap

Warna spot flavonoid di visibel : kuning
 Rf. Flavonoid : 0,80

Lampiran 5. Hasil evaluasi dan gambar optimasi basis masker gel *peel off*

1. Organoleptis



F1

F2

F3

F4

F5

2. Homogenitas



F1

F2

F3

F4

F5

Formula Optimum



3. Uji viskositas Formula 1-5



F1



F2



F3



F4



F5

Formula Optimum



Replikasi 1



Replikasi 2



Replikasi 3

4. Uji Daya Sebar Formula 1-5



F1



F2



F3



F4



F5

Formula Optimum



Replikasi 1

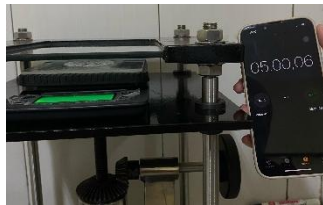


Replikasi 2



Replikasi 3

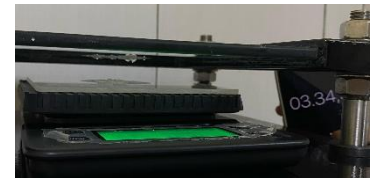
5. Uji Daya Lekat Formula 1-5



F1



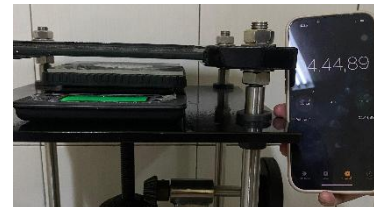
F2



F3

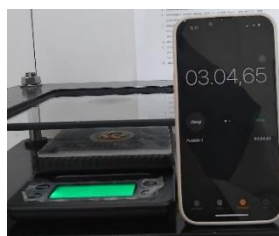


F4



F5

Formula Optimum



Replikasi 1



Replikasi 2



Replikasi 3

6. Uji pH Formula 1-5



F1



F2



F3



F4



F5

Formula Optimum



Replikasi 1



Replikasi 2



Replikasi 3

7. Uji Waktu Mengering Formula 1-5



Lampiran 6. Optimasi sediaan masker gel *peel off* dengan *Design Expert* menggunakan SLD (*Simple Lattice Design*)

1. Hasil uji fisik yang dilakukan

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File Edit View Display Options Design Tools Help

Navigation Pane

Design (Actual)

Information

Notes

Summary

Graph Columns

Evaluation

Constraints

Analysis [+]

pH (Analyzed)

Viskositas (Analyzed)

Daya sebar (Analyzed)

Daya lekat (Analyzed)

Waktu mengering (Analyzed)

Design Properties

Run 1

Comment

Row Status Normal

Std	Run	Component 1 A-PVA %	Component 2 B-HPMC %	Response 1 pH	Response 2 Viskositas cps	Response 3 Daya sebar cm	Response 4 Daya lekat detik	Response 5 Waktu mengering menit
6	1	15	2	6.52	2133	5.65	154	20
5	2	12.75	4.25	6.05	4870	4.82	284	26
7	3	12	5	6.1	5400	4.71	300	28
8	4	13.5	3.5	6.13	3297	5.16	184	25
3	5	13.5	3.5	6.13	3297	5.16	184	25
4	6	14.25	2.75	6.12	2807	5.11	225	23
1	7	15	2	6.52	2133	5.65	154	20
2	8	12	5	6.1	5400	4.71	300	28

For Help, press F1

2. Respon Viskositas

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File Edit View Display Options Design Tools Help

Navigation Pane

Design (Actual)

Information

Notes

Summary

Graph Columns

Evaluation

Constraints

Analysis [+]

pH (Analyzed)

Viskositas (Analyzed)

Daya sebar (Analyzed)

Daya lekat (Analyzed)

Waktu mengering (Analyzed)

Optimization

Numerical

Graphical

Post Analysis

Point Prediction

Confirmation

Coefficients Table

Configure Fit Summary Model ANOVA Diagnostics Model Graphs

Analysis of Variance

Response 2: Viskositas

Source	Sum of Squares	df	Mean Square	F-value	p-value	
Model	1.272E+07	1	1.272E+07	168.02	< 0.0001	significant
⁽¹⁾ Linear Mixture	1.272E+07	1	1.272E+07	168.02	< 0.0001	
Residual	4.542E+05	6	75702.03			
Lack of Fit	4.542E+05	3	1.514E+05			
Pure Error	0.0000	3	0.0000			
Cor Total	1.317E+07	7				

Fit Statistics

	Std. Dev.	Mean	C.V. %	R ²	Adjusted R ²	Predicted R ²	Adeq Precision
	275.14	3667.13	7.50	0.9655	0.9598	0.9493	24.4417

The Predicted R² of 0.9493 is in reasonable agreement with the Adjusted R² of 0.9598; i.e. the difference is less than 0.2.

Component Effects (Cox)

Component	Gradient in Reals	Component Effect	Gradient Std Error	Approx t for H ₀ Gradient=0	Prob > t
A-PVA	-19053.85	-3362.44	1469.96	-12.96	< 0.0001
B-HPMC	19053.85	3362.44	1469.96	12.96	< 0.0001

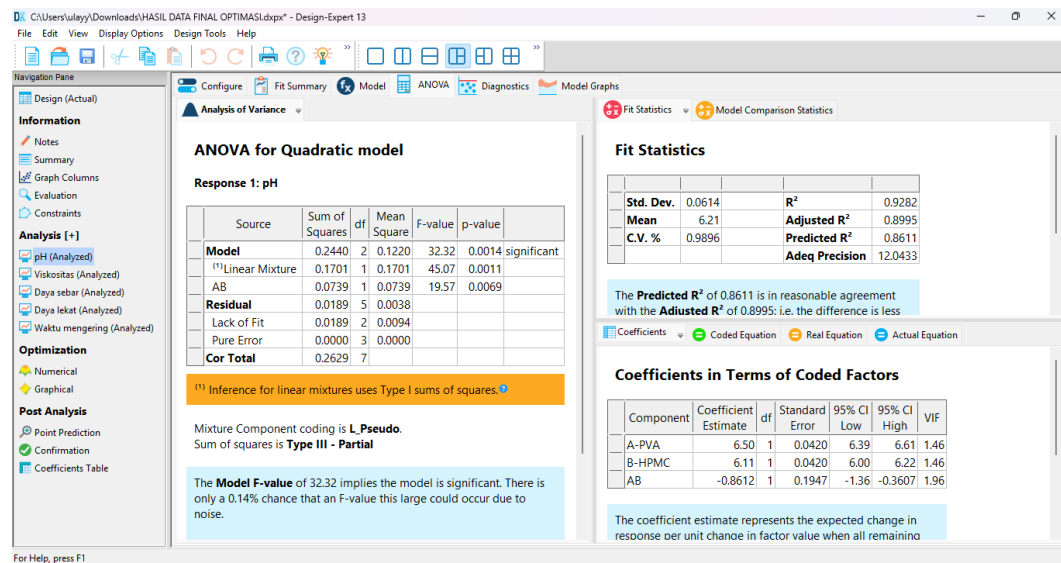
Coefficients in Terms of Coded Factors

Component	Coefficient Estimate	df	Standard Error	95% CI Low	95% CI High	VIF
A-PVA	1985.90	1	162.13	1589.19	2382.62	1.09
B-HPMC	5348.35	1	162.13	4951.63	5745.06	1.09

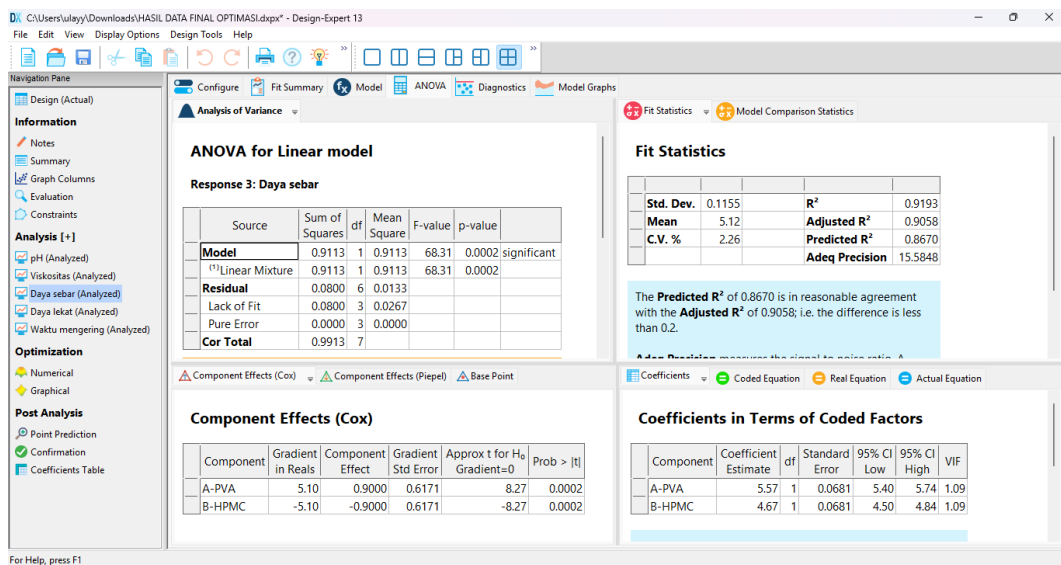
The coefficient estimate represents the expected change in response per unit change in factor value when all remaining

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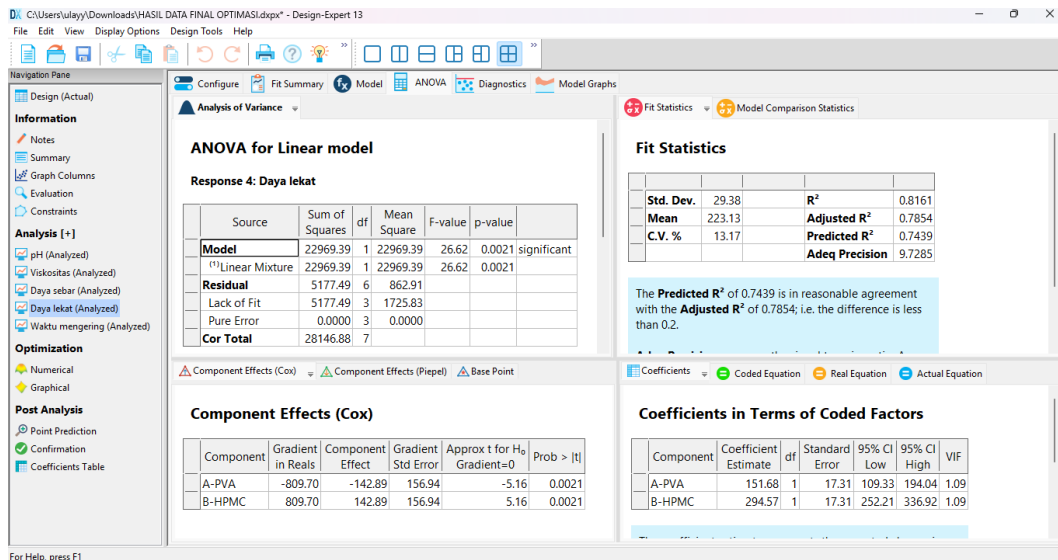
3. Respon pH



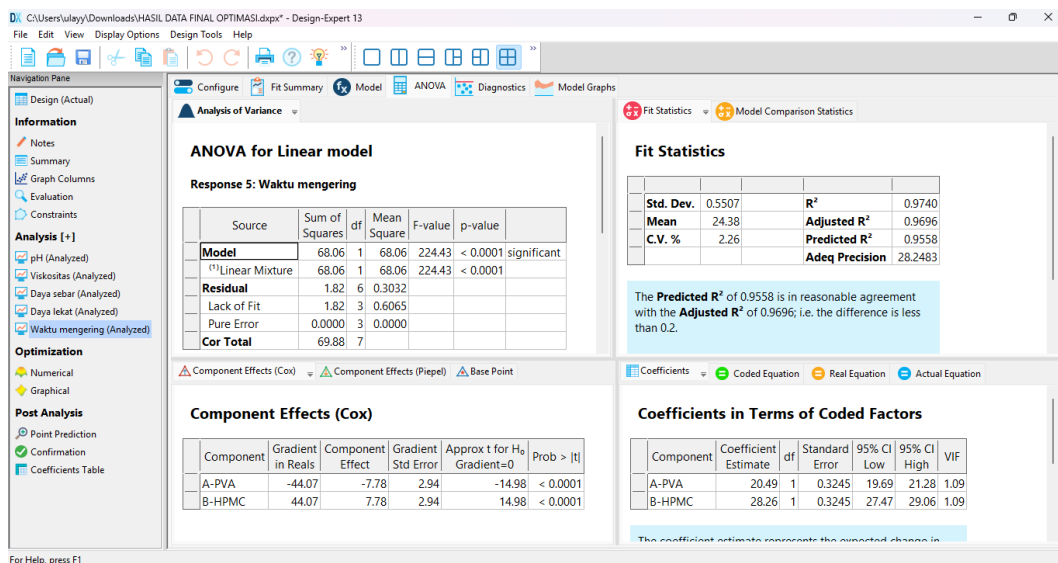
4. Respon Daya Sebar



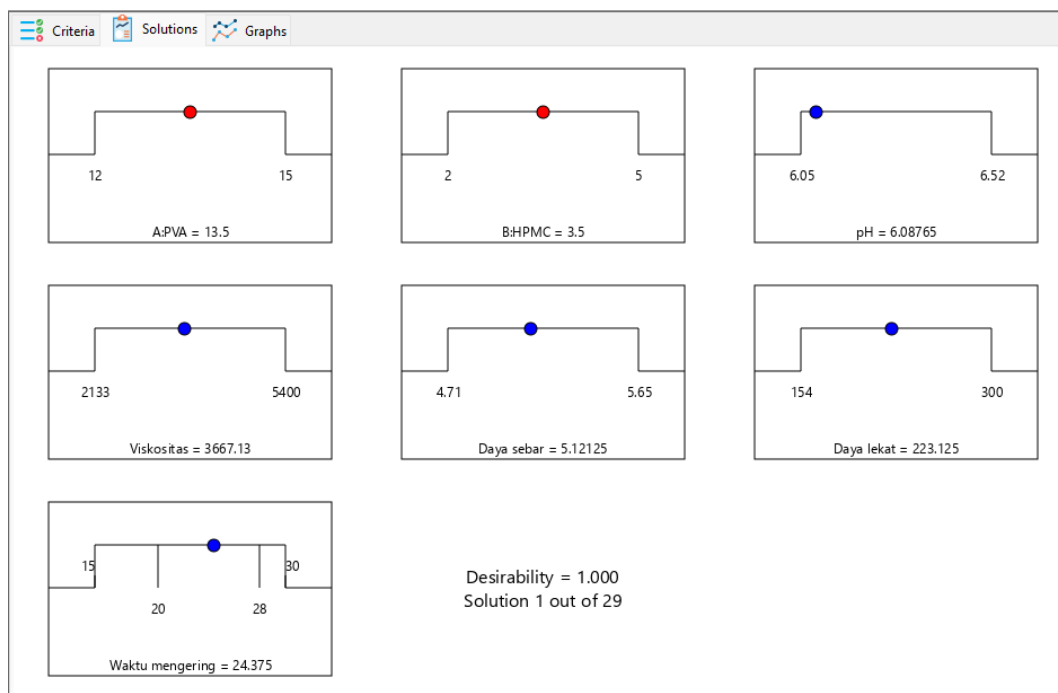
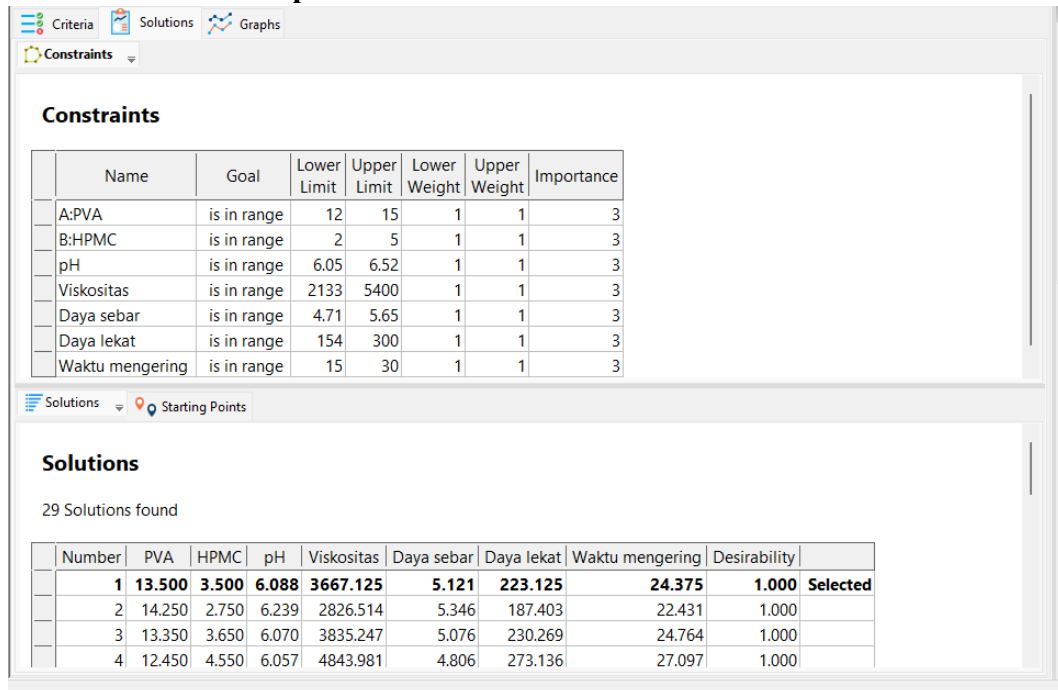
5. Respon Daya Lekat



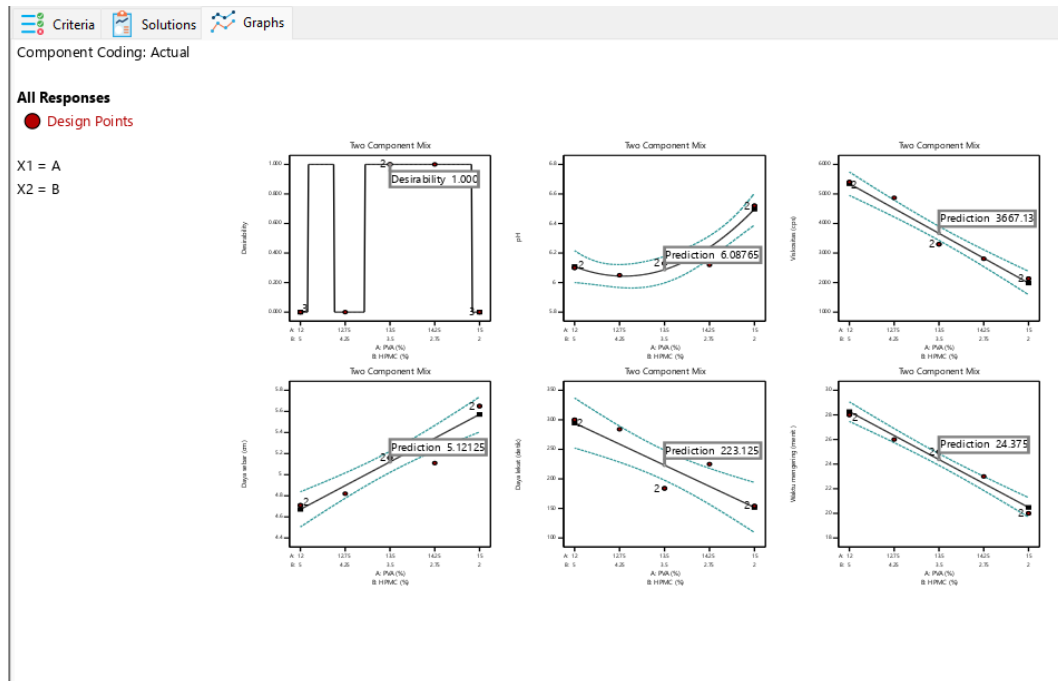
6. Respon Waktu Mengering



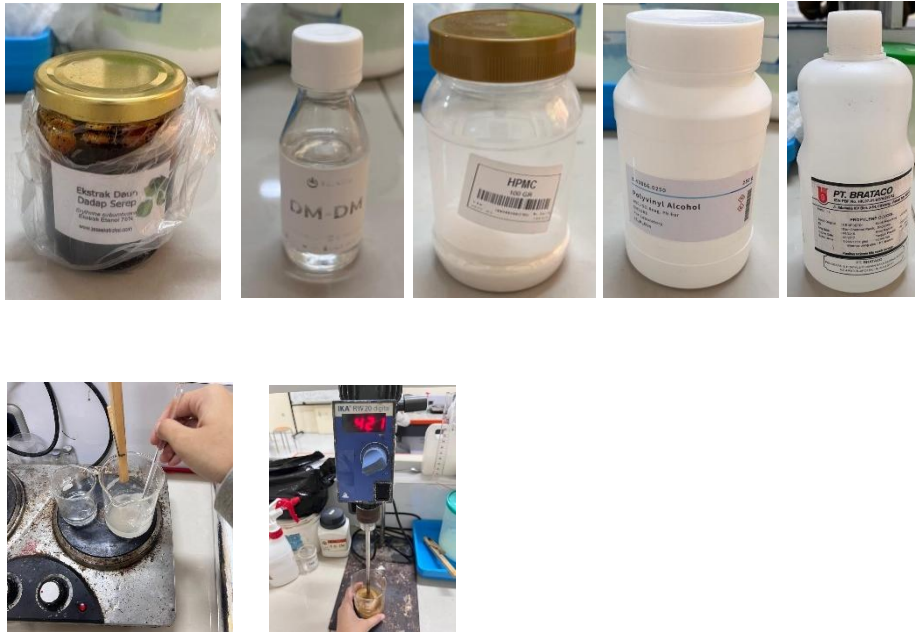
Hasil output solusi dari SLD



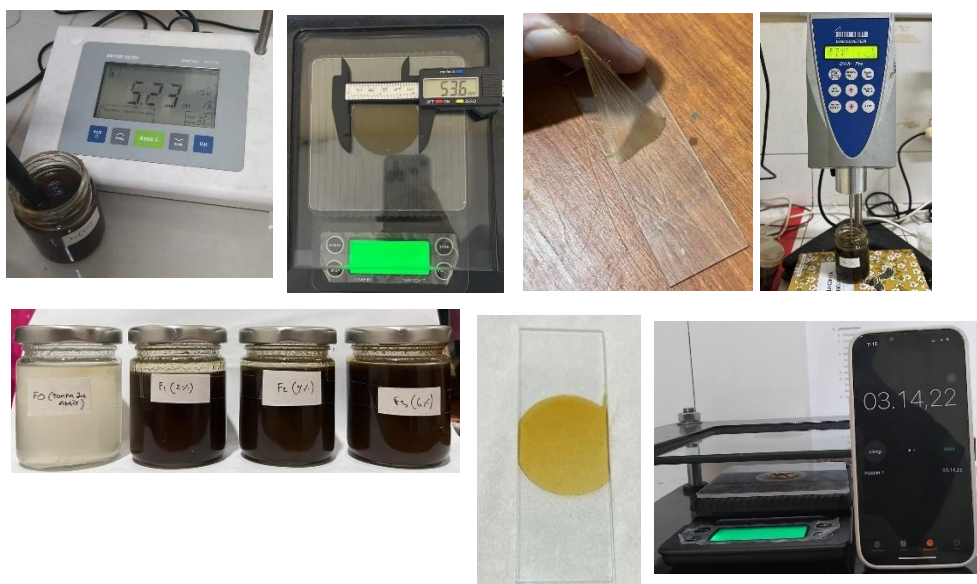
Grafik



Lampiran 7. Pembuatan sediaan masker gel *peel off*



Lampiran 8. Dokumentasi evaluasi sediaan



Lampiran 9. Data hasil evaluasi uji pH

Formula	Hari ke	Replikasi			Rata-rata	SD	Rata-rata±SD
		1	2	3			
F0	0	6,14	6,20	6,27	6,20	0,065	6,20±0,065
	7	6,16	6,10	6,18	6,14	0,041	6,14±0,041
	14	6,00	5,98	6,10	6,02	0,064	6,02±0,064
	21	5,91	5,94	6,00	5,95	0,045	5,95±0,045
	28	5,80	5,73	5,90	5,81	0,085	5,81±0,085
F1	0	5,95	5,83	5,73	5,83	0,110	5,83±0,110
	7	5,78	5,70	5,80	5,76	0,052	5,76±0,052
	14	5,56	5,61	5,45	5,54	0,081	5,54±0,081
	21	5,17	4,99	5,24	5,13	0,128	5,13±0,128
	28	4,98	4,86	4,81	4,88	0,087	4,88±0,087
F2	0	5,56	5,55	5,61	5,57	0,032	5,57±0,032
	7	5,10	5,27	5,15	5,17	0,087	5,17±0,087
	14	4,88	4,81	4,75	4,81	0,065	4,81±0,065
	21	4,78	4,67	4,62	4,69	0,081	4,69±0,081
	28	4,72	4,65	4,70	4,69	0,036	4,69±0,036
F3	0	5,35	5,23	5,46	5,34	0,115	5,34±0,115
	7	5,25	5,19	5,20	5,21		5,21±0,032
	14	5,00	4,95	4,81	4,92	0,032	4,92±0,098

	21	4,71	4,67	4,73	4,70	0,098	4,70±0,030
	28	4,50	4,55	4,57	4,54	0,030 0,036	4,54±0,036

Lampiran 10. Data evaluasi uji viskositas

Formula	Hari ke	Replikasi			Rata-rata	SD	Rata-rata±SD
		1	2	3			
F0	0	3297	3307	3353	3319	29,866	3319±29,866
	7	3207	3448	3332	3329	120,528	3329±120,528
	14	3185	3275	3245	3235	45,825	3235±45,825
	21	3120	3040	3125	3095	47,696	3095±47,696
	28	2917	2925	2933	2925	8	2925±8
F1	0	3327	3313	3360	3333,33	24,131	3333,33±24,131
	7	3300	3245	3350	3298,33	52,519	3298,33±52,519
	14	3255	3216	3195	3222	30,446	3222±30,446
	21	3201	3010	3150	3120,33	98,895	3120,33±98,895
	28	3117	3000	3215	3110,66	107,639	3110,66±107,639
F2	0	3442	3475	3345	3420,66	67,574	3420,66±67,574
	7	3405	3415	3400	3406,66	7,637	3406,66±7,637
	14	3345	3325	3285	3318,33	30,550	3318,33±30,550
	21	3233	3118	3224	3191,66	63,955	3191,66±63,955
	28	3128	3215	3108	3150,33	56,888	3150,33±56,888
F3	0	3525	3456	3448	3476,33	42,335	3476,33±42,335
	7	3467	3373	3433	3424,33	47,595	3424,33±47,595
	14	3425	3400	3387	3404	19,313	3404±19,313
	21	3303	3214	3321	3279,33	57,291	3279,33±57,291
	28	3325	3235	3241	3267	50,318	3267±50,318

Lampiran 11. Data evaluasi uji daya sebar

Formula	Hari ke	Replikasi			Rata-rata	SD	Rata-rata±SD
		1	2	3			
F0	0	5,71	5,63	5,54	5,62	0,085	5,62±0,085
	7	5,52	5,47	5,40	5,46	0,060	5,46±0,060
	14	5,37	5,31	5,34	5,34	0,03	5,34±0,03
	21	5,22	5,24	5,28	5,24	0,030	5,24±0,030
	28	5,20	5,21	5,15	5,18	0,032	5,18±0,032
F1	0	5,36	5,32	5,30	5,32	0,030	5,32±0,030
	7	5,30	5,29	5,31	5,30	0,01	5,30±0,01
	14	5,27	5,28	5,29	5,28	0,01	5,28±0,01
	21	5,31	5,22	5,24	5,25	0,047	5,25±0,047

	28	5,21	5,20	5,12	5,17	0,049	5,17±0,049
F2	0	5,34	5,31	5,35	5,33	0,020	5,33±0,020
	7	5,28	5,30	5,29	5,29	0,01	5,29±0,01
	14	5,27	5,29	5,26	5,27	0,015	5,27±0,015
	21	5,28	5,25	5,23	5,25	0,025	5,25±0,025
	28	5,22	5,18	5,13	5,17	0,045	5,17±0,045
F3	0	5,34	5,31	5,33	5,32	0,015	5,32±0,015
	7	5,31	5,33	5,29	5,31	0,02	5,31±0,02
	14	5,28	5,30	5,27	5,28	0,015	5,28±0,015
	21	5,29	5,25	5,36	5,30	0,055	5,30±0,055
	28	5,15	5,20	5,11	5,15	0,045	5,15±0,045

Lampiran 12. Data evaluasi uji daya lekat

Formula	Hari ke	Replikasi			Rata-rata	SD	Rata-rata±SD
		1	2	3			
F0	0	184	182	185	183,66	1,527	183,66±1,527
	7	181	183	182	182	1	182±1
	14	180	177	179	178,66	1,527	178,66±1,527
	21	181	180	184	181,66	2,081	181,66±2,081
	28	179	178	180	179	1	179±1
F1	0	300	305	308	304,33	4,041	304,33±4,041
	7	301	302	305	302,66	2,081	302,66±2,081
	14	304	302	303	303	1	303±1
	21	310	306	307	307,66	2,081	307,66±2,081
	28	309	307	310	308,66	1,527	308,66±1,527
F2	0	310	314	312	312	2	312±2
	7	313	318	311	314	3,605	314±3,605
	14	316	315	310	313,66	3,214	313,66±3,214
	21	317	316	314	315,66	1,527	315,66±1,527
	28	312	317	313	314	2,645	314±2,645
F3	0	320	325	328	324,33	4,041	324,33±4,041
	7	324	321	330	325	4,582	325±4,582
	14	329	325	323	325,66	3,055	325,66±3,055
	21	316	318	319	317,66	1,527	317,66±1,527
	28	310	311	312	311	1	311±1

Lampiran 13. Data evaluasi uji waktu mengering

Formula	Hari ke	Replikasi			Rata-rata	SD	Rata-rata±SD
		1	2	3			
F0	0	25	25,15	25,35	25,16	0,175	25,16±0,175
	7	25,10	25,25	25,20	25,18	0,076	25,18±0,076
	14	25,28	25,20	25,30	25,26	0,052	25,26±0,052

	21	25,15	25,10	25,31	25,18	0,109	25,18±0,109
	28	25,18	25,17	25,24	25,19	0,037	25,19±0,037
F1	0	26,10	26,08	26,06	26,08	0,02	26,08±0,02
	7	26,14	26,11	26,07	26,10	0,035	26,10±0,035
	14	26,16	26,10	26,09	26,11	0,037	26,11±0,037
	21	26,17	26,11	26,15	26,14	0,030	26,14±0,030
	28	26,09	26	26,20	26,09	0,100	26,09±0,100
F2	0	26,15	26,20	26,10	26,15	0,05	26,15±0,05
	7	26,10	26,15	26,17	26,14	0,036	26,14±0,036
	14	26,08	26,18	26,22	26,16	0,072	26,16±0,072
	21	26,11	26,19	26,28	26,19	0,085	26,19±0,085
	28	26,12	26,29	26,32	26,24	0,107	26,24±0,107
F3	0	28,10	28,16	28,17	28,14	0,037	28,14±0,037
	7	28,14	28,20	28,16	28,16	0,030	28,16±0,030
	14	28,26	28,25	28,28	28,26	0,015	28,26±0,015
	21	28,17	28,30	28,40	28,29	0,115	28,29±0,115
	28	28,22	28,35	28,20	28,25	0,081	28,25±0,081

Lampiran 14. Data SPSS uji pH

Uji Normalitas

Tests of Normality

	HARI KE	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
PH_F0	0	.187	3	.	.998	3	.915
	7	.292	3	.	.923	3	.463
	14	.328	3	.	.871	3	.298
	21	.253	3	.	.964	3	.637
	28	.213	3	.	.990	3	.806
PH_F1	0	.191	3	.	.997	3	.900
	7	.314	3	.	.893	3	.363
	14	.263	3	.	.955	3	.593
	21	.279	3	.	.939	3	.525
	28	.272	3	.	.947	3	.554
PH_F2	0	.328	3	.	.871	3	.298
	7	.272	3	.	.947	3	.554
	14	.187	3	.	.998	3	.915
	21	.263	3	.	.955	3	.593

	28	.276	3	.	.942	3	.537
	0	.178	3	.	.999	3	.952
	7	.328	3	.	.871	3	.298
PH_F3	14	.286	3	.	.930	3	.490
	21	.253	3	.	.964	3	.637
	28	.276	3	.	.942	3	.537

a. Lilliefors Significance Correction

Homogenitas

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PH_F0	.473	4	10	.755
PH_F1	.653	4	10	.638
PH_F2	1.171	4	10	.380
PH_F3	1.861	4	10	.194

One way ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
PH_F0	Between Groups	.295	4	.074	18.929	.000
	Within Groups	.039	10	.004		
	Total	.334	14			
PH_F1	Between Groups	2.020	4	.505	55.003	.000
	Within Groups	.092	10	.009		
	Total	2.111	14			
PH_F2	Between Groups	1.755	4	.439	104.978	.000
	Within Groups	.042	10	.004		
	Total	1.797	14			
PH_F3	Between Groups	1.369	4	.342	65.323	.000
	Within Groups	.052	10	.005		
	Total	1.422	14			

Post-Hoc

Multiple Comparisons

Bonferroni

Dependent Variable(I) HARI KE	(J) HARI KE	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
PH_F0	7	.05667	.05099	1.000	-.1259	.2393
	14	.17667	.05099	.061	-.0059	.3593
	21	.25333*	.05099	.006	.0707	.4359
	28	.39333*	.05099	.000	.2107	.5759
	0	-.05667	.05099	1.000	-.2393	.1259
	14	.12000	.05099	.404	-.0626	.3026
	21	.19667*	.05099	.032	.0141	.3793
	28	.33667*	.05099	.001	.1541	.5193
	0	-.17667	.05099	.061	-.3593	.0059
	7	-.12000	.05099	.404	-.3026	.0626
	21	.07667	.05099	1.000	-.1059	.2593
	28	.21667*	.05099	.017	.0341	.3993
	0	-.25333*	.05099	.006	-.4359	-.0707
	7	-.19667*	.05099	.032	-.3793	-.0141
	14	-.07667	.05099	1.000	-.2593	.1059
	28	.14000	.05099	.206	-.0426	.3226
	0	-.39333*	.05099	.000	-.5759	-.2107
	7	-.33667*	.05099	.001	-.5193	-.1541
	14	-.21667*	.05099	.017	-.3993	-.0341
	21	-.14000	.05099	.206	-.3226	.0426
PH_F1	7	.07667	.07823	1.000	-.2035	.3568
	14	.29667*	.07823	.035	.0165	.5768
	21	.70333*	.07823	.000	.4232	.9835
	28	.95333*	.07823	.000	.6732	1.2335
	0	-.07667	.07823	1.000	-.3568	.2035
	7	.22000	.07823	.184	-.0602	.5002

PH_F2	14	21	.62667*	.07823	.000	.3465	.9068
		28	.87667*	.07823	.000	.5965	1.1568
		0	-.29667*	.07823	.035	-.5768	-.0165
		7	-.22000	.07823	.184	-.5002	.0602
		21	.40667*	.07823	.004	.1265	.6868
		28	.65667*	.07823	.000	.3765	.9368
	21	0	-.70333*	.07823	.000	-.9835	-.4232
		7	-.62667*	.07823	.000	-.9068	-.3465
		14	-.40667*	.07823	.004	-.6868	-.1265
		28	.25000	.07823	.096	-.0302	.5302
		0	-.95333*	.07823	.000	-1.2335	-.6732
		7	-.87667*	.07823	.000	-1.1568	-.5965
	28	14	-.65667*	.07823	.000	-.9368	-.3765
		21	-.25000	.07823	.096	-.5302	.0302
		7	.40000*	.05279	.000	.2109	.5891
		14	.76000*	.05279	.000	.5709	.9491
		21	.88333*	.05279	.000	.6943	1.0724
		28	.88333*	.05279	.000	.6943	1.0724
	0	0	-.40000*	.05279	.000	-.5891	-.2109
		14	.36000*	.05279	.000	.1709	.5491
		21	.48333*	.05279	.000	.2943	.6724
		28	.48333*	.05279	.000	.2943	.6724
		0	-.76000*	.05279	.000	-.9491	-.5709
		7	-.36000*	.05279	.000	-.5491	-.1709
	14	21	.12333	.05279	.416	-.0657	.3124
		28	.12333	.05279	.416	-.0657	.3124
		0	-.88333*	.05279	.000	-1.0724	-.6943
		7	-.48333*	.05279	.000	-.6724	-.2943
		14	-.12333	.05279	.416	-.3124	.0657
		28	.00000	.05279	1.000	-.1891	.1891
	21	0	-.88333*	.05279	.000	-1.0724	-.6943
		7	-.48333*	.05279	.000	-.6724	-.2943
		14	-.12333	.05279	.416	-.3124	.0657
		28	.00000	.05279	1.000	-.1891	.1891
		0	-.88333*	.05279	.000	-1.0724	-.6943
		7	-.48333*	.05279	.000	-.6724	-.2943
	28	14	-.12333	.05279	.416	-.3124	.0657

PH_F3	0	21	.00000	.05279	1.000	-.1891	.1891
		7	.13333	.05910	.477	-.0783	.3450
		14	.42667*	.05910	.000	.2150	.6383
		21	.64333*	.05910	.000	.4317	.8550
		28	.80667*	.05910	.000	.5950	1.0183
		0	-.13333	.05910	.477	-.3450	.0783
	7	14	.29333*	.05910	.006	.0817	.5050
		21	.51000*	.05910	.000	.2983	.7217
		28	.67333*	.05910	.000	.4617	.8850
		0	-.42667*	.05910	.000	-.6383	-.2150
		7	-.29333*	.05910	.006	-.5050	-.0817
		21	.21667*	.05910	.043	.0050	.4283
	14	28	.38000*	.05910	.001	.1683	.5917
		0	-.64333*	.05910	.000	-.8550	-.4317
		7	-.51000*	.05910	.000	-.7217	-.2983
		14	-.21667*	.05910	.043	-.4283	-.0050
		28	.16333	.05910	.200	-.0483	.3750
		0	-.80667*	.05910	.000	-1.0183	-.5950
	21	7	-.67333*	.05910	.000	-.8850	-.4617
		14	-.38000*	.05910	.001	-.5917	-.1683
		28	-.16333	.05910	.200	-.3750	.0483

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

Lampiran 15. Data SPSS uji Viskositas

Uji Normalitas

Tests of Normality

	HARI KE	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
VISK_F0	0	.323	3	.	.879	3	.321
	7	.178	3	.	1.000	3	.959

	14	.253	3		.964	3	.637
	21	.367	3		.794	3	.100
	28	.175	3		1.000	3	1.000
	0	.270	3		.948	3	.562
	7	.179	3		.999	3	.948
VISK_F1	14	.245	3		.971	3	.672
	21	.285	3		.933	3	.498
	28	.190	3		.997	3	.903
	0	.291	3		.925	3	.471
	7	.253	3		.964	3	.637
VISK_F2	14	.253	3		.964	3	.637
	21	.360	3		.808	3	.134
	28	.319	3		.884	3	.337
	0	.351	3		.827	3	.181
	7	.239	3		.975	3	.698
VISK_F3	14	.249	3		.968	3	.656
	21	.327	3		.872	3	.301
	28	.364	3		.800	3	.114

a. Lilliefors Significance Correction

Uji Homogenitas

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
VISK_F0	2.193	4	10	.143
VISK_F1	1.799	4	10	.206
VISK_F2	3.059	4	10	.069
VISK_F3	1.241	4	10	.354

One way ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VISK_F0	Between Groups	350385.600	4	87596.400	22.056	.000

	Within Groups	39716.000	10	3971.600		
	Total	390101.600	14			
	Between Groups	122474.267	4	30618.567	5.972	.010
VISK_F1	Within Groups	51268.667	10	5126.867		
	Total	173742.933	14			
	Between Groups	181140.400	4	45285.100	17.573	.000
VISK_F2	Within Groups	25769.333	10	2576.933		
	Total	206909.733	14			
	Between Groups	102732.400	4	25683.100	12.534	.001
VISK_F3	Within Groups	20490.000	10	2049.000		
	Total	123222.400	14			

Post Hoc

Multiple Comparisons

Bonferroni

Dependent Variable	(I) HARI KE	(J) HARI KE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
VISK_F0	0	7	-10.00000	51.45613	1.000	-194.2853	174.2853
		14	84.00000	51.45613	1.000	-100.2853	268.2853
		21	224.00000*	51.45613	.014	39.7147	408.2853
		28	394.00000*	51.45613	.000	209.7147	578.2853
	7	0	10.00000	51.45613	1.000	-174.2853	194.2853
		14	94.00000	51.45613	.977	-90.2853	278.2853
		21	234.00000*	51.45613	.011	49.7147	418.2853
		28	404.00000*	51.45613	.000	219.7147	588.2853
	14	0	-84.00000	51.45613	1.000	-268.2853	100.2853
		7	-94.00000	51.45613	.977	-278.2853	90.2853
		21	140.00000	51.45613	.215	-44.2853	324.2853
		28	310.00000*	51.45613	.001	125.7147	494.2853
	21	0	-224.00000*	51.45613	.014	-408.2853	-39.7147

VISK_F1	28	7	-234.00000*	51.45613	.011	-418.2853	-49.7147
		14	-140.00000	51.45613	.215	-324.2853	44.2853
		28	170.00000	51.45613	.080	-14.2853	354.2853
		0	-394.00000*	51.45613	.000	-578.2853	-209.7147
		7	-404.00000*	51.45613	.000	-588.2853	-219.7147
		14	-310.00000*	51.45613	.001	-494.2853	-125.7147
		21	-170.00000	51.45613	.080	-354.2853	14.2853
	0	7	35.00000	58.46290	1.000	-174.3794	244.3794
		14	111.33333	58.46290	.860	-98.0461	320.7127
		21	213.00000*	58.46290	.045	3.6206	422.3794
		28	222.66667*	58.46290	.034	13.2873	432.0461
		0	-35.00000	58.46290	1.000	-244.3794	174.3794
		14	76.33333	58.46290	1.000	-133.0461	285.7127
		21	178.00000	58.46290	.124	-31.3794	387.3794
	7	28	187.66667	58.46290	.093	-21.7127	397.0461
		0	-111.33333	58.46290	.860	-320.7127	98.0461
		7	-76.33333	58.46290	1.000	-285.7127	133.0461
		14	101.66667	58.46290	1.000	-107.7127	311.0461
		21	111.33333	58.46290	.860	-98.0461	320.7127
		0	-213.00000*	58.46290	.045	-422.3794	-3.6206
		7	-178.00000	58.46290	.124	-387.3794	31.3794
	21	14	-101.66667	58.46290	1.000	-311.0461	107.7127
		28	9.66667	58.46290	1.000	-199.7127	219.0461
		0	-222.66667*	58.46290	.034	-432.0461	-13.2873
		7	-187.66667	58.46290	.093	-397.0461	21.7127
		14	-111.33333	58.46290	.860	-320.7127	98.0461
		21	-9.66667	58.46290	1.000	-219.0461	199.7127
		28	-187.66667	58.46290	.093	-397.0461	21.7127
VISK_F2	0	7	14.00000	41.44823	1.000	-134.4429	162.4429
		14	102.33333	41.44823	.332	-46.1096	250.7763
		21	229.00000*	41.44823	.003	80.5571	377.4429
		28	270.33333*	41.44823	.001	121.8904	418.7763
		7	-14.00000	41.44823	1.000	-162.4429	134.4429

VISK_F3	14	14	88.33333	41.44823	.589	-60.1096	236.7763
		21	215.00000*	41.44823	.004	66.5571	363.4429
		28	256.33333*	41.44823	.001	107.8904	404.7763
		0	-102.33333	41.44823	.332	-250.7763	46.1096
	21	7	-88.33333	41.44823	.589	-236.7763	60.1096
		21	126.66667	41.44823	.121	-21.7763	275.1096
		28	168.00000*	41.44823	.023	19.5571	316.4429
		0	-229.00000*	41.44823	.003	-377.4429	-80.5571
	28	7	-215.00000*	41.44823	.004	-363.4429	-66.5571
		14	-126.66667	41.44823	.121	-275.1096	21.7763
		28	41.33333	41.44823	1.000	-107.1096	189.7763
		0	-270.33333*	41.44823	.001	-418.7763	-121.8904
	0	7	-256.33333*	41.44823	.001	-404.7763	-107.8904
		14	-168.00000*	41.44823	.023	-316.4429	-19.5571
		21	-41.33333	41.44823	1.000	-189.7763	107.1096
		7	52.00000	36.95944	1.000	-80.3668	184.3668
	7	14	72.33333	36.95944	.788	-60.0334	204.7001
		21	197.00000*	36.95944	.003	64.6332	329.3668
		28	209.33333*	36.95944	.002	76.9666	341.7001
		0	-52.00000	36.95944	1.000	-184.3668	80.3668
	14	14	20.33333	36.95944	1.000	-112.0334	152.7001
		21	145.00000*	36.95944	.029	12.6332	277.3668
		28	157.33333*	36.95944	.017	24.9666	289.7001
		0	-72.33333	36.95944	.788	-204.7001	60.0334
	21	7	-20.33333	36.95944	1.000	-152.7001	112.0334
		21	124.66667	36.95944	.071	-7.7001	257.0334
		28	137.00000*	36.95944	.041	4.6332	269.3668
		0	-197.00000*	36.95944	.003	-329.3668	-64.6332
	28	7	-145.00000*	36.95944	.029	-277.3668	-12.6332
		14	-124.66667	36.95944	.071	-257.0334	7.7001
		28	12.33333	36.95944	1.000	-120.0334	144.7001

	0	-209.33333*	36.95944	.002	-341.7001	-76.9666
	7	-157.33333*	36.95944	.017	-289.7001	-24.9666
28	14	-137.00000*	36.95944	.041	-269.3668	-4.6332
	21	-12.33333	36.95944	1.000	-144.7001	120.0334

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

Lampiran 16. Data SPSS uji Daya Sebar

Uji Normalitas

Tests of Normality

	HARI KE	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
DS_F0	0	.182	3	.	.999	3	.935
	7	.211	3	.	.991	3	.817
	14	.175	3	.	1.000	3	1.000
	21	.253	3	.	.964	3	.637
	28	.328	3	.	.871	3	.298
DS_F1	0	.253	3	.	.964	3	.637
	7	.175	3	.	1.000	3	1.000
	14	.175	3	.	1.000	3	1.000
	21	.304	3	.	.907	3	.407
	28	.238	3	.	.976	3	.702
DS_F2	0	.292	3	.	.923	3	.463
	7	.175	3	.	1.000	3	1.000
	14	.253	3	.	.964	3	.637
	21	.219	3	.	.987	3	.780
	28	.196	3	.	.996	3	.878
DS_F3	0	.253	3	.	.964	3	.637
	7	.175	3	.	1.000	3	1.000
	14	.253	3	.	.964	3	.637
	21	.292	3	.	.923	3	.463
	28	.196	3	.	.996	3	.878

a. Lilliefors Significance Correction

Uji Homogenitas

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
DS_F0	1.039	4	10	.434
DS_F1	2.829	4	10	.083
DS_F2	1.436	4	10	.292
DS_F3	1.202	4	10	.369

One way ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
DS_F0	Between Groups	.373	4	.093	33.934	.000
	Within Groups	.027	10	.003		
	Total	.400	14			
DS_F1	Between Groups	.028	4	.007	5.366	.014
	Within Groups	.013	10	.001		
	Total	.041	14			
DS_F2	Between Groups	.040	4	.010	14.529	.000
	Within Groups	.007	10	.001		
	Total	.047	14			
DS_F3	Between Groups	.056	4	.014	20.915	.000
	Within Groups	.007	10	.001		
	Total	.062	14			

Post Hoc

Multiple Comparisons

Bonferroni

Dependent Variable	(I) HARI KE	(J) HARI KE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
DS_F0	0	7	.16333*	.04279	.034	.0101	.3166
		14	.28667*	.04279	.001	.1334	.4399
		21	.38000*	.04279	.000	.2267	.5333
		28	.44000*	.04279	.000	.2867	.5933
	7	0	-.16333*	.04279	.034	-.3166	-.0101
		14	.12333	.04279	.163	-.0299	.2766
		21	.21667*	.04279	.005	.0634	.3699
		28	.27667*	.04279	.001	.1234	.4299
	14	0	-.28667*	.04279	.001	-.4399	-.1334
		7	-.12333	.04279	.163	-.2766	.0299
		21	.09333	.04279	.541	-.0599	.2466
		28	.15333*	.04279	.050	.0001	.3066
	21	0	-.38000*	.04279	.000	-.5333	-.2267
		7	-.21667*	.04279	.005	-.3699	-.0634
		14	-.09333	.04279	.541	-.2466	.0599
		28	.06000	.04279	1.000	-.0933	.2133
	28	0	-.44000*	.04279	.000	-.5933	-.2867
		7	-.27667*	.04279	.001	-.4299	-.1234
		14	-.15333*	.04279	.050	-.3066	-.0001
		21	-.06000	.04279	1.000	-.2133	.0933
DS_F1	0	7	.02667	.02936	1.000	-.0785	.1318
		14	.04667	.02936	1.000	-.0585	.1518
		21	.07000	.02936	.384	-.0352	.1752
	7	28	.12667*	.02936	.015	.0215	.2318
		0	-.02667	.02936	1.000	-.1318	.0785
		14	.02000	.02936	1.000	-.0852	.1252

DS_F2	14	21	.04333	.02936	1.000	-.0618	.1485
		28	.10000	.02936	.067	-.0052	.2052
		0	-.04667	.02936	1.000	-.1518	.0585
		7	-.02000	.02936	1.000	-.1252	.0852
		21	.02333	.02936	1.000	-.0818	.1285
		28	.08000	.02936	.214	-.0252	.1852
	21	0	-.07000	.02936	.384	-.1752	.0352
		7	-.04333	.02936	1.000	-.1485	.0618
		14	-.02333	.02936	1.000	-.1285	.0818
		28	.05667	.02936	.825	-.0485	.1618
		0	-.12667*	.02936	.015	-.2318	-.0215
		7	-.10000	.02936	.067	-.2052	.0052
	28	14	-.08000	.02936	.214	-.1852	.0252
		21	-.05667	.02936	.825	-.1618	.0485
		7	.04333	.02140	.704	-.0333	.1200
		14	.06000	.02140	.187	-.0166	.1366
		21	.08000*	.02140	.039	.0034	.1566
		28	.15667*	.02140	.000	.0800	.2333
	0	0	-.04333	.02140	.704	-.1200	.0333
		14	.01667	.02140	1.000	-.0600	.0933
		21	.03667	.02140	1.000	-.0400	.1133
		28	.11333*	.02140	.003	.0367	.1900
		0	-.06000	.02140	.187	-.1366	.0166
		7	-.01667	.02140	1.000	-.0933	.0600
	7	14	.02000	.02140	1.000	-.0566	.0966
		28	.09667*	.02140	.011	.0200	.1733
		0	-.08000*	.02140	.039	-.1566	-.0034
		7	-.03667	.02140	1.000	-.1133	.0400
		14	-.02000	.02140	1.000	-.0966	.0566
		28	.07667*	.02140	.050	.0000	.1533
	21	0	-.15667*	.02140	.000	-.2333	-.0800
		7	-.11333*	.02140	.003	-.1900	-.0367
		14	-.09667*	.02140	.011	-.1733	-.0200

DS_F3	0	21	-.07667*	.02140	.050	-.1533	.0000
		7	.01667	.02108	1.000	-.0588	.0922
		14	.04333	.02108	.669	-.0322	.1188
		21	.06000	.02108	.174	-.0155	.1355
		28	.17333*	.02108	.000	.0978	.2488
		0	-.01667	.02108	1.000	-.0922	.0588
	7	14	.02667	.02108	1.000	-.0488	.1022
		21	.04333	.02108	.669	-.0322	.1188
		28	.15667*	.02108	.000	.0812	.2322
		0	-.04333	.02108	.669	-.1188	.0322
		7	-.02667	.02108	1.000	-.1022	.0488
		21	.01667	.02108	1.000	-.0588	.0922
	14	28	.13000*	.02108	.001	.0545	.2055
		0	-.06000	.02108	.174	-.1355	.0155
		7	-.04333	.02108	.669	-.1188	.0322
		14	-.01667	.02108	1.000	-.0922	.0588
		28	.11333*	.02108	.003	.0378	.1888
		0	-.17333*	.02108	.000	-.2488	-.0978
	21	7	-.15667*	.02108	.000	-.2322	-.0812
		14	-.13000*	.02108	.001	-.2055	-.0545
		28	-.11333*	.02108	.003	-.1888	-.0378
	28	0	-.07667*	.02140	.050	-.1533	.0000
		7	.01667	.02108	1.000	-.0588	.0922
		14	.04333	.02108	.669	-.0322	.1188
		21	.06000	.02108	.174	-.0155	.1355
		28	.17333*	.02108	.000	.0978	.2488
		0	-.01667	.02108	1.000	-.0922	.0588

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

Lampiran 17. Data SPSS uji Daya Lekat

Uji Normalitas

Tests of Normality

	HARI KE	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
DL_F0	0	.253	3	.	.964	3	.637
	7	.175	3	.	1.000	3	1.000

	14	.253	3		.964	3	.637
	21	.292	3		.923	3	.463
	28	.175	3		1.000	3	1.000
	0	.232	3		.980	3	.726
	7	.292	3		.923	3	.463
DL_F1	14	.175	3		1.000	3	1.000
	21	.292	3		.923	3	.463
	28	.253	3		.964	3	.637
	0	.175	3		1.000	3	1.000
	7	.276	3		.942	3	.537
DL_F2	14	.328	3		.871	3	.298
	21	.253	3		.964	3	.637
	28	.314	3		.893	3	.363
	0	.232	3		.980	3	.726
	7	.253	3		.964	3	.637
DL_F3	14	.253	3		.964	3	.637
	21	.253	3		.964	3	.637
	28	.175	3		1.000	3	1.000

a. Lilliefors Significance Correction

Uji Homogenitas

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
DL_F0	.889	4	10	.505
DL_F1	1.718	4	10	.222
DL_F2	1.057	4	10	.426
DL_F3	1.782	4	10	.209

One way ANOVA

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
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DL_F0	Between Groups	54.000	4	13.500	6.136	.009
	Within Groups	22.000	10	2.200		
	Total	76.000	14			
DL_F1	Between Groups	90.267	4	22.567	3.982	.035
	Within Groups	56.667	10	5.667		
	Total	146.933	14			
DL_F2	Between Groups	20.400	4	5.100	.695	.612
	Within Groups	73.333	10	7.333		
	Total	93.733	14			
DL_F3	Between Groups	478.933	4	119.733	11.973	.001
	Within Groups	100.000	10	10.000		
	Total	578.933	14			

Post hoc

Multiple Comparisons

Bonferroni

Dependent Variable	(I) HARI KE	(J) HARI KE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
DL_F0	0	7	1.66667	1.21106	1.000	-2.6706	6.0040
		14	5.00000*	1.21106	.020	.6627	9.3373
		21	2.00000	1.21106	1.000	-2.3373	6.3373
		28	4.66667*	1.21106	.032	.3294	9.0040
		0	-1.66667	1.21106	1.000	-6.0040	2.6706
	7	14	3.33333	1.21106	.204	-1.0040	7.6706
		21	.33333	1.21106	1.000	-4.0040	4.6706
		28	3.00000	1.21106	.327	-1.3373	7.3373
		0	-5.00000*	1.21106	.020	-9.3373	-.6627
		14	-3.33333	1.21106	.204	-7.6706	1.0040
		21	-3.00000	1.21106	.327	-7.3373	1.3373

DL_F1	21	28	-.33333	1.21106	1.000	-4.6706	4.0040
		0	-2.00000	1.21106	1.000	-6.3373	2.3373
		7	-.33333	1.21106	1.000	-4.6706	4.0040
		14	3.00000	1.21106	.327	-1.3373	7.3373
		28	2.66667	1.21106	.523	-1.6706	7.0040
	28	0	-4.66667*	1.21106	.032	-9.0040	-.3294
		7	-3.00000	1.21106	.327	-7.3373	1.3373
		14	.33333	1.21106	1.000	-4.0040	4.6706
		21	-2.66667	1.21106	.523	-7.0040	1.6706
		28	2.66667	1.21106	.523	-7.0040	1.6706
	0	7	1.66667	1.94365	1.000	-5.2943	8.6277
		14	1.33333	1.94365	1.000	-5.6277	8.2943
		21	-3.33333	1.94365	1.000	-10.2943	3.6277
		28	-4.33333	1.94365	.499	-11.2943	2.6277
		0	-1.66667	1.94365	1.000	-8.6277	5.2943
	7	14	-.33333	1.94365	1.000	-7.2943	6.6277
		21	-5.00000	1.94365	.278	-11.9610	1.9610
		28	-6.00000	1.94365	.115	-12.9610	.9610
		0	-1.33333	1.94365	1.000	-8.2943	5.6277
		7	.33333	1.94365	1.000	-6.6277	7.2943
DL_F2	14	21	-4.66667	1.94365	.373	-11.6277	2.2943
		28	-5.66667	1.94365	.154	-12.6277	1.2943
		0	3.33333	1.94365	1.000	-3.6277	10.2943
		7	5.00000	1.94365	.278	-1.9610	11.9610
		14	4.66667	1.94365	.373	-2.2943	11.6277
	21	28	-1.00000	1.94365	1.000	-7.9610	5.9610
		0	4.33333	1.94365	.499	-2.6277	11.2943
		7	6.00000	1.94365	.115	-.9610	12.9610
		14	5.66667	1.94365	.154	-1.2943	12.6277
		21	1.00000	1.94365	1.000	-5.9610	7.9610
	28	7	-2.00000	2.21108	1.000	-9.9188	5.9188
		14	-1.66667	2.21108	1.000	-9.5855	6.2521
		21	-3.66667	2.21108	1.000	-11.5855	4.2521

DL_F3	7	28	-2.00000	2.21108	1.000	-9.9188	5.9188
		0	2.00000	2.21108	1.000	-5.9188	9.9188
		14	.33333	2.21108	1.000	-7.5855	8.2521
		21	-1.66667	2.21108	1.000	-9.5855	6.2521
		28	.00000	2.21108	1.000	-7.9188	7.9188
		0	1.66667	2.21108	1.000	-6.2521	9.5855
	14	7	-.33333	2.21108	1.000	-8.2521	7.5855
		21	-2.00000	2.21108	1.000	-9.9188	5.9188
		28	-.33333	2.21108	1.000	-8.2521	7.5855
	21	0	3.66667	2.21108	1.000	-4.2521	11.5855
		7	1.66667	2.21108	1.000	-6.2521	9.5855
		14	2.00000	2.21108	1.000	-5.9188	9.9188
		28	1.66667	2.21108	1.000	-6.2521	9.5855
	28	0	2.00000	2.21108	1.000	-5.9188	9.9188
		7	.00000	2.21108	1.000	-7.9188	7.9188
		14	.33333	2.21108	1.000	-7.5855	8.2521
		21	-1.66667	2.21108	1.000	-9.5855	6.2521
	0	7	-.66667	2.58199	1.000	-9.9138	8.5805
		14	-1.33333	2.58199	1.000	-10.5805	7.9138
		21	6.66667	2.58199	.273	-2.5805	15.9138
		28	13.33333*	2.58199	.004	4.0862	22.5805
	7	0	.66667	2.58199	1.000	-8.5805	9.9138
		14	-.66667	2.58199	1.000	-9.9138	8.5805
		21	7.33333	2.58199	.175	-1.9138	16.5805
		28	14.00000*	2.58199	.003	4.7528	23.2472
	14	0	1.33333	2.58199	1.000	-7.9138	10.5805
		7	.66667	2.58199	1.000	-8.5805	9.9138
		21	8.00000	2.58199	.113	-1.2472	17.2472
		28	14.66667*	2.58199	.002	5.4195	23.9138
	21	0	-6.66667	2.58199	.273	-15.9138	2.5805
		7	-7.33333	2.58199	.175	-16.5805	1.9138

	14	-8.00000	2.58199	.113	-17.2472	1.2472
	28	6.66667	2.58199	.273	-2.5805	15.9138
	0	-13.33333*	2.58199	.004	-22.5805	-4.0862
	7	-14.00000*	2.58199	.003	-23.2472	-4.7528
28	14	-14.66667*	2.58199	.002	-23.9138	-5.4195
	21	-6.66667	2.58199	.273	-15.9138	2.5805

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

Lampiran 18. Data SPSS uji Waktu Mengering

Uji Normalitas

Tests of Normality

	HARI KE	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
WM_F0	0	.204	3	.	.993	3	.843
	7	.253	3	.	.964	3	.637
	14	.314	3	.	.893	3	.363
	21	.298	3	.	.916	3	.439
	28	.337	3	.	.855	3	.253
WM_F1	0	.175	3	.	1.000	3	1.000
	7	.204	3	.	.993	3	.843
	14	.337	3	.	.855	3	.253
	21	.253	3	.	.964	3	.637
	28	.193	3	.	.997	3	.890
WM_F2	0	.175	3	.	1.000	3	1.000
	7	.276	3	.	.942	3	.537
	14	.276	3	.	.942	3	.537
	21	.182	3	.	.999	3	.935
	28	.334	3	.	.860	3	.266
WM_F3	0	.337	3	.	.855	3	.253
	7	.253	3	.	.964	3	.637
	14	.253	3	.	.964	3	.637

21	.201	3	.	.994	3	.856
28	.340	3	.	.848	3	.235

a. Lilliefors Significance Correction

Uji Homogenitas

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
WM_F0	1.731	4	10	.219
WM_F1	1.866	4	10	.193
WM_F2	1.266	4	10	.346
WM_F3	2.549	4	10	.105

One way ANOVA

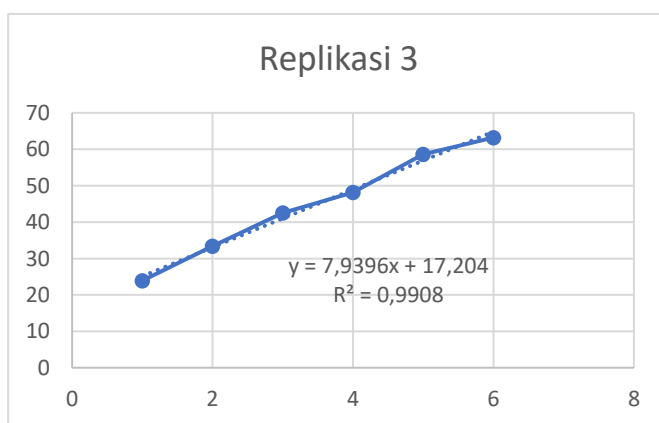
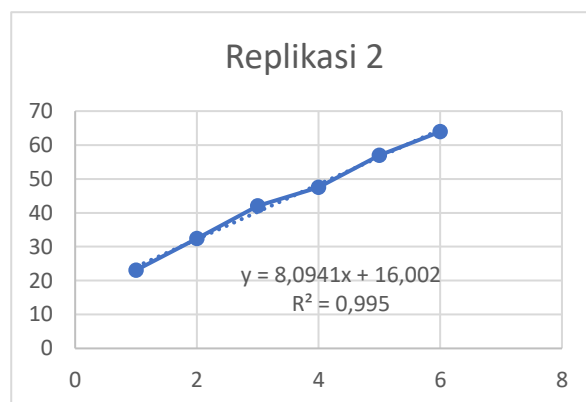
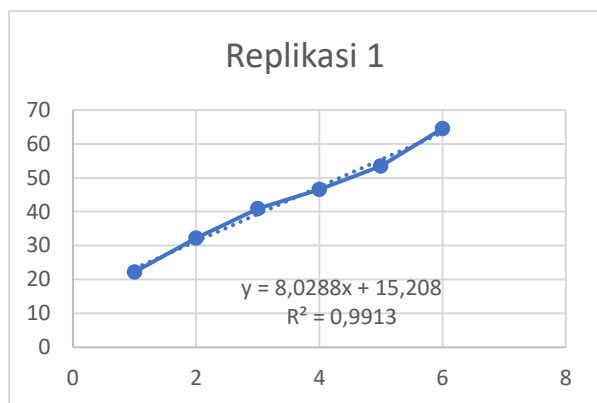
ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
WM_F0	Between Groups	.016	4	.004	.366	.827
	Within Groups	.106	10	.011		
	Total	.121	14			
WM_F1	Between Groups	.007	4	.002	.597	.673
	Within Groups	.028	10	.003		
	Total	.035	14			
WM_F2	Between Groups	.021	4	.005	.949	.475
	Within Groups	.056	10	.006		
	Total	.077	14			
WM_F3	Between Groups	.050	4	.013	2.790	.086
	Within Groups	.045	10	.005		
	Total	.095	14			

Lampiran 19. Antioksidan

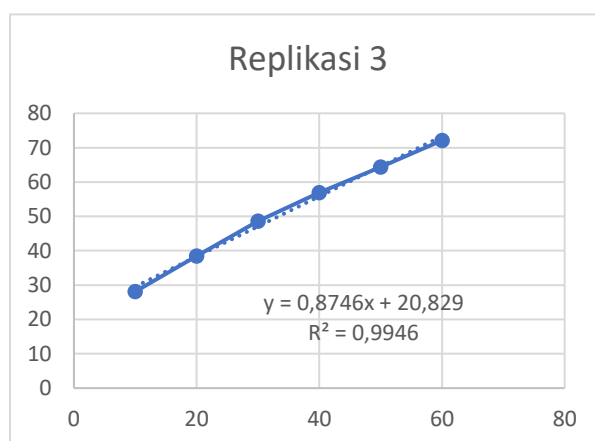
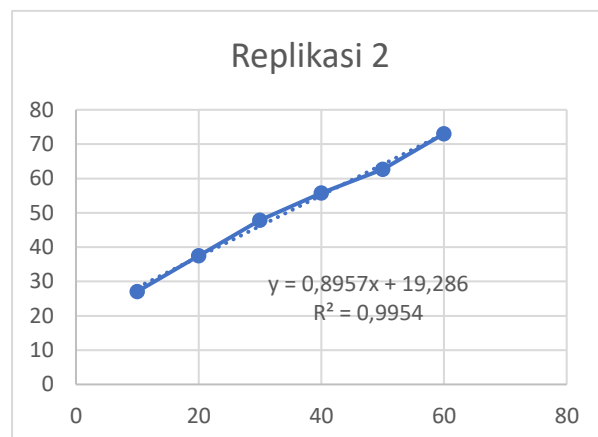
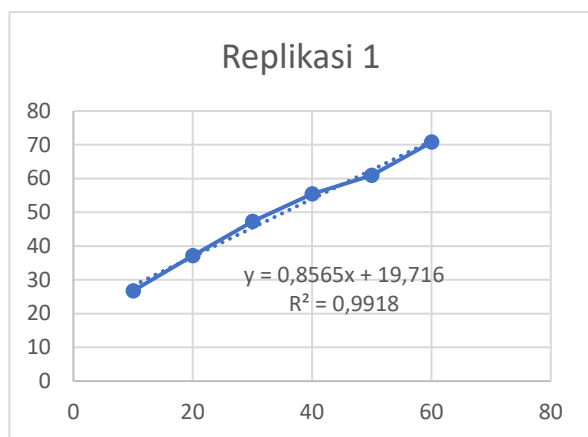
Vitamin C

		Abs sampel			% Inhibisi			IC50			Rata-rata±SD
Abs kontrol	Konsentrasi (PPM)	1	2	3	1	2	3	1	2	3	
0,832	1	0,647	0,64	0,633	22,23558	23,07692	23,91827	4,3333			4,2214 ± 0,10
0,832	2	0,564	0,562	0,554	32,21154	32,45192	33,41346				
0,832	3	0,492	0,482	0,478	40,86538	42,06731	42,54808		4,2003	4,1306	
0,832	4	0,445	0,437	0,431	46,51442	47,47596	48,19712				
0,832	5	0,387	0,358	0,344	53,48558	56,97115	58,65385				
0,832	6	0,295	0,3	0,306	64,54327	63,94231	63,22115				



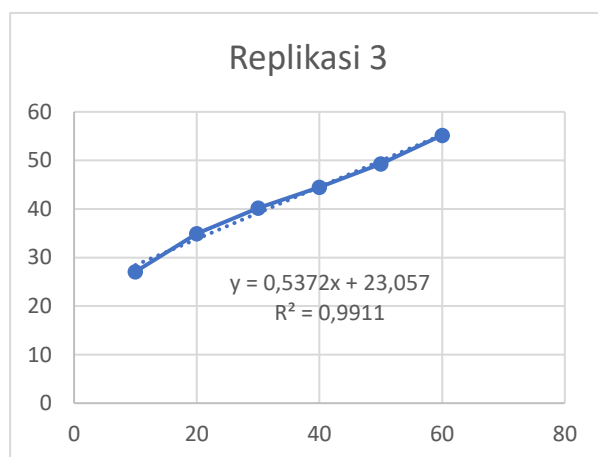
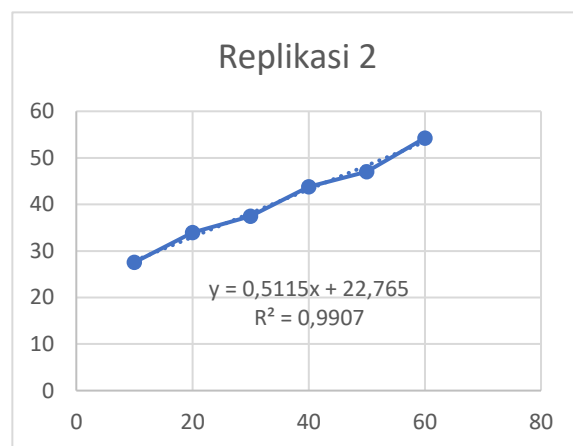
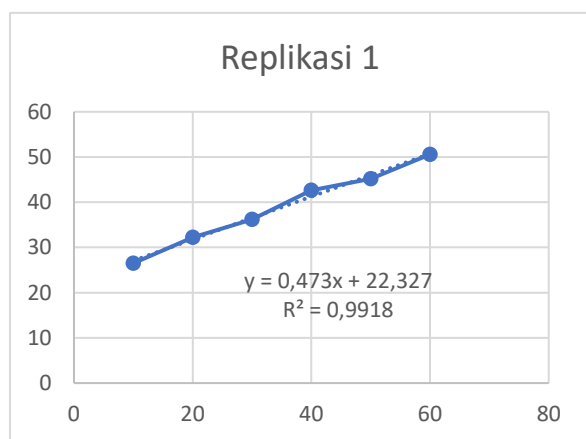
Ekstrak Daun Dadap

		Abs sampel				% Inhibisi			IC50			Rata-rata±SD
Abs kontrol	Konsentrasi (PPM)	1	2	3	1	2	3	1	2	3	34,33396667±1,00	
0,868	10	0,636	0,633	0,624	26,72811	27,07373	28,1106	35,3579				
0,868	20	0,546	0,543	0,534	37,09677	37,4424	38,47926					
0,868	30	0,458	0,453	0,446	47,23502	47,81106	48,61751		34,2905	33,3535		
0,868	40	0,387	0,384	0,374	55,41475	55,76037	56,91244					
0,868	50	0,339	0,324	0,309	60,9447	62,67281	64,40092					
0,868	60	0,254	0,234	0,242	70,73733	73,04147	72,11982					



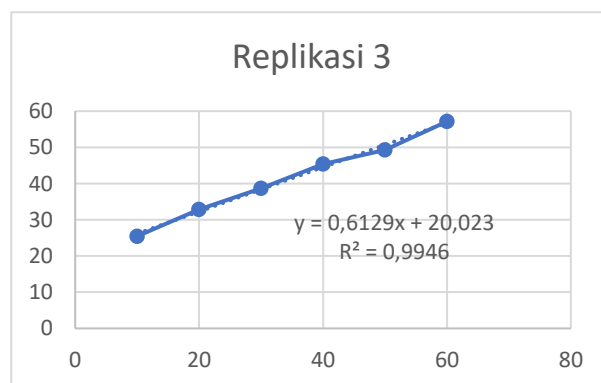
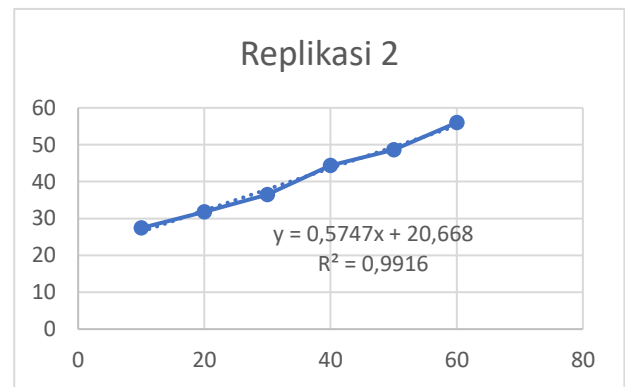
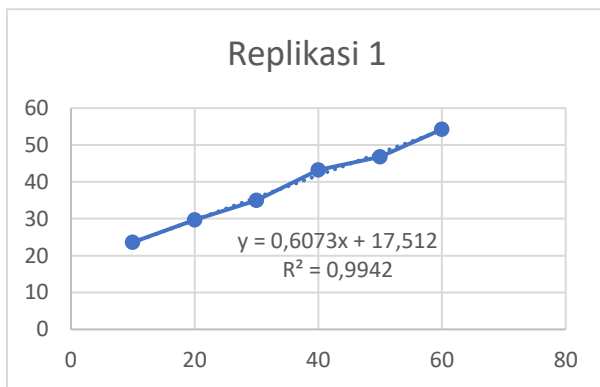
Formula 1

		Abs sampel			% Inhibisi			IC50			Rata-rata±SD
Abs kontrol	Konsentrasi (PPM)	1	2	3	1	2	3	1	2	3	53,96838333± 4,22
0,868	10	0,638	0,629	0,633	26,4977	27,53456	27,07373	58,50529			
0,868	20	0,588	0,573	0,565	32,25806	33,98618	34,90783				
0,868	30	0,554	0,543	0,519	36,17512	37,4424	40,20737		53,24536	50,1545	
0,868	40	0,498	0,488	0,482	42,62673	43,7788	44,47005				
0,868	50	0,476	0,46	0,44	45,16129	47,00461	49,30876				
0,868	60	0,429	0,397	0,389	50,57604	54,26267	55,18433				



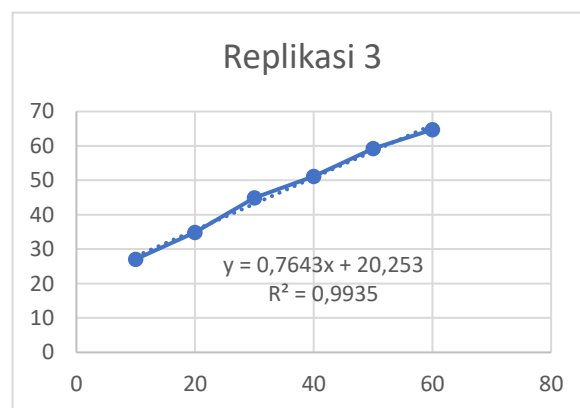
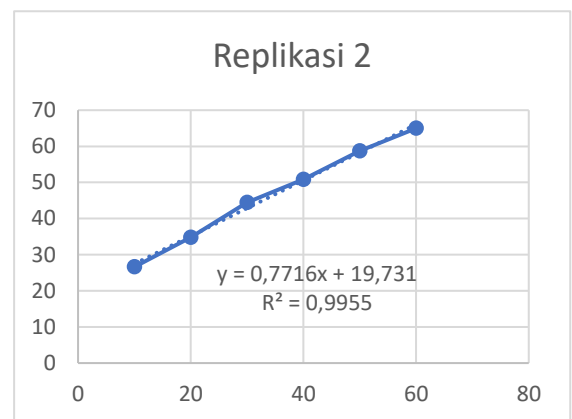
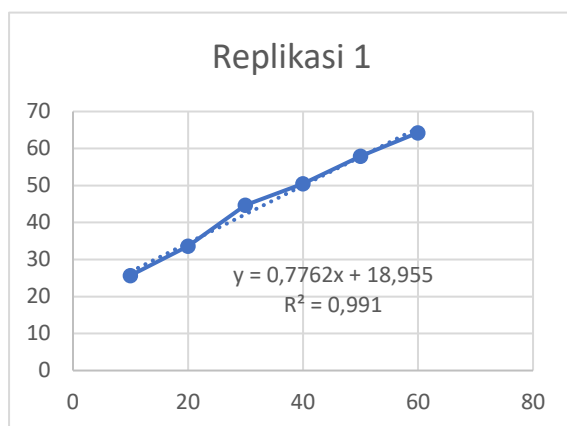
Formula 2

		Abs sampel			% Inhibisi			IC50			Rata-rata±SD
Abs kontrol	Konsentrasi (PPM)	1	2	3	1	2	3	1	2	3	
0,868	10	0,663	0,63	0,647	23,61751	27,41935	25,46083	53,4958			51,14823333± 2,29
0,868	20	0,61	0,592	0,583	29,7235	31,79724	32,8341				
0,868	30	0,564	0,551	0,532	35,02304	36,52074	38,70968		51,0388	48,9101	
0,868	40	0,493	0,483	0,474	43,20276	44,35484	45,39171				
0,868	50	0,462	0,446	0,44	46,77419	48,61751	49,30876				
0,868	60	0,397	0,382	0,372	54,26267	55,99078	57,14286				



Formula 3

		Abs sampel			% Inhibisi			IC50			Rata-rata±SD	
Abs kontrol	Konsentrasi (PPM)	1	2	3	1	2	3	1	2	3		
0,868	10	0,645	0,637	0,633	25,69124	26,6129	27,07373	39,99614				
0,868	20	0,576	0,566	0,565	33,64055	34,79263	34,90783					
0,868	30	0,48	0,482	0,478	44,70046	44,47005	44,93088		39,22888	38,92058		39,38187± 0,55
0,868	40	0,43	0,427	0,424	50,46083	50,80645	51,15207					
0,868	50	0,365	0,358	0,354	57,94931	58,75576	59,21659					
0,868	60	0,31	0,304	0,306	64,28571	64,97696	64,74654					



Lampiran 20. Certificate of Analysis PVA

There is another top address in Darmstadt

AppliChem GmbH
 Ottoweg 4
 D-64291 Darmstadt
 Phone 0049 6151 93 57-0
 Fax 0049 6151 93 57-11
 eMail service@applichem.com
 internet www.applichem.com

 **AppliChem**
 BioChemica Chemica Synthesis Service

Page 1 of 1

Certificate of Analysis

Description	Polyvinyl alcohol 72000 BioChemica
Product number	A2255
CAS number	9002-89-5
Molecular weight	approx. 72000 g/mol
Formula	
Lot number	2X004470
QC-release date	06.06.2018
Next retest	06.2020

Parameter	Specification	Analysis
Appearance	white powder	white powder
Assay	min. 98 %	> 98 %
Loss on drying	max. 5 %	2.9 %

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



i.A. Kay Schubert
 Quality Control

i.A. Katrin Wünsche
 Quality Control

The manufacture of this product is carried out with greatest care. We guarantee the above details secured by our QM system. The suitability for special applications is not guaranteed. The certificate of analysis does not release you from performing the standard control upon receipt of incoming goods.

Lampiran 21. Certificate of Analysis HPMC



Certificate of Analysis

(Representative Sample Certificate)

Product Name: Hydroxypropyl Methylcellulose
INCI Name: Hydroxypropyl methylcellulose
CAS Number: 9004-65-3
Lot Number: Not available (data may vary slightly with different lots or batches)
Expiration Date: 36 months from production date

Analytical Tests	Specification	Analysis
Appearance	Off-white to yellowish powder	pass
Odor	Characteristic	pass
Viscosity, 2% in water at 20°C	60,000-90,000	83,921
Moisture as packaged	<7.0%	2.5
Sodium Chloride	<5.0%	0.4
Particle Size, thru 40 U.S. Std. Sieve	>99	100

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 and 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 out of use. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use.

MakingCosmetics.com Inc.
 35318 SE Center Street, Snoqualmie, WA 98065
 Phone 425-292-9502 Fax 425-292-9601 www.makingcosmetics.com

Lampiran 22. Certificate of Analysis Propylen glikol



HASIL PEMERIKSAAN

Nama Bahan : Propylene Glycol
 No Batch : J 0041/18 (C815HBK22T)
 Ex : Dow Chemical Pacific, Singapore
 E.D. : 11/2025
 Grade : Farma

Jenis Pemeriksaan	Persyaratan USP NF 19	Hasil
Pemerian	Cairan kental jernih, tidak berwarna, tidak berbau, rasa agak manis, hygrokopik	Sesuai
Kelarutan	Dapat bercampur dgn air, dengan etanol dan dengan kloroform	Sesuai
Keasam-basaan	$\leq 0,3$ ml NaOH 0.1N	0,2 ml NaOH 0,1 N
Index Bias	1,431 - 1,433	1,433
Bobot per-ml	1,035 g - 1,037 g/ml	1,0364 g/ml
pH	$\pm 6,5$	7.476

Kesimpulan : Memenuhi Syarat

Cikarang, 22 – 01 – 2022

Pemeriksa

Aptria Wariski
Staff QC

Penanggung Jawab

Dra. Tri Hartati
Apoteker

STRA : 19560421/STRA-ITB/1984/20192

HEAD OFFICE	: J. Cikang Barat No. 78, Jakarta Pusat 10150, Telp. (021) 3522736 (hunting) Fax. : (021) 3522734, E-mail : brataco@brataco.com
BRANCH OFFICE	: • JAKARTA : J. Mangga Besar V No.5, Jakarta 11180 Telp. (021) 6290113 (hunting 3 lines) Fax. (021) 6292430 • BANDUNG : J. Boulevard Raya Blok T52 No. 6, Jakarta 14240 Telp. (021) 45940952-04 Fax. (021) 4532915 • SEMARANG : J. Kelenjing No. 8, Bandung Telp. (022) 6077128, 6030008 Fax. (022) 6031975 • YOGYA : J. Terusan Jakarta No. 7703, Bandung Telp. (022) 7101277, 7210308-309 Fax. (022) 7210310 • SURABAYA : J. Brigen, Klaten No. 19 Telp. (024) 8415272, 8415069 Fax. (024) 8414880 • MEDAN : J. Bhayangkara No. 45, Yogya Telp. (0274) 543348, 5151500 Fax. (0274) 543348 • TANGERANG, BOGOR, CIKARANG, CIREBON, TASIKMALAYA, SOLO, PURWOKERTO, TEGAL, MALANG, SIDOARJO, DENPASAR, PALEMBANG, MAKASSAR : J. Tidar No. 89, Surabaya Telp. (031) 5322887, 5325057 Fax. (031) 5310468 • MEDAN : J. Iskandar Muda no. 40 B, Medan Telp. (061) 4148272, 4523159 Fax. (061) 4525996
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The Nationwide Chemicals and Ingredients Distributor

Lampiran 23. *Certificate of Analysis* DMDM Hydantoin



NGUYEN BA TRADING AND MANUFACTURING CO. LTD

947/46/6 Cach Mang Thang 8 Street, Ward 7, Tan Binh District.

Tel: 39490974 – 39771039 – Fax: 39491374

Email: nguyenbachem@hotmail.com – Website: <http://nguyenbachem.com>

DMDM Hydantoin

Chemical name:

Dimethylol Dimethyl Hydantoin (DMDMH)

CAS NO: 6440-58-0

Trade name:

Hydantoin, 1,3-bis(hydroxymethyl)-5,5-dimethyl-, 1,3-Bis(hydroxymethyl)-5,5-dimethylhydantoin; 1,3-dimethylol-5,5-dimethylhydantoin; 2,4-Imidazolidinedione, 1,3-bis(hydroxymethyl)-5,5-dimethyl-; Dantoin dmdmh 55; Dimethylol-5,5-dimethylhydantoin; DMDM hydantoin; dmdmh; dmdmh 55; Glydant; Nipaguard

Molecular formula: C₇H₁₂N₂O₄

Molecular weight: 188.2

Introduction:

DMDMH is biocide. The active ingredient provides broad-spectrum activity against common bacteria and fungi. It is approved by EPA and FDA for industrial and cosmetic applications.

Physical and Chemical Properties:

Percent Active: 55.0%

Description: Colorless liquid

PH: 6.5-7.5

Stability: Stable for 1 year @ 25 °C

Lampiran 24. Kartu Bimbingan

 UNIVERSITAS BHAKTI KENCANA Jl. Sukarno Hatta No.754, Cipadung Kidul, Kec. Panyileukan, Kota Bandung, Jawa Barat 40114 Website : www.bku.ac.id / e-Mail : sekretariat@bku.ac.id / Telepon : 022 7930 760	
REKAP PERCAKAPAN BIMBINGAN	
Judul Proposal	: PENGEMBANGAN MASKER GEL PEEL OFF EKSTRAK DAUN DADAP (ERYTHRYNA SUBUMBRAN) SEBAGAI ANTIOKSIDAN
Sesi / Bahasan	: ke-1 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-1 / presentasi kemajuan 1 TAZ terkait data evaluasi optimasi
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
Tidak ada data percakapan	
Sesi / Bahasan	: ke-2 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
Tidak ada data percakapan	
Sesi / Bahasan	: ke-2 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-3 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
Tidak ada data percakapan	
Sesi / Bahasan	: ke-3 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-4 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-4 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
Tidak ada data percakapan	
Sesi / Bahasan	: ke-5 /
Tidak ada data percakapan	
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Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
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Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
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Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
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Sesi / Bahasan	: ke-7 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-7 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
Tidak ada data percakapan	
Sesi / Bahasan	: ke-8 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0407129103 - Noviliana Devianti Sagita, M.Farm
Tidak ada data percakapan	
Sesi / Bahasan	: ke-8 /
Mahasiswa	: 211FF03010 - ULAYYA.ZHAFIRAH Pembimbing : 0430067205 - apt. Yenni Chisari Marthani, M.BSc.
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Lampiran 25 Cek Plagiasi

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Lampiran 26. Riwayat Hidup



Ulayya Zhafirah

+6281371251508 • rarazafira2@gmail.com • Tarempa, Indonesia

Mahasiswa Program Studi S1 Farmasi di Universitas Bhakti Kencana Bandung yang memiliki ketertarikan khusus dalam bidang farmasi.

Pendidikan

Universitas Bhakti Kencana - Bandsung, Indonesia	Agustus 2021 - Sekarang
Pendidikan Farmasi	
SMA Negeri 1 Siantan - Tarempa, Kabupaten Kepulauan Anambas, Indonesia	Juli 2018 - 2021
Matematika dan Ilmu Pengetahuan Alam	
SMPN 2 Siantan - Tarempa, Kabupaten Kepulauan Anambas	Juli 2015 - 2018
SDN 001 - Tarempa, Kabupaten Kepulauan Anambas	Juli 2009 - 2015
TK Pertiwi - Tarempa, Kabupaten Kepulauan Anambas	Juli 2007 - 2009

Organisasi

Unit Kegiatan Mahasiswa

- Anggota Divisi Kreatif
- Wakil ketua Divisi Kreatif

Jawa Barat

2022 - 2023

Pengalaman

- Magang Merdeka Belajar - Kampus Merdeka (MBKM) di RSUD Al-Ihsan

Jawa Barat

2024 - 2025