

Lampiran 1. Surat Pernyataan Bebas Plagiasi

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Indah Pitaloka

N P M : 201FF04044

adalah mahasiswa Fakultas Farmasi, Universitas Bhakti Kencana, menyatakan dengan sesungguhnya bahwa Naskah Skripsi yang saya tulis dengan judul:

FORMULASI DAN UJI AKTIVITAS EKSTRAK PEGAGAN

(Centella asiatica, (L.) Urban) SEBAGAI ANTIJERAWAT

DALAM SEDIAAN GEL

adalah benar-benar merupakan hasil karya saya sendiri. Apabila di kemudian hari diketahui bahwa isi Naskah Skripsi ini merupakan hasil plagiasi, maka saya bersedia menerima sanksi berupa pembatalan kelulusan dan atau pencabutan gelar yang saya peroleh.

Demikian surat pernyataan ini saya buat untuk dapat dipergunakan sebagaimana mestinya.

Bandung, 26 Juli 2022

Yang membuat pernyataan,



Indah Pitaloka

NPM. 201FF04044

Lampiran 2. Surat Persetujuan untuk dipublikasikan di media online

Lampiran 2. Surat Persetujuan untuk dipublikasikan di media online

SURAT PERNYATAAN

Yang bertanda tangan di bawah ini,

Nama : Indah Pitaloka

N P M : 201FF04044

Menyatakan bahwa demi kepentingan perkembangan ilmu pengetahuan,
saya menyetujui abstrak Skripsi yang saya tulis dengan judul:

FORMULASI DAN UJI AKTIVITAS EKSTRAK PEGAGAN

(*Centella asiatica*, (L.) Urban) SEBAGAI ANTIJERAWAT

DALAM SEDIAAN GEL

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Demikian surat pernyataan ini saya buat untuk dapat dipergunakan sebagaimana
mestinya.

Bandung, 26 Juli 2022

Yang membuat pernyataan,



Indah Pitaloka

NPM. 201FF04044

Lampiran 3. Hasil Uji Statistika Uji Aktivitas Ekstrak Pegagan

1. Uji Normalitas	Descriptive Statistics					
	Zona Hambat (mm)					
		1000	125	250	500	Kontrol +
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	13.500	12.333	12.500	13.000	20.500
	Std. Deviation	1.000	0.577	0.866	1.803	1.803
	Shapiro-Wilk	1.000	0.750	0.750	0.942	0.942
	P-value of Shapiro-Wilk	1.000	< .001	< .001	0.537	0.537
	Minimum	12.500	12.000	11.500	11.000	18.500
	Maximum	14.500	13.000	13.000	14.500	22.000
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	1.600	4.000	10.000	0.249		
3 Uji Kruskal-Wallis	Kruskal-Wallis Test					
	Factor	Statistic	df	p		
	Konsentrasi (ppm)	8.371	4	0.079		

Lampiran 4. Hasil Uji Statistika pH sediaan gel

1 Uji Normalitas	Descriptive Statistics					
	pH					
		F0	F1	F2	F3	F4
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	5.853	5.953	5.670	5.823	5.907
	Std. Deviation	0.466	0.540	0.442	0.276	0.533
	Shapiro-Wilk	0.953	0.774	0.797	0.956	0.972
	P-value of Shapiro-Wilk	0.583	0.053	0.108	0.598	0.678
	Minimum	5.340	5.330	5.390	5.520	5.330
	Maximum	6.250	6.280	6.180	6.060	6.380
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	0.576	4.000	10.000	0.687		
3 Uji Anova	ANOVA - pH					
	Cases	Sum of Squares	df	Mean Square	F	p
	Formula	0.140	4	0.035	0.164	0.952
	Residuals	2.129	10	0.213		
	Note. Type III Sum of Squares					

Lampiran 5. Hasil Uji Statistika Uji Daya Sebar

1 Uji Normalitas	Descriptive Statistics					
	Daya Sebar					
		F0	F1	F2	F3	F4
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	4.900	4.900	4.967	5.133	5.167
	Std. Deviation	0.173	0.265	0.153	0.153	0.208
	Shapiro-Wilk	0.750	0.893	0.964	0.964	0.923
	P-value of Shapiro-Wilk	< .001	0.363	0.637	0.637	0.463
	Minimum	4.700	4.600	4.800	5.000	5.000
	Maximum	5.000	5.100	5.100	5.300	5.400
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	0.691	4.000	10.000	0.615		
3 Uji Anova	ANOVA - Daya Sebar					
	Cases	Sum of Squares	df	Mean Square	F	p
	Formula	0.197	4	0.049	1.298	0.335
	Residuals	0.380	10	0.038		
	Note. Type III Sum of Squares					

Lampiran 6. Hasil Uji Statistika Uji Daya Lekat

1 Uji Normalitas	Descriptive Statistics					
	Daya Sebar					
		F0	F1	F2	F3	F4
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	4.900	4.900	4.967	5.133	5.167
	Std. Deviation	0.173	0.265	0.153	0.153	0.208
	Shapiro-Wilk	0.750	0.893	0.964	0.964	0.923
	P-value of Shapiro-Wilk < .001	0.363	0.637	0.637	0.463	
	Minimum	4.700	4.600	4.800	5.000	5.000
	Maximum	5.000	5.100	5.100	5.300	5.400
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	0.850	4.000	10.000	0.525		
3 Uji Anova	ANOVA - Daya Lekat					
	Cases	Sum of Squares	df	Mean Square	F	p
	Formula	10.963	4	2.741	1.162	0.384
	Residuals	23.583	10	2.358		
	Note. Type III Sum of Squares					

Lampiran 7. Hasil Uji Statistika Uji Viskositas

1 Uji Normalitas	Descriptive Statistics					
	Viskositas					
		F0	F1	F2	F3	F4
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	34066.667	34843.333	31186.667	34453.333	34933.333
	Std. Deviation	2497.145	1486.484	5300.314	254.034	1205.543
	Shapiro-Wilk	0.863	0.998	0.855	0.750	0.991
	P-value of Shapiro-Wilk	0.276	0.915	0.253	< .001	0.817
	Minimum	32280.000	33320.000	25120.000	34160.000	33800.000
	Maximum	36920.000	36290.000	34920.000	34600.000	36200.000
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	6.195	4.000	10.000	0.009		
3 Uji Anova	ANOVA - Viskositas					
	Cases	Sum of Squares	df	Mean Square	F	p
	Formula	2.896e+7	4	7.240e+6	0.951	0.474
	Residuals	7.611e+7	10	7.611e+6		
	Note. Type III Sum of Squares					

Lampiran 8. Hasil Uji Statistika Uji Aktivitas Sediaan Gel

1 Uji Normalitas	Descriptive Statistics					
	Zona Hambat (mm)					
		FI	FII	FIII	FIV	Kontrol +
	Valid	3	3	3	3	3
	Missing	0	0	0	0	0
	Mean	9.667	9.667	10.333	10.000	2.467
	Std. Deviation	1.155	0.577	0.577	1.732	0.058
	Shapiro-Wilk	0.750	0.750	0.750	0.750	0.750
	P-value of Shapiro-Wilk	< .001	< .001	< .001	< .001	< .001
	Minimum	9.000	9.000	10.000	8.000	2.400
	Maximum	11.000	10.000	11.000	11.000	2.500
2 Uji Homogen	Test for Equality of Variances (Levene's)					
	F	df1	df2	p		
	6.566	4.000	10.000	0.007		
3 Uji Kruskal-Wallis	Kruskal-Wallis Test					
	Factor	Statistic	df	p		
	Formula	7.824	4	0.098		

Lampiran 9. Hasil Uji Statistika Uji Freeze Thraw

1 Uji Normalitas F0	Descriptive Statistics						
	pH						
		Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
	Valid	3	3	3	3	3	3
	Missing	0	0	0	0	0	0
	Mean	5.413	5.353	5.320	5.257	5.243	5.207
	Std. Deviation	0.138	0.180	0.161	0.200	0.211	0.165
	Shapiro-Wilk	0.888	0.839	0.928	0.997	0.988	1.000
	P-value of Shapiro-Wilk	0.348	0.213	0.480	0.890	0.791	0.967
	Minimum	5.310	5.230	5.190	5.050	5.020	5.040
	Maximum	5.570	5.560	5.500	5.450	5.440	5.370
	Descriptive Statistics						
	Viskositas (cP)						
		Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
	Valid	3	3	3	3	3	3
	Missing	0	0	0	0	0	0
	Mean	24906.667	22109.333	21426.667	20840.000	20253.333	20173.333
	Std. Deviation	3241.070	3130.243	2160.123	1454.923	894.725	1233.099
	Shapiro-Wilk	0.927	0.789	0.774	0.750	0.840	0.916
	P-value of Shapiro-Wilk	0.476	0.088	0.053	< .001	0.214	0.437

	Minimum 21280.000 20160.000 20120.000 20000.000 19640.000 19200.000 Maximum 27520.000 25720.000 23920.000 22520.000 21280.000 21560.000																																				
2 Uji Homogen F0	Test for Equality of Variances (Levene's) <table><tr><th>F</th><th>df1</th><th>df2</th><th>p</th></tr><tr><td>0.128</td><td>5.000</td><td>12.000</td><td>0.983</td></tr></table> Test for Equality of Variances (Levene's) <table><tr><th>F</th><th>df1</th><th>df2</th><th>p</th></tr><tr><td>2.583</td><td>5.000</td><td>12.000</td><td>0.083</td></tr></table>	F	df1	df2	p	0.128	5.000	12.000	0.983	F	df1	df2	p	2.583	5.000	12.000	0.083																				
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2.583	5.000	12.000	0.083																																		
3 Uji Anova F0	ANOVA - pH <table><tr><th>Cases</th><th>Sum of Squares</th><th>df</th><th>Mean Square</th><th>F</th><th>p</th></tr><tr><td>Formula F0</td><td>0.090</td><td>5</td><td>0.018</td><td>0.568</td><td>0.723</td></tr><tr><td>Residuals</td><td>0.379</td><td>12</td><td>0.032</td><td></td><td></td></tr></table> Note. Type III Sum of Squares ANOVA - Viskositas (cP) <table><tr><th>Cases</th><th>Sum of Squares</th><th>df</th><th>Mean Square</th><th>F</th><th>p</th></tr><tr><td>Formula F0</td><td>4.694e+7</td><td>5</td><td>9.389e+6</td><td>1.916</td><td>0.165</td></tr><tr><td>Residuals</td><td>5.881e+7</td><td>12</td><td>4.901e+6</td><td></td><td></td></tr></table> Note. Type III Sum of Squares	Cases	Sum of Squares	df	Mean Square	F	p	Formula F0	0.090	5	0.018	0.568	0.723	Residuals	0.379	12	0.032			Cases	Sum of Squares	df	Mean Square	F	p	Formula F0	4.694e+7	5	9.389e+6	1.916	0.165	Residuals	5.881e+7	12	4.901e+6		
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1 Uji Normalit as F1	Descriptive Statistics					
	pH					
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6

Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	5.590	5.47 7	5.32 7	5.267	5.28 7	5.25 3
Std. Deviation	0.209	0.27 8	0.15 0	0.146	0.12 4	0.13 8
Shapiro- Wilk	0.828	0.87 5	0.99 4	0.923	0.78 4	0.88 8
P-value of Shapiro- Wilk	0.183	0.31 1	0.85 3	0.463	0.07 7	0.34 8
Minimum	5.350	5.16 0	5.17 0	5.150	5.21 0	5.15 0
Maximum	5.730	5.68 0	5.47 0	5.430	5.43 0	5.41 0
Descriptive Statistics						
Viskositas (cP)						
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	28013.3 33	29240.0 00	26040.0 00	25746.6 67	23973.3 33	22960.0 00
Std. Deviation	5005.97 0	1664.21 2	3517.04 4	3203.08 2	2542.85 9	2577.75 1
Shapiro-	0.966	0.948	0.913	0.854	0.921	0.896

	Wilk						
	P-value of Shapiro-Wilk	0.646	0.559	0.427	0.251	0.455	0.373
	Minimum	22560.000	27840.000	22080.000	22080.000	21120.000	21000.000
	Maximum	32400.000	31080.000	28800.000	28000.000	26000.000	25880.000
2 Uji Homogeneity F1	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	1.262	5.000	12.000	0.341			
	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	1.102	5.000	12.000	0.409			
3 Uji Anova F1	ANOVA - pH						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula FI	0.278	5	0.056	1.678	0.214	
	Residuals	0.398	12	0.033			
	<i>Note.</i> Type III Sum of Squares						
	ANOVA - Viskositas (cP)						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula FI	8.390e+7	5	1.678e+7	1.584	0.238	
	Residuals	1.271e+8	12	1.059e+7			
	<i>Note.</i> Type III Sum of Squares						
1 Uji Normalitas FII	Descriptive Statistics						
	pH						

	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	5.577	5.437	5.430	5.317	5.253	5.190
Std. Deviation	0.127	0.222	0.261	0.253	0.152	0.157
Shapiro-Wilk	0.815	0.983	0.996	0.898	0.977	0.851
P-value of Shapiro-Wilk	0.150	0.751	0.873	0.380	0.708	0.244
Minimum	5.430	5.200	5.160	5.030	5.090	5.080
Maximum	5.660	5.640	5.680	5.510	5.390	5.370
Descriptive Statistics						
Viskositas (cP)						
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	32320.00	27333.33	30106.67	28973.33	25893.33	25626.67
Std. Deviation	3320.723	4574.247	1651.343	1353.711	4653.486	4595.882

	n	Shapiro-Wilk					
		1.000	0.959	0.760	0.951	0.754	0.757
	P-value of Shapiro-Wilk	0.960	0.612	0.023	0.573	0.008	0.017
	Minimum	28960.000	22320.000	28200.000	27480.000	20520.000	20320.000
	Maximum	35600.000	31280.000	31080.000	30120.000	28600.000	28320.000
2 Uji Homogeneity FII	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	0.542	5.000	12.000	0.742			
	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	1.872	5.000	12.000	0.173			
3 Uji Anova FII	ANOVA - pH						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula II		0.299 5	0.060	1.462	0.273	
	Residuals		0.490 12	0.041			
	Note. Type III Sum of Squares						
	ANOVA - Viskositas (cP)						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula II		1.012e+8 5	2.023e+7	1.531	0.252	
Residuals		1.586e+8 12	1.321e+7				
Note. Type III Sum of Squares							

1 Uji Normality as FIII	Descriptive Statistics
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	pH					
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	5.553	5.507	5.513	5.383	5.260	5.307
Std. Deviation	0.040	0.219	0.095	0.297	0.149	0.242
Shapiro-Wilk	0.980	0.916	0.907	0.921	0.879	0.863
P-value of Shapiro-Wilk	0.726	0.439	0.407	0.454	0.321	0.277
Minimum	5.510	5.260	5.440	5.050	5.150	5.030
Maximum	5.590	5.680	5.620	5.620	5.430	5.480
Descriptive Statistics						
	Viskositas (cP)					
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	30413.33	28560.00	24520.00	24173.33	22920.00	22693.33
Std.	3496.36	3509.07	2226.02	2306.28	3163.03	3104.92

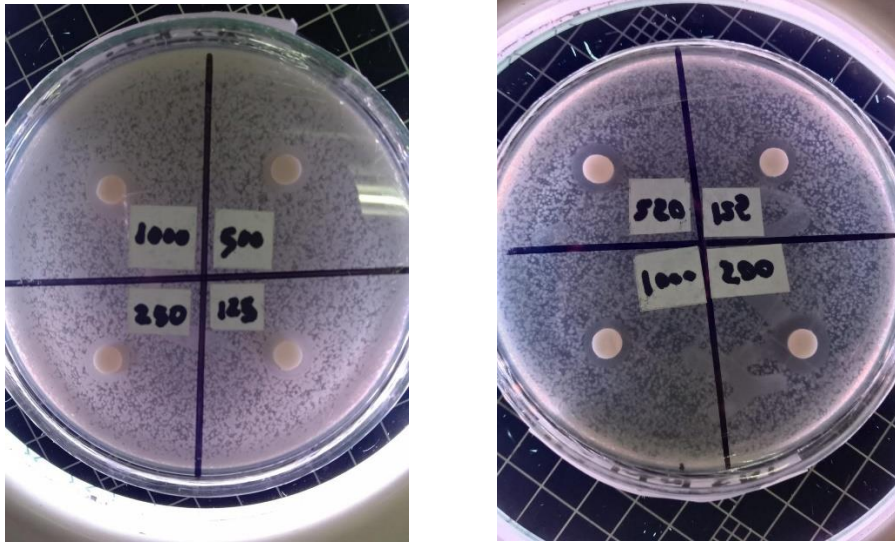
	Deviation	0	4	8	1	7	1
	Shapiro-Wilk	0.838	0.874	0.959	0.877	0.998	0.984
	P-value of Shapiro-Wilk	0.208	0.306	0.611	0.316	0.916	0.758
	Minimum	26400.00	26000.00	22600.00	22480.00	19840.00	19840.00
	Maximum	32800.00	32560.00	26960.00	26800.00	26160.00	26000.00
2 Uji Homogeneity FIII	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	2.811	5.000	12.000	0.066			
	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	0.344	5.000	12.000	0.877			
3 Uji Anova FIII	ANOVA - pH						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula III		0.221	5	0.044	1.166	0.380
	Residuals		0.456	12	0.038		
	Note. Type III Sum of Squares						
	ANOVA - Viskositas (cP)						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula III		1.522e+8	5	3.045e+7	3.355	0.040
Residuals		1.089e+8	12	9.076e+6			
Note. Type III Sum of Squares							

1 Uji Normality	Descriptive Statistics
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as FIV	pH					
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	5.453	5.337	5.423	5.393	5.277	5.140
Std. Deviation	0.224	0.284	0.117	0.262	0.067	0.131
Shapiro-Wilk	0.967	0.835	0.881	0.988	0.953	0.983
P-value of Shapiro-Wilk	0.653	0.202	0.328	0.789	0.583	0.747
Minimum	5.210	5.010	5.290	5.150	5.220	5.000
Maximum	5.650	5.530	5.510	5.670	5.350	5.260
Descriptive Statistics						
	Viskositas (cP)					
	Siklus 1	siklus 2	siklus 3	siklus 4	siklus 5	siklus 6
Valid	3	3	3	3	3	3
Missing	0	0	0	0	0	0
Mean	29053.33	27440.00	26762.00	25293.33	24755.33	24213.33

	Std.		1904.94	2166.82	1035.63	1255.12	1214.13
	Deviation	843.169	1	5	2	8	9
	Shapiro-Wilk	0.946	0.893	0.991	0.895	0.987	0.977
	P-value of Shapiro-Wilk	0.551	0.363	0.818	0.371	0.783	0.708
	Minimum	28120.00	25280.00	24486.00	24120.00	23426.00	23120.00
	Maximum	29760.00	28880.00	28800.00	26080.00	25920.00	25520.00
2 Uji Homogen FIV	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	1.717	5.000	12.000	0.205			
	Test for Equality of Variances (Levene's)						
	F	df1	df2	p			
	0.879	5.000	12.000	0.524			
3 Uji Anova FIV	ANOVA - pH						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula IV	0.200	5	0.040	1.021	0.447	
	Residuals	0.470	12	0.039			
	Note. Type III Sum of Squares						
	ANOVA - Viskositas (cP)						
	Cases	Sum of Squares	df	Mean Square	F	p	
	Formula IV	5.050e+7	5	1.010e+7	4.606	0.014	
	Residuals	2.631e+7	12	2.193e+6			
Note. Type III Sum of Squares							

Lampiran 10. Uji Aktivitas Antibakteri Ekstrak Pegagan



Lampiran 11. Sediaan Gel Ekstrak Pegagan

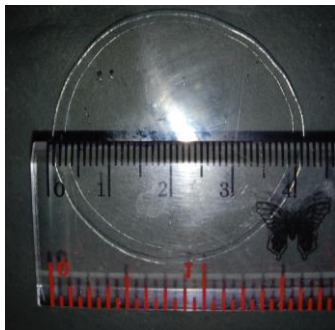


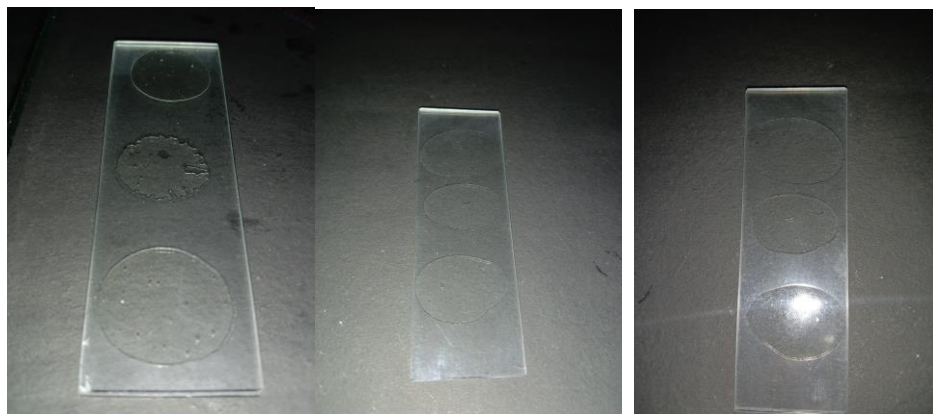
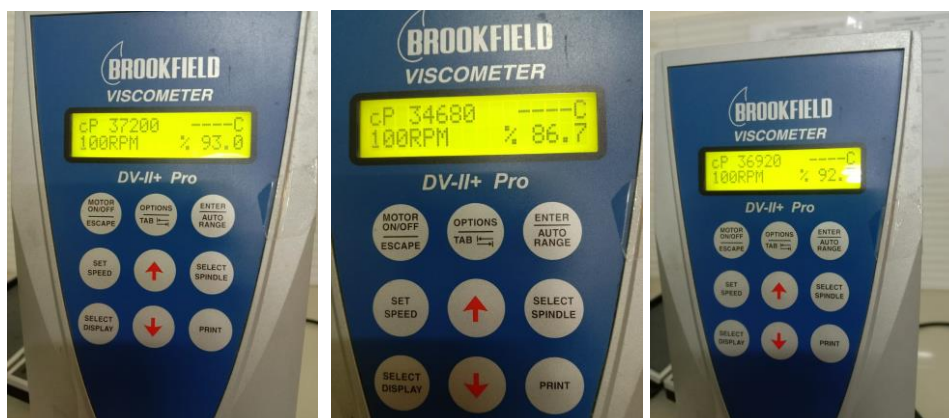
Lampiran 12. Uji pH sediaan Gel Ekstrak Pegagan

Formulasi	Bacth I	Bets II	Bets III
F0			
F1			

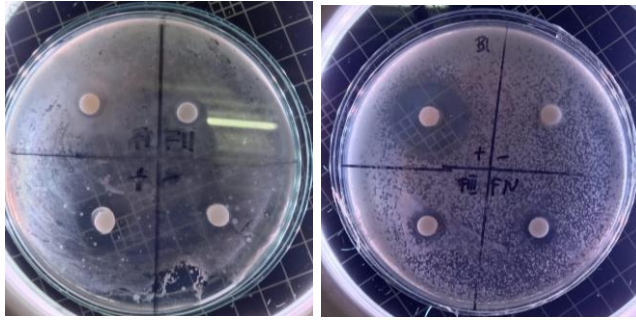
FII		-	
FIII			
FIV			

Lampiran 13. Uji Daya Sebar Sediaan Gel Ekstrak Pegagan

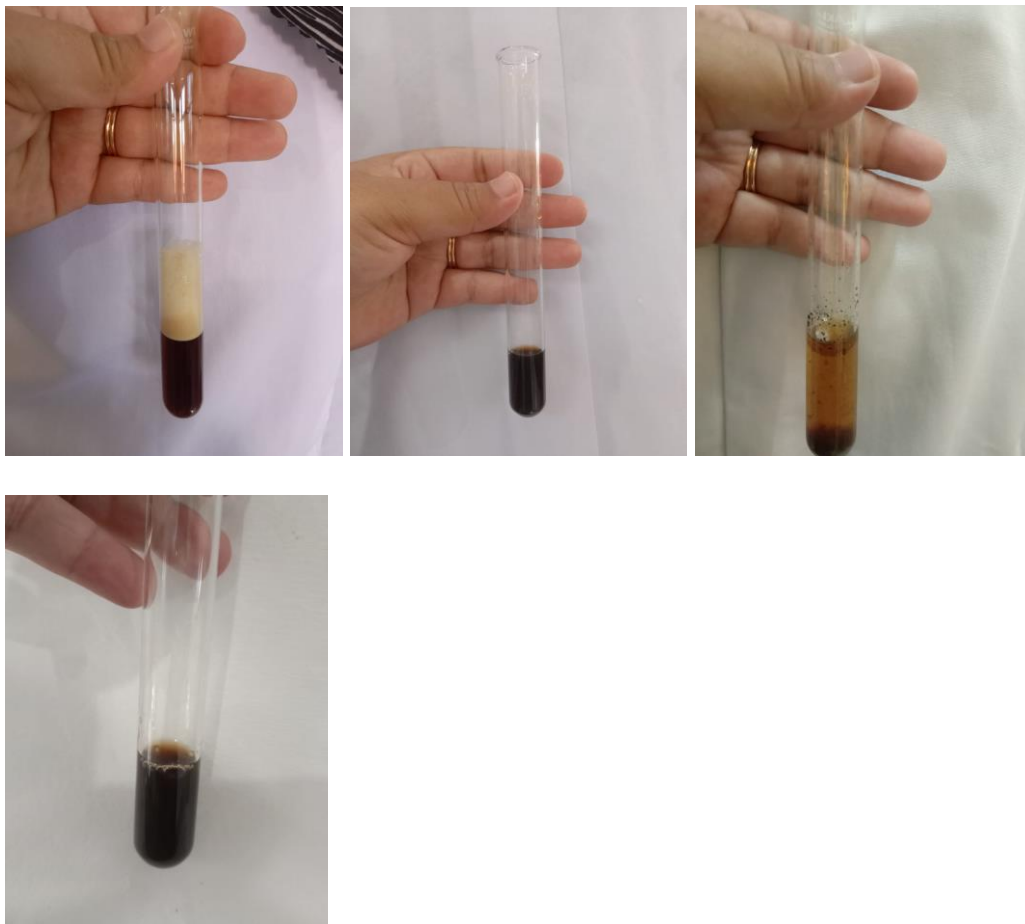


Lampiran 14. Uji Daya Lekat sediaan Gel Ekstrak pegagan**Lampiran 15. Uji Homogenitas sediaan Gel Ekstrak Pegagan****Lampiran 16. Uji Viskositas Sediaan Gel Ekstrak Pegagan**

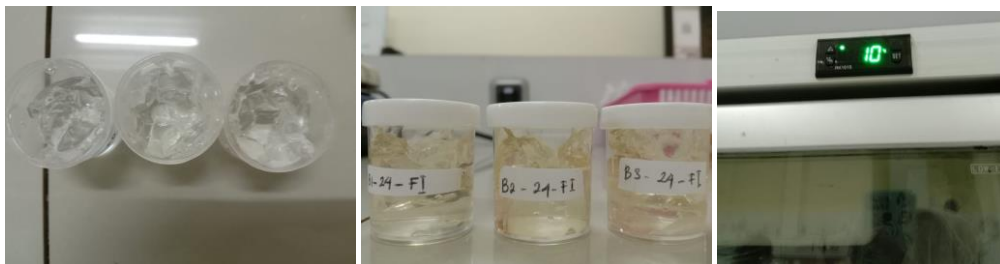
Lampiran 17. Uji Aktivitas Antibakteri Sediaan



Lampiran 18. Skrining Fitokimia



Lampiran 19. Uji Sineresis



Lampiran 20. Uji Stabilitas pH

Uji Stabilitas pH						
Siklus	Formulasi	Bets I	Bets II	Bets III	Rata-Rata	Nilai SD
1	F0	5.31	5.36	5.57	5.41	0.14
	FI	5.35	5.69	5.73	5.59	0.21
	FII	5.64	5.43	5.66	5.58	0.13
	FIII	5.56	5.51	5.59	5.55	0.04
	FIV	5.65	5.5	5.21	5.45	0.22
2	F0	5.23	5.27	5.56	5.35	0.18
	FI	5.16	5.59	5.68	5.48	0.28
	FII	5.64	5.2	5.47	5.44	0.22
	FIII	5.26	5.68	5.58	5.51	0.22
	FIV	5.53	5.47	5.01	5.34	0.28
3	F0	5.27	5.19	5.5	5.32	0.16
	FI	5.17	5.34	5.47	5.33	0.15
	FII	5.68	5.16	5.45	5.43	0.26
	FIII	5.44	5.62	5.48	5.51	0.09
	FIV	5.29	5.47	5.51	5.42	0.12
4	F0	5.27	5.05	5.45	5.26	0.20
	FI	5.15	5.22	5.43	5.27	0.15
	FII	5.51	5.03	5.41	5.32	0.25
	FIII	5.05	5.62	5.48	5.38	0.30
	FIV	5.15	5.67	5.36	5.39	0.26
5	F0	5.17	5.01	5.44	5.21	0.22
	FI	5.21	5.22	5.43	5.29	0.12
	FII	5.28	5.09	5.39	5.25	0.15
	FIII	5.15	5.2	5.43	5.26	0.15
	FIV	5.22	5.26	5.35	5.28	0.07
6	F0	5.21	5.04	5.37	5.21	0.17
	FI	5.2	5.15	5.41	5.25	0.14
	FII	5.12	5.08	5.37	5.19	0.16

FIII	5.03	5.48	5.41	5.31	0.24
FIV	5.16	5.26	5	5.14	0.13

Lampiran 21. Uji Stabilitas Viskositas

Uji Stabilitas Viskositas (cP)						
Siklus	Formulasi	Bets I	Bets II	Bets III	Rata-Rata	Nilai SD
1	F0	25920	21280	27520	24907	3241.07
	FI	22560	29080	32400	28013	5005.97
	FII	35600	28960	32400	32320	3320.72
	FIII	26400	32800	32040	30413	3496.36
	FIV	28120	29280	29760	29053	843.17
2	F0	20160	20448	25720	22109	3130.24
	FI	31080	28800	27840	29240	1664.21
	FII	22320	28400	31280	27333	4574.25
	FIII	26000	32560	27120	28560	3509.07
	FIV	25280	28880	28160	27440	1904.94
3	F0	20120	20240	23920	21427	2160.12
	FI	22080	28800	27240	26040	3517.04
	FII	31080	28200	31040	30107	1651.34
	FIII	24000	22600	26960	24520	2226.03
	FIV	24486	28800	27000	26762	2166.83
4	F0	20000	20000	22520	20840	1454.92
	FI	22080	28000	27160	25747	3203.08
	FII	30120	27480	29320	28973	1353.71
	FIII	23240	22480	26800	24173	2306.28
	FIV	24120	25680	26080	25293	1035.63
5	F0	19640	19840	21280	20253	894.73
	FI	21120	24800	26000	23973	2542.86
	FII	28560	20520	28600	25893	4653.49
	FIII	22760	19840	26160	22920	3163.04
	FIV	23426	24920	25920	24755	1255.13
	F0	19200	19760	21560	20173	1233.10

	FI	21000	22000	25880	22960	2577.75
6	FII	28240	20320	28320	25627	4595.88
	FIII	22240	19840	26000	22693	3104.92
	FIV	23120	24000	25520	24213	1214.14

Lampiran 22. Sertifikat of Analisis Ekstrak Pegagan

		LEMBAR KERJA EKSTRAKSI LABORATORIUM PENGUJIAN																	
Nama sampel	Pegagan	Tanggal	10 Maret 2022																
Kode sampel	220333072	Metode Ekstraksi	Maserasi																
Prosedur ekstraksi 1. Sortasi pegagan 2. Keringkan dalam oven pada suhu 45°C selama 12 jam 3. Giling simplisia kering menggunakan diskmill dengan ayakan 60 mesh 4. Masukkan ke dalam kontainer ekstraktor 5. Tambahkan solvent ethanol 70% 6. Ekstraksikan dengan ultra turax pada kecepatan 1.000 rpm selama 2 jam 7. Maserasikan selama 48 jam 8. Filtrasi dengan corong buchner, sedot dengan mesin vakum 9. Residu diekstraksi ulang seperti diatas 10. Filtrat pertama dan kedua dievaporasi dengan vakum rotary evaporator pada suhu 50°C tekanan vakum 11. Tuang ekstrak ke dalam cawan porselin 12. Uapkan sisa solvent dengan pengering vakum 13. Timbang ekstrak yang diperoleh. Kompilasi Data Ekstraksi : <table> <tr> <td>Berat daun segar</td> <td>:</td> <td>2.400</td> <td>g</td> </tr> <tr> <td>Berat serbuk daun</td> <td>:</td> <td>721</td> <td>g</td> </tr> <tr> <td>Volume solvent ethanol 70%</td> <td>:</td> <td>5</td> <td>L</td> </tr> <tr> <td>Berat ekstrak</td> <td>:</td> <td>119,4</td> <td>g</td> </tr> </table>				Berat daun segar	:	2.400	g	Berat serbuk daun	:	721	g	Volume solvent ethanol 70%	:	5	L	Berat ekstrak	:	119,4	g
Berat daun segar	:	2.400	g																
Berat serbuk daun	:	721	g																
Volume solvent ethanol 70%	:	5	L																
Berat ekstrak	:	119,4	g																

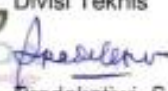


SERTIFIKAT HASIL UJI

Nomor : 220333072b
Nama Sampel : Ekstrak Pegagan
Uji : Kadar Air, Kadar Abu, Kualitatif Andrographolide
Metode : Gravimetri
Tanggal : 10 Maret 2022
Permintaan : Indah Pitaloka
NIM : 201FF04044
Institusi : Fakultas Farmasi Universitas Bhakti Kencana Bandung

Hasil Uji Gravimetri

Parameter Uji	Hasil Analisis	Satuan
Kadar Air	4,54	% v/b
Kadar Abu Total	0,47	% b/b
Kualitatif Andrographolide	Positif	-

Divisi Teknis

Pradekatiwi, S.Si.

		LEMBAR KERJA UJI KIMIA LABORATORIUM PENGUJIAN	
Nama sampel	Ekstrak Pegagan	Tanggal	10 Maret 2022
Kode sampel	220333072b	Metode Ekstraksi	Gravimetri, TLC

Penetapan Kadar Air Metode Gravimetri/Susut Pengeringan

1. Timbang dengan seksama serbuk sampel dalam cawan yang sebelumnya telah dipanaskan pada suhu penetapan selama 30 menit.
2. Masukkan kedalam oven, keringkan pada suhu pada 105°C selama 2 jam.
3. Masukkan sampel ke dalam eksikator dan biarkan mendingin didalam eksikator.
4. Ulangi pengeringan hingga mendapat bobot tetap.

Penetapan Kadar Abu Total

1. Timbang dengan seksama serbuk sampel.
2. Masukkan ke dalam krus silikat yang telah dipijar dan ditara, kemudian diratakan.
3. Masukkan krus ke dalam furnis, pijarkan pada suhu 600°C hingga membentuk abu.
4. Dinginkan krus dan timbang.
5. Kadar abu dihitung terhadap simplisia yang telah dikeringkan di udara.

Uji Kualitatif Andrographolide :

1. Timbang ekstrak sebanyak 50 g
2. Masukkan kedalam tabung reaksi, tambahkan chloroform 5 ml
3. Ekstraksi menggunakan metode sonikasi selama 10 menit
4. Filtrasi fase chloroform, residu diekstraksi kembali
5. Masukkan residu ke dalam tabung reaksi, tambahkan chloroform 5 ml
6. Sonikasi selama 10 menit
7. Filtrasi fase chloroform, evaporasikan dengan gas nitrogen hingga kering
8. Tambahkan methanol 1 ml
9. Spotting sampel pada fase diam silikagel F₂₅₄
10. Eluasikan dengan fase gerak chloroform-metanol (90:10) hingga batas

Hasil Uji Organoleptik

Organoleptik	Hasil Pengamatan
Tekstur	Serbuk
Warna	Kehitaman
Bau	Tidak berbau
Rasa	Agak pahit

Kadar Air Metode Gravimetri

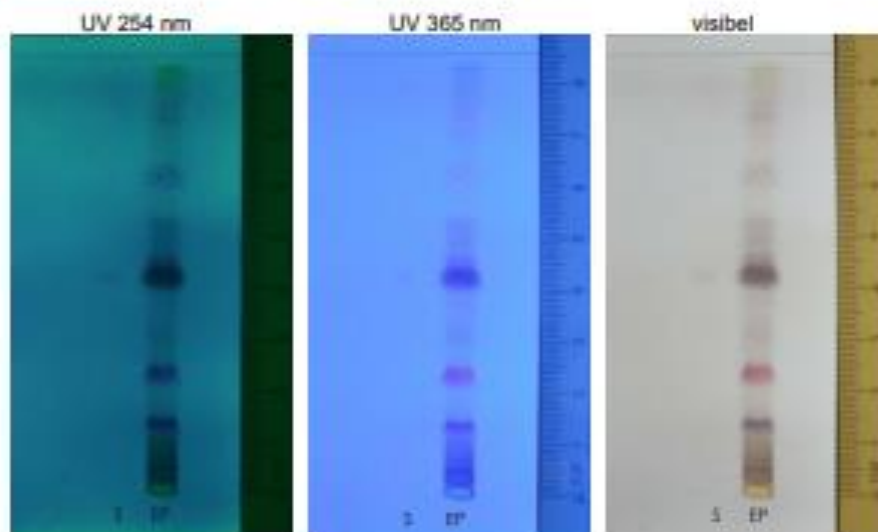
Berat Ekstrak (g)	Berat Kering Ekstrak (g)	Kadar Air (% v/b)
2,0109	1,9192	4,56
2,0086	1,9161	4,51
Rata-rata		4,54

Kadar Abu Total Metode Gravimetri

Berat Ekstrak (g)	Berat Abu (g)	Kadar Abu (% b/b)
2.0087	0.0095	0.473
2.0014	0.0095	0.475
Rata-rata		0.47

TLC PROFILE

Sample number : 220333072b
 Sample detail : Ekstrak Pegagan
 Analysis : Andrographolide
 Adsorbent : Silicagel 60 F₂₅₄ (Al - Sheet)
 Mobile Phase : Choroform : Methanol = 90:10
 Detection : Anisaldehyde Asam Sufat



S : Standar Adrographolide
 EP : Ekstrak Pegagan

Warna spot andrographolide di visibel : kehitaman
 Rf. flavonoid terdeteksi : 0,49

Lampiran 23. Sertifikat of Analisis Carbopol 940

COREL PHARMA CHEM

NEAR UNDERBRIDGE, THOL ROAD, KADI - 382715, DIST. MEHSANA, GUJARAT (INDIA)
 PHONE - + 91 8000880044/55 E-MAIL: corel@corelpharmachem.com WEB SITE: www.corelpharmachem.com

CERTIFICATE OF ANALYSIS

PRODUCT NAME : ACRYPOL 940 (Carbopol)
 BATCH NO. : 1102106
 MFG. DATE : Sep-2020
 RETEST. DATE : Aug-2023

ISSUE DATE : 01-Oct-2023
 A.R.NO.: A19201003967

The supply as detailed above has been tested and found to meet the requirements as below on sample basis.

SRL No.	PARAMETER	UNIT	SPECIFICATION	RESULTS
1	DESCRIPTION		WHITE, FLUFFY, HYDROSCOPIC POWDER HAVING A SLIGHT, CHARACTERISTIC ODOR. PH (5% W/V IN DISPERSION IN WATER) IS ABOUT 5.	WHITE, FLUFFY, HYDROSCOPIC POWDER HAVING A SLIGHT, CHARACTERISTIC ODOR. THE PH OF 5% W/V DISPERSION IN WATER IS ABOUT 5.
2	SOLUBILITY		GOOD SOLUBLE IN ETHYL ALCOHOL, HYDROCHLORIC ACID, 10% AQUEOUS NaOH, 10% AQUEOUS NaCl, 10% AQUEOUS Na ₂ CO ₃ AND Glycerol.	COMPLIES
3	IDENTIFICATION		VERY VISCOUS OIL IS PRODUCED	VERY VISCOUS OIL IS PRODUCED
4	IDENTIFICATION		10 mg/ml dispersion with 10% NaCl - ORANGE COLOR	ORANGE COLOR PRODUCED
5	IDENTIFICATION		10 mg/ml dispersion with 10% NaOH - YELLOW COLOR	YELLOW COLOR PRODUCED
6	VISCOSITY (2% AQUEOUS DISPERSION)	cpa.s	4000 TO 6000	5000
7	LOSS ON DRYING (IN A VACUUM AT 60°C FOR 1 HOUR)	%	100% L.S.	0.15
8	LIMIT OF SULFIDE	%	0.0010	Not Detected
9	ASSAY FOR CARBOMETHYL ACID CONTENT	%	90.0 TO 94.0	91.61

STATUS : Approves Above Spec.

* Specification as per finished product specifications (ACRYPOL 940) (Carbopol 940, Meeting requirements of USP 34)

"This is an electronically generated report, hence does not require signature"

The Next Generation Polymer Technologist

REGD. OFFICE : 2/A, VJAY COLONY, NR. S. P. COLONY, ESHWARYA ROAD, NARANPURA, AHMEDABAD-380 015. TELE : 91-79-32931099

ACHYCOAT • COLORCOAT • ACHYPOL • KEROX • ACHYSOL • ACRYFLOW • ACRYSET

Lampiran 24. Sertifikat of Analisis TEA

CERTIFICATE OF ANALYSIS

TRIETHANOLAMINE 99% 232 KG STEEL DRUM

Center/Vehicle ID	: DRYU2958538	Material ID	: 72000040
Customer P.O. No.	: QTN-0500016574-1	Customer No.	: 8010900433
Sales Order No.	: 103245939	Batch No.	: 255520
Delivery Qty	: 17.000	Delivery No.	: 500407257
Delivery Unit	: DR	Inspection Dt.	: 13 MAR 2019

NOTE: THE TEST CHARACTERISTICS AND THEIR UNITS, TOLERANCES AND RESULTS LISTED BELOW WILL VARY DEPENDING ON THE BUSINESS, CUSTOMER & MATERIAL REQUIREMENTS.

Test Characteristics	Results	Unit	Tolerance Limits	Method
TRIETHANOLAMINE	99.9	WTP	99.6 - 100.0	1B-17A-0.1
MONOETHANOLAMINE	0.00	WTP	0.00 - 0.10	1B-17A-0.1
DIETHANOLAMINE	0.1	WTP	0.0 - 0.5	1B-17A-0.1
WATER	0.1	WTP	0.0 - 0.2	1B-17A-0.2
IRON	0	PPM	0 - 10	1B-17A-0.4
COLOR	17	PTCO	0 - 40	1B-17A-0
APPEARANCE	PASS:Clear	-	-	1B-17A-0

Production Date : 13 Mar 2019

Expiry Date : 13 Mar 2024

This product meets the Product Sales Specification. This result is based on the sample being tested.

This is a computer generated document. No signature is required.

Lampiran 25. Serrtifikat of Analisis DMDM Hydantoin



昆山市双友日用化工有限公司

KunShan City Shuangyou DailyChemical Co., LTD

质量检验报告单

CERTIFICATE OF QUALITY ANALYSIS

Trade Name/商品名称: K2000 Preservative K2000 防腐剂
 INCI 名: DMDM HYDANTOIN/DMDM 乙内酰脲
 Batch NO/产品批号: 20210908 Quantity/产品数量: 5000kg
 Issued Date/检验日期: 2021/9/8 Standard/检验依据: SY/WI-824-02-(06)
 Manufacturing Date/生产日期: 2021/9/7 Package/包装形式: 20kg/桶
 Effective Date/有效期至: 2022/9/6

Item 检测项目	Specification 规格	Result 检测结果	Analytical Method 分析方法
Appearance 外观	Colorless to pale yellow liquid 无色至浅黄色液体	Colorless to pale yellow liquid 无色至浅黄色液体	SY/WI-824-02-(06)
Acidity(pH) 酸度	5.0-7.0	6.23	GB/T 9724-2007
DMDMH(%) DMDMH 含量	54-56	55.78	SY/WI-824-02-(06)
Specific Gravity 比重	1.14-1.18	1.1470	GB/T 611-88
Free Formaldehyde(%) 游离甲醛	≤0.9	0.63	SY/WI-824-02-(06)
Total Formaldehyde(%) 总甲醛含量	17.0-18.0	17.80	SY/WI-824-02-(06)

Conclusion 结论: Pass 合格

Analyzed by 检验: 肖冬梅

Check by 复核: 毕天尧

地址: 江苏省昆山市千灯镇萧墅路615号

Address: Qiandeng Town, Kunshan City, Jiangsu Province, China

Postcode: 215300

TEL: 0512-57786356

FAX: 0512-57476182

Lampiran 26.Sertifikat of Analisis Gliserin

Page 1 of 1

Date : 13/November/2021

CERTIFICATE OF ANALYSIS

Ref No : G/QC/GSK/21/01-067

Product : REFINED GLYCERINE 99.7%

Manufactured Date : NOVEMBER 05, 2021

Best Before : NOVEMBER 05, 2022

Date of Received : NOVEMBER 05, 2021

Date of Analysis : NOVEMBER 05, 2021

Lot No : Q211105-3W

Parameter	Unit	Result	Specification	Test Method
Appearance		Transparent	Transparent	Visual
Identification A (IR)		Conform	Conform	USP 43 : 2020 (187 F)
Identification B				
Dioethylene 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	Conform	USP 43 : 2020 (P 1967)
Glycerine Content	%	99.8	99.7 min	USP 43 : 2020 (P 1967)
Chloride	ppm	<10	10 max	USP 43 : 2020 (221)
Sulfate	ppm	<20	20 max	USP 43 : 2020 (221)
Residue on Ignition	%	0.004	0.01 max	USP 43 : 2020 (281)
Related Compounds				
Chlorinated Compounds	ppm	<30	30 max	USP 43 : 2020 (P 1968)
Color (mL FeCl3)	-	<0.4	0.4 max	USP 43 : 2020 (P 1969)
Specific Gravity @ 25	-	1.2614	1.2612 min	USP 43 : 2020 (941)
Moisture Content	%	0.10	0.3 max	USP 43 : 2020 (921)
Color (APHA)	-	5	10 max	AOCS Ex 9-65
Heavy Metal as Pb	ppm	<5	5 max	USP 41 : 2018 (231)

Certified Correct


Rika Jofanda
QC Head

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Factory / Laboratory :
Jl. Kapten Darmo Sugianto No. 58
Gade - 81124, East Java - Indonesia
Tel : +6231-3688101 Fax : +6231-3071332

Lampiran 27. Sertifikat of Analisis Aquadest

CERTIFICATE OF ANALYSIS

Product Name	: AQUADEST	Molecular Weight	: 18.02 g/mol
Catalog No.	: A.1078	Batch No.	: 1088914
Grade	: Laboratory Reagent	Manufacturing Date	: Oct 06, 2021
Formula	: H ₂ O	Expire Date	: Oct, 2023
Cas No.	: 7732-18-5		

No.	ITEM TEST	UNITS	SPECIFICATION	RESULTS
1.	Appearance	-	Clear and free of visible particulate	Passes test
2.	Conductivity at 25 °C	uS/cm	≤ 1.0	0.16
3.	pH at 25 °C	-	5.5 - 8.0	7.8
4.	Total Dissolve Solid (TDS)	ppm	≤0.5	0.08
5.	Residu on evaporation	ppm	≤ 1.0	NIL
6.	Total Organic Carbon (TOC)	ppm	≤50	<50
7.	Total Hardness	ppm	≤ 0.1	NIL
8.	Chloride (Cl)	ppm	≤0.5	0.3
9.	Silica	ppm	≤0.5	0.0188
10.	Iron (Fe)	ppm	≤ 0.1	0.0379
11.	Aromatic Hydrocarbon	ppm	Free of Hydrocarbon	NIL

Lampiran 28. Sertifikat Bakteri P.Acne



LABORATORIUM MIKROBIOLOGI-BIOTEKNOLOGI FARMASI
FAKULTAS FARMASI
UNIVERSITAS PADJADJARAN
Gedung ~~Lantai 2~~ Lantai 2 ~~Universitas Padjadjaran~~ Farmasi UNPAD
Jl. Raya Bandung - Sumedang KM 21, ~~Sumedang~~ ~~Sumedang~~ 451363



SERTIFIKAT UJI BAKTERI

PROPIONIBACTERIUM ACNES ~~Acc.~~ *Acc.* 2223



Significant taxa	% ID	T	Tests against			
<i>Propionibacterium acnes</i>	99.9	0.94				

Read taxon	% ID	T	Tests against			
<i>Propionibacterium granulosum</i>	0.1	0.34	IND	0%	SAC	82%

Mengetahui,
Kepala Laboratorium Mikrobiologi-
Bioteknologi Farmasi,

Dr. Tera Rostinawati, M.Si., Apt.
NID 197301032006042001

Lampiran 29. Hasil Cek Plagiarism

201FF04044 Indah Pitaloka			
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