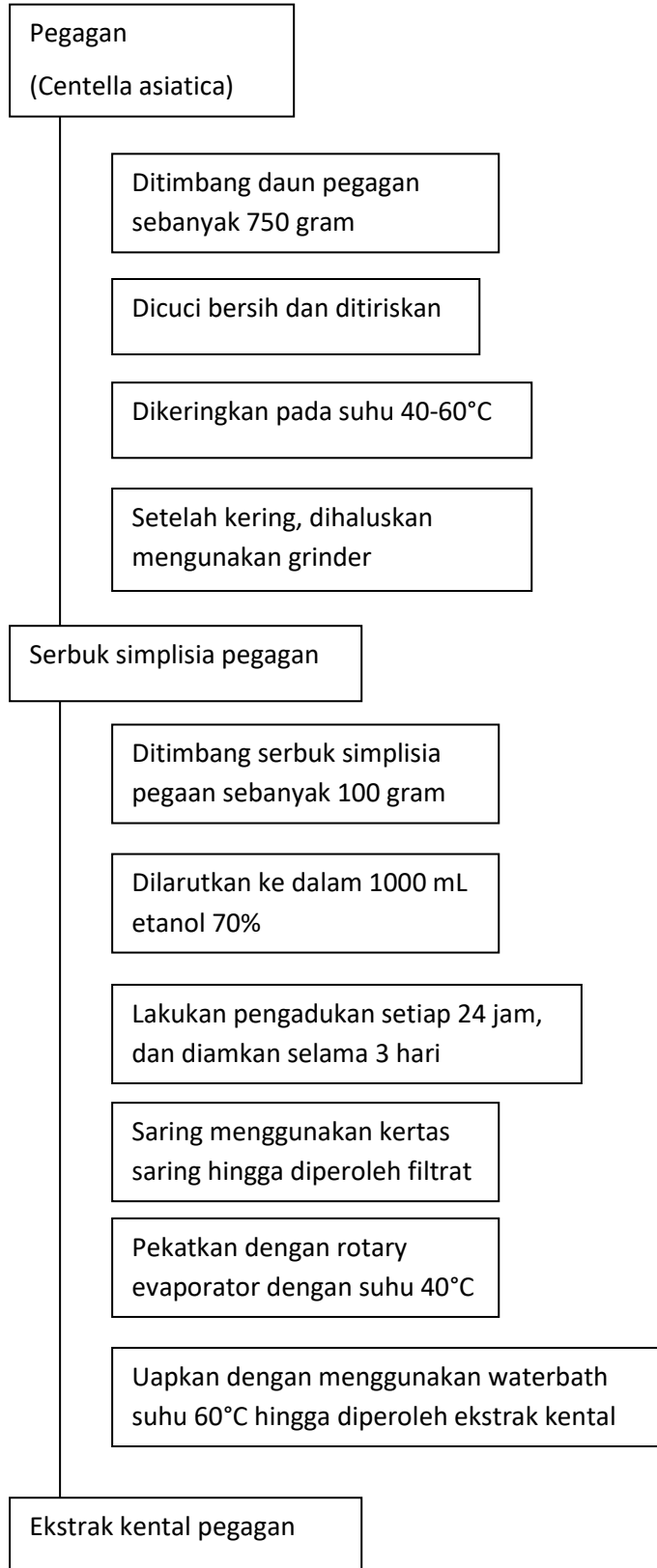
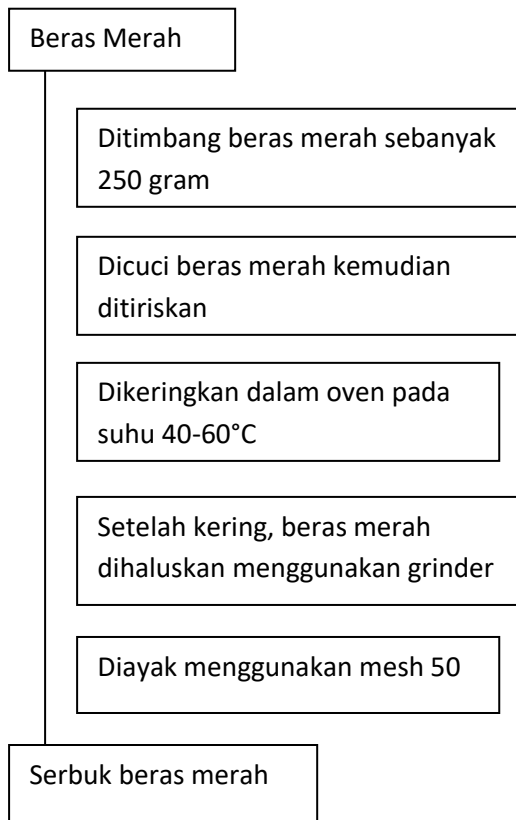


LAMPIRAN

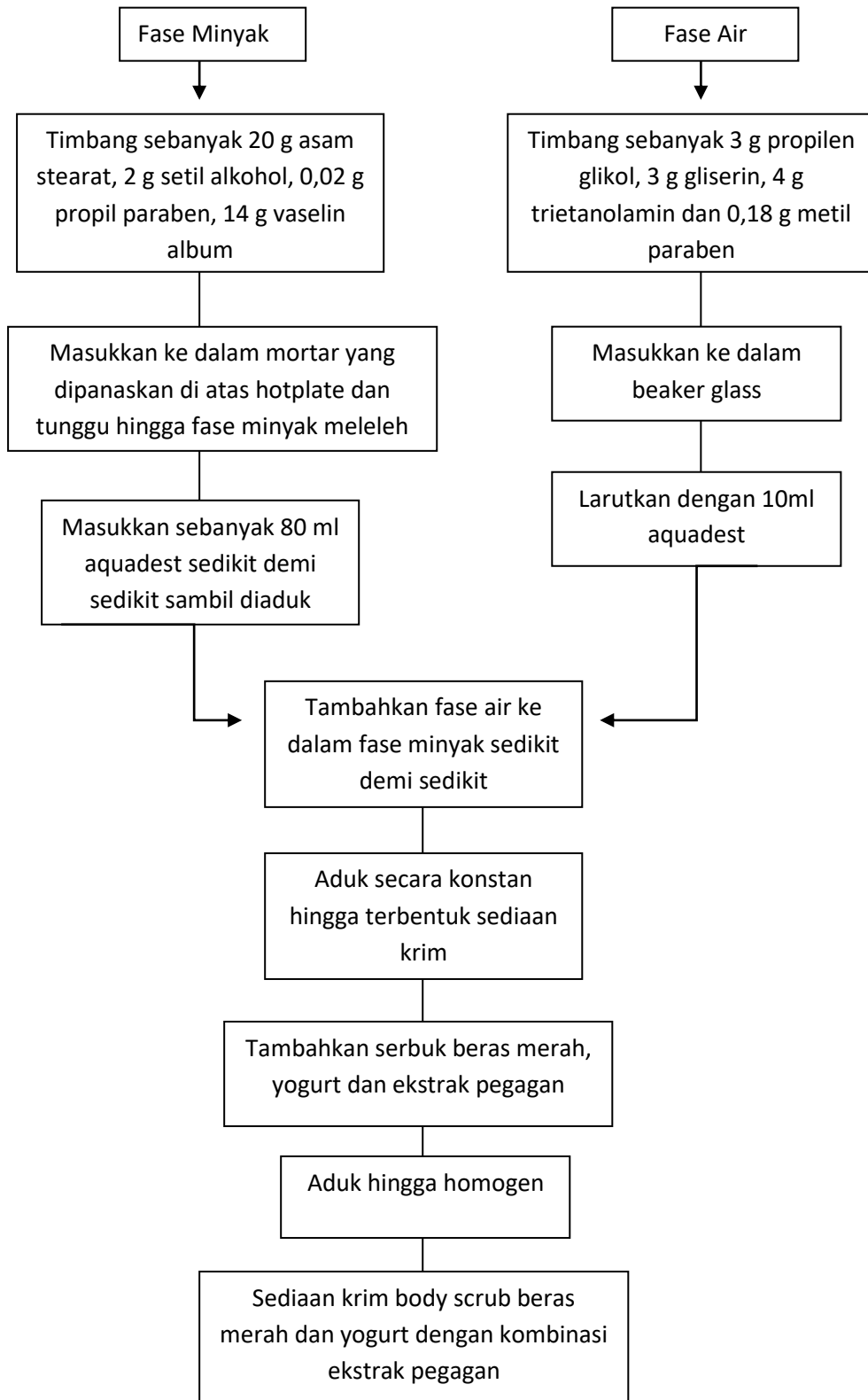
Lampiran 1. Bagan Alir Pembuatan Ekstrak Pegagan



Lampiran 2. Bagan Alir Pembuatan Simplisia Beras Merah



Lampiran 3. Bagan Alir Pembuatan Sediaan Krim Body Scrub



Lampiran 4. Determinasi Tanaman Pegagan (*Centella asiatica* L)



PEMERINTAH PROVINSI JAWA TIMUR
DINAS KESEHATAN
UPT LABORATORIUM HERBAL
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Jl. Kolonel Sugiono 457 – 459 Kota Malang
Email : materiamedicabatu@jatimprov.go.id



Nomor : 000.9.3/ 072/ 102.20/ 2024
Sifat : Biasa
Perihal : **Determinasi Tanaman Pegagan**

Memenuhi permohonan saudara :

Nama : LINA DWI WAHYUNINGSIH
NIM/ NIK/ NIP : P17120214068
Fakultas : ANALISIS FARMASI DAN MAKANAN
POLITEKNIK KESEHATAN KEMENKES MALANG

1. Perihal determinasi tanaman pegagan

Kingdom : Plantae (Tumbuhan)
Divisi : Magnoliophyta (Tumbuhan berbunga)
Kelas : Dicotyledonae
Bangsa : Umbellales
Suku : Umbelliferae
Marga : *Centella*
Jenis : *Centella asiatica* (L.) Urban.
Nama Daerah : Pegagan, gagan-gagan, rendeng, kerok batok (Jawa), daun kaki kuda (Indonesia), pegaga (Ujung Pandang), antanan gede, antanan rambut (Sunda), dau tungke (Bugis), kos tekosan (Madura), kori-kori (Halmahera).
Kunci Determinasi : 1b-2b-3b-4b-6b-7b-9b-10b-11b-12b-13b-14b-16a-239b-243b-244b-248b- 249b- 250b-266b-267a-268a-269a:Umbelliferae-1b-2b:Centella-3:C.asiatica.

2. Morfologi

: Pegagan merupakan tema menahun tanpa batang, tetapi dengan rimpang pendek dan stolon-stolon yang merayap dengan panjang 10-80 cm. Akar keluar dari setiap bonggol, banyak bercabang yang membentuk tumbuhan baru. Helai daun tunggal, bertangkai panjang sekitar 5-15 cm berbentuk ginjal. Tepinya bergerigi atau beringgit, dengan penampang 1-7 cm tersusun dalam roset yang terdiri atas 2-10 helai daun, kadang-kadang agak berambut. Bunga berwarna putih atau merah muda, tersusun dalam karangan berupa payung, tunggal atau 3-5 bersama-sama keluar dari ketiak daun. Tangkai bunga 5-50 mm. Buah kecil bergantung yang berbentuk lonjong/pipih panjang 2-2.5 mm, baunya wangi dan rasanya pahit.

3. Bagian yang digunakan : Daun.

4. Penggunaan : Penelitian.

5. Daftar Pustaka

- Anonim. 1977. *Materia Medica Indonesia Jilid I*. Departemen Kesehatan Republik Indonesia.
- Van Steenis, CGGJ. 2008. *FLORA: untuk Sekolah di Indonesia*. Pradnya Paramita, Jakarta.

Demikian surat keterangan determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 09 Januari 2024

KEPALA UPT LABORATORIUM HERBAL
MATERIA MEDICA BATU







DR. RATNA YULIANTI, M.M.







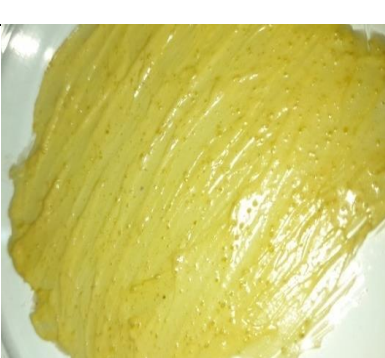
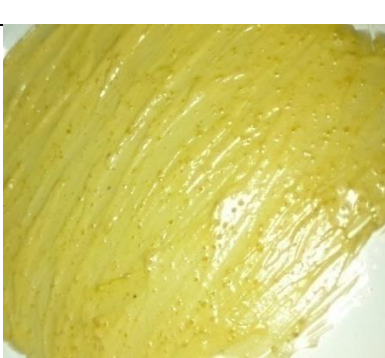
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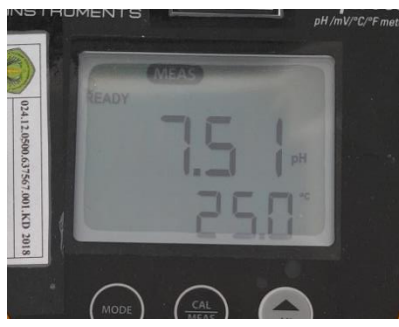




Lampiran 5. Dokumentasi Pembuatan Sediaan Krim Body Scrub

Proses Pembuatan Sediaan Krim Body Scrub	Keterangan
	<p>Bahan pembuatan krim body scrub</p>
	<p>Pengeringan pegagan</p>
	<p>Pemekatan ekstrak pegagan menggunakan rotary evaporator</p>
	<p>Pembuatan sediaan krim body scrub</p>

Lampiran 6. Hasil Uji Homogenitas Sediaan krim body scrub

Formulasi	Replikasi 1	Replikasi 2
F0		
F1		
F2		
F3		

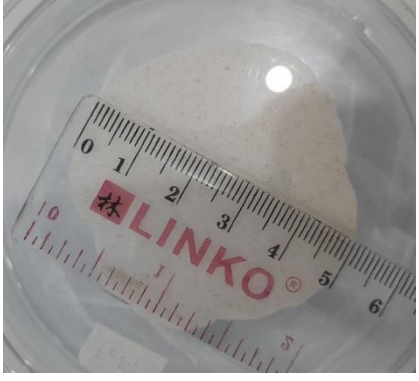



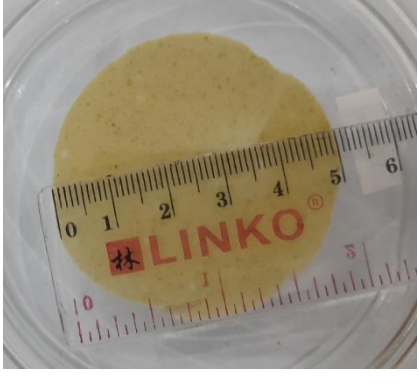
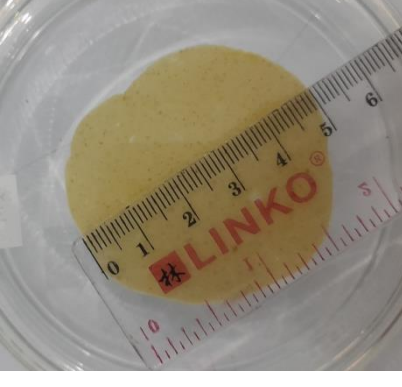
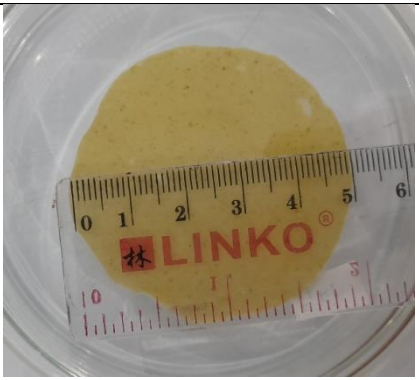
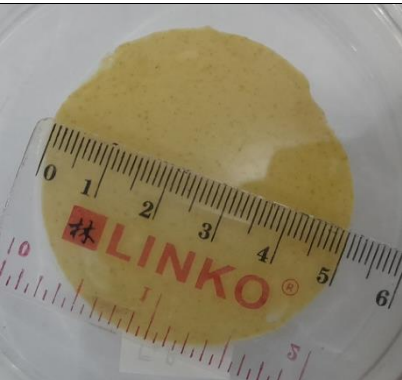
Lampiran 7. Hasil Uji pH Sediaan Body Scrub

Formulasi	Replikasi 1	Replikasi 2
F0	 <p>A digital pH meter (pH 700) showing a reading of 7.68 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>	 <p>A digital pH meter (pH 700) showing a reading of 7.51 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>
F1	 <p>A digital pH meter (pH 700) showing a reading of 7.28 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>	 <p>A digital pH meter (pH 700) showing a reading of 7.26 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>
F2	 <p>A digital pH meter (pH 700) showing a reading of 7.03 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>	 <p>A digital pH meter (pH 700) showing a reading of 7.10 pH and 25.0 °C. The screen also displays 'MEAS' and 'READY'. A label on the left side of the device contains identification information.</p>









F3



Lampiran 8. Hasil Uji Daya Sebar Sediaan Krim body scrub

Formulasi	Replikasi 1	Replikasi 2
F0	 A petri dish containing a white, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.	 A petri dish containing a white, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.
F1	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.
F2	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.
F3	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.	 A petri dish containing a yellow, semi-transparent cream spread. A ruler with the brand name 'LINKO' is placed horizontally across the spread. The spread appears to be approximately 4.5 cm wide and 3.5 cm high.

Lampiran 9. Hasil Uji Stabilitas Sediaan Krim Body Scrub

Formulasi	Sebelum dilakukan uji	Sesudah dilakukan uji
F0		
F1		
F2		
F3		

Lampiran 10. Perhitungan

a. Perhitungan Pembuatan Larutan HCl 2N

$$M_1 \times V_1 = M_2 \times V_2$$

$$12,06 \text{ N} \times V_1 = 2 \text{ N} \times 10 \text{ mL}$$

$$V_1 = 20/12,06$$

$$V_1 = 1,66 \text{ ml}$$

b. Perhitungan Pembuatan Larutan NaOH 10%

$$\frac{10 \text{ g}}{100 \text{ ml}} = \frac{x}{10 \text{ ml}}$$

$$x = 10 \times 10/100$$

$$x = 1 \text{ gram}$$

c. Perhitungan Pembuatan Larutan FeCl₃ 1%

$$\frac{1 \text{ g}}{100 \text{ ml}} = \frac{x}{25 \text{ ml}}$$

$$x = 25 \times 1/100$$

$$x = 0,25 \text{ gram}$$

d. Perhitungan nilai stabilitas sediaan kim body scrub

$$\text{Rumus stabilitas emulsi} = \frac{\text{berat fase tersisa (gram)}}{\text{berat awal sampel (gram)}} \times 100\%$$

Formulasi	Replikasi 1	Replikasi 2
F0 (0%)	Berat awal sampel : 5,0265 g Berat sampel tersisa : 4,2155 g stabilitas = $\frac{4,2155 \text{ g}}{5,0265 \text{ g}} \times 100\%$ = 83,86%	Berat awal sampel : 5,0539 g Berat sampel tersisa : 4,2682 g stabilitas = $\frac{4,2682 \text{ g}}{5,0539 \text{ g}} \times 100\%$ = 84,45%
F1 (4,4%)	Berat awal sampel : 5,0153 g Berat sampel tersisa : 4,5272 g stabilitas = $\frac{4,5272 \text{ g}}{5,0153 \text{ g}} \times 100\%$ = 90,27%	Berat awal sampel : 5,0058 g Berat sampel tersisa : 4,6031 g stabilitas = $\frac{4,6031 \text{ g}}{5,0058 \text{ g}} \times 100\%$ = 91,96%

F2 (8,8%)	Berat awal sampel : 5,0066 g Berat sampel tersisa : 4,6108 g stabilitas = $\frac{4,6108 \text{ g}}{5,0066 \text{ g}} \times 100\%$ = 92,09%	Berat awal sampel : 5,0059 g Berat sampel tersisa : 4,5950 g stabilitas = $\frac{4,5950 \text{ g}}{5,0059 \text{ g}} \times 100\%$ = 91,79%
F3 (13,3%)	Berat awal sampel : 5,02 g Berat sampel tersisa : 4,6315 g stabilitas = $\frac{4,6315 \text{ g}}{5,02 \text{ g}} \times 100\%$ = 92,26%	Berat awal sampel : 5,0439 g Berat sampel tersisa : 4,6415 g stabilitas = $\frac{4,6415 \text{ g}}{5,0439 \text{ g}} \times 100\%$ = 92,02%

e. Perhitungan rata-rata nilai pH

$$\begin{array}{ll} \mathbf{F0 (0\%)} = & \text{Replikasi 1} = 7,68 \\ & \text{Replikasi 2} = 7,51 \\ & \text{Rata-rata} = \frac{7,68+7,51}{2} \\ & = 7,59 \end{array} \quad \begin{array}{ll} \mathbf{F2 (8,8\%)} = & \text{Replikasi 1} = 7,03 \\ & \text{Replikasi 2} = 7,10 \\ & \text{Rata-rata} = \frac{7,03+7,10}{2} \\ & = 7,06 \end{array}$$

$$\begin{array}{ll} \mathbf{F1 (4,4\%)} = & \text{Replikasi 1} = 7,28 \\ & \text{Replikasi 2} = 7,26 \\ & \text{Rata-rata} = \frac{7,28+7,26}{2} \\ & = 7,27 \end{array} \quad \begin{array}{ll} \mathbf{F3 (13,3\%)} = & \text{Replikasi 1} = 6,94 \\ & \text{Replikasi 2} = 6,93 \\ & \text{Rata-rata} = \frac{6,94+6,93}{2} \\ & = 6,93 \end{array}$$

f. Perhitungan rata-rata daya sebar

$$\begin{array}{ll} \mathbf{F0 (0\%)} = & \text{Replikasi 1} = 5 \text{ cm} \\ & \text{Replikasi 2} = 4,7 \text{ cm} \\ & \text{Rata-rata} = \frac{5+4,7}{2} \\ & = 4,9 \text{ cm} \end{array} \quad \begin{array}{ll} \mathbf{F2 (8,8\%)} = & \text{Replikasi 1} = 5 \text{ cm} \\ & \text{Replikasi 2} = 5 \text{ cm} \\ & \text{Rata-rata} = \frac{5+5}{2} \\ & = 5 \text{ cm} \end{array}$$

$$\begin{array}{ll} \mathbf{F1 (4,4\%)} = & \text{Replikasi 1} = 5,5 \text{ cm} \\ & \text{Replikasi 2} = 5,3 \text{ cm} \\ & \text{Rata-rata} = \frac{5,5+5,3}{2} \\ & = 5 \text{ cm} \end{array} \quad \begin{array}{ll} \mathbf{F3 (13,3\%)} = & \text{Replikasi 1} = 5 \text{ cm} \\ & \text{Replikasi 2} = 5 \text{ cm} \\ & \text{Rata-rata} = \frac{5+5}{2} \\ & = 5 \text{ cm} \end{array}$$

Lampiran 11. Tabel Hasil Uji Hedonik

Panelis	Aroma				Tekstur				Warna			
	A718	A215	A612	A151	A718	A215	A612	A151	A718	A215	A612	A151
1	2	4	3	3	4	4	4	4	4	4	3	3
2	4	3	4	3	5	3	4	4	3	5	4	3
3	4	3	4	5	4	4	3	4	4	5	3	4
4	3	4	3	5	4	4	4	5	4	5	4	4
5	4	2	3	3	4	4	4	4	4	5	4	4
6	5	3	4	3	3	4	5	4	5	5	3	5
7	2	3	3	4	4	3	3	5	4	4	5	5
8	2	2	2	2	4	5	4	3	3	4	4	4
9	3	3	3	3	3	4	3	3	2	5	2	3
10	3	4	3	4	5	5	4	5	5	5	5	5
11	3	3	3	3	4	4	4	4	3	3	3	3
12	3	4	3	3	4	2	4	4	3	3	3	5
13	3	3	3	3	3	4	4	3	3	4	4	3
14	3	3	3	3	3	3	4	3	4	4	4	4
15	2	2	3	2	3	3	4	3	3	4	4	3
16	2	2	2	2	4	4	4	4	4	2	3	4
17	4	5	3	3	4	4	2	2	5	3	3	3
18	3	3	3	2	1	4	3	3	4	5	4	4
19	3	5	3	3	3	4	3	3	4	5	4	4
20	3	5	4	3	4	2	4	4	3	5	4	4
21	3	4	4	3	3	3	2	3	5	4	3	3
22	4	5	4	4	4	5	4	4	4	5	4	4
23	4	3	5	5	5	5	5	5	4	4	4	4
24	3	3	5	4	4	3	4	5	5	4	5	3
25	4	5	5	3	3	3	4	3	5	5	4	3
26	3	3	4	4	3	4	3	4	4	4	4	3
27	4	4	4	4	4	4	4	5	4	4	4	4
28	4	4	5	5	5	3	5	5	4	3	4	3
29	3	3	4	4	4	4	4	4	3	4	3	4
30	5	4	5	5	4	3	5	4	3	5	4	5
Total	98	104	107	103	112	111	114	116	115	127	112	113
Rata-rata	3,27	3,47	3,567	3,433	3,733	3,7	3,8	3,867	3,833	4,233	3,733	3,767

Keterangan :

Kode sampel A215 = Formula 0 (0%)

Kode sampel A718 = Formula 1 (4,4%)

Kode sampel A151 = Formula 2 (8,8%)

Kode sampel A612 = Formula 3 (13,3%)

Lampiran 12. Hasil Uji Hedonik menggunakan SPSS

a. Uji Anova (aroma)

Descriptives

Aroma

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A215	30	3.47	.937	.171	3.12	3.82	2	5
A718	30	3.27	.828	.151	2.96	3.58	2	5
A151	30	3.43	.935	.171	3.08	3.78	2	5
A612	30	3.57	.858	.157	3.25	3.89	2	5
Total	120	3.43	.886	.081	3.27	3.59	2	5

ANOVA

Aroma

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.400	3	.467	.588	.624
Within Groups	92.067	116	.794		
Total	93.467	119			

b. Uji Duncan (aroma)

Post Hoc Tests

Homogeneous Subsets

Aroma

Duncan^a

Sampel	N	Subset for alpha = 0.05
		1
A718	30	3.27
A151	30	3.43
A215	30	3.47
A612	30	3.57
Sig.		.241

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30.000.

c. Uji Anova (tekstur)

Descriptives

Tekstur

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A215	30	3.70	.794	.145	3.40	4.00	2	5
A718	30	3.73	.828	.151	3.42	4.04	1	5
A151	30	3.87	.819	.150	3.56	4.17	2	5
A612	30	3.80	.761	.139	3.52	4.08	2	5
Total	120	3.78	.793	.072	3.63	3.92	1	5

ANOVA

Tekstur

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.492	3	.164	.255	.857
Within Groups	74.433	116	.642		
Total	74.925	119			

d. Uji Duncan (tekstur)

Post Hoc Tests

Homogeneous Subsets

Tekstur

Duncan^a

Sampel	N	Subset for alpha = 0.05	
		1	
A215	30	3.70	
A718	30	3.73	
A612	30	3.80	
A151	30	3.87	
Sig.		.471	

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30.000.

e. Uji Anova (warna)

Descriptives

Warna

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A215	30	4.23	.817	.149	3.93	4.54	2	5
A718	30	3.83	.791	.145	3.54	4.13	2	5
A151	30	3.77	.728	.133	3.49	4.04	3	5
A612	30	3.73	.691	.126	3.48	3.99	2	5
Total	120	3.89	.776	.071	3.75	4.03	2	5

ANOVA

Warna

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.825	3	1.608	2.794	.043
Within Groups	66.767	116	.576		
Total	71.592	119			

f. Uji Duncan (warna)

Post Hoc Tests

Homogeneous Subsets

Warna

Duncan^a

Sampel	N	Subset for alpha = 0.05	
		1	2
A612	30	3.73	
A151	30	3.77	
A718	30	3.83	
A215	30		4.23
Sig.		.634	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30.000.