BAB V

KESIMPULAN DAN SARAN

A. KESIMPULAN

Dari hasil penelitian gel sampo minyak atsiri sereh dapur (*Cymbopogon citratus*) dengan variasi konsentrasi karbopol dapat disimpulkan :

1. Peningkatan konsentrasi karbopol berpengaruh terhadap peningkatan viskositas dan berkurangnya stabilitas busa sediaan gel sampo minyak atsiri sereh dapur (*Cymbopogon citratus*).

2. Formula yang memiliki uji mutu fisik gel sampo paling baik adalah formula ketiga.
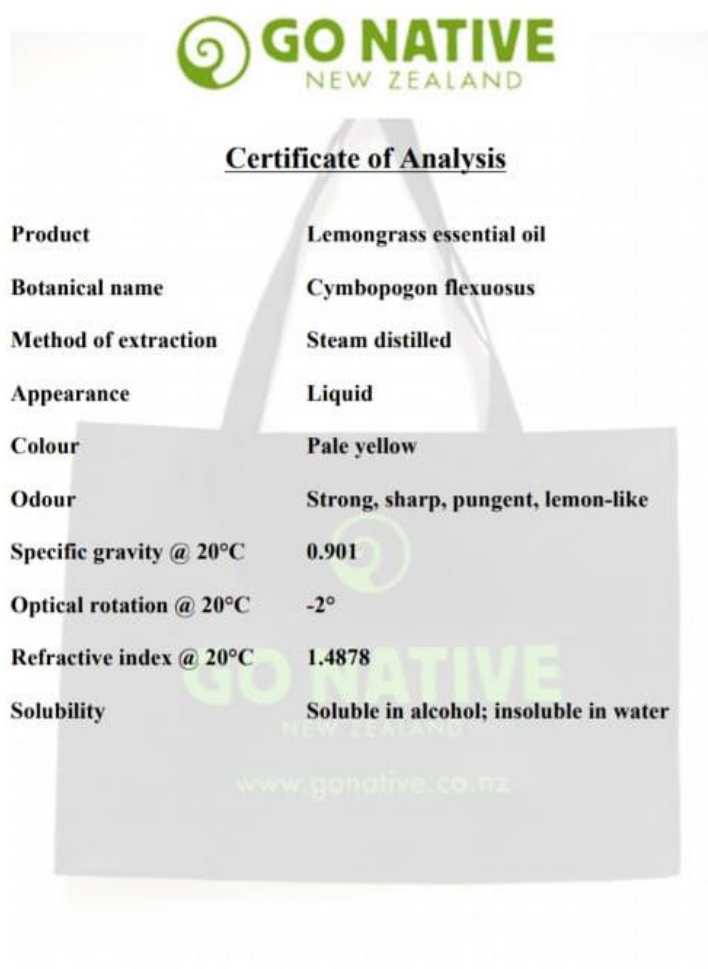
B. SARAN

Perlu dilakukan penelitian menggunakan *Thickening agent* yang berbeda.

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LAMPIRAN

Lampiran 1. Certificate of Analysis Lemongrass essential oil

GO NATIVE
NEW ZEALAND

Certificate of Analysis

Product	Lemongrass essential oil
Botanical name	Cymbopogon flexuosus
Method of extraction	Steam distilled
Appearance	Liquid
Colour	Pale yellow
Odour	Strong, sharp, pungent, lemon-like
Specific gravity @ 20°C	0.901
Optical rotation @ 20°C	-2°
Refractive index @ 20°C	1.4878
Solubility	Soluble in alcohol; insoluble in water

Go Native New Zealand, 8 Buchanan St, Devonport, Auckland, New Zealand.
Ph/fax 64 9 4453549; info@gonative.co.nz; www.gonative.co.nz

Lampiran 2. Hasil perhitungan formula gel sampo minyak atsiri sereh dapur

1. Formula 1
   - Minyak atsiri sereh dapur : 10 g
   - Natrium lauril sulfat : 3,5 g
   - Karbopol : 1,6 g
   - Propilenglikol : 10 g
   - Nipasol : 0,1 g
   - Nipagin : 0,01 g
   - TEA :9 tetes
   - Aquadest

   :100 g-(10+3,5+1,6+10+0,1+0,01)g =74,79 g

2. Formula 2
   - Minyak atsiri sereh dapur : 10 g
   - Natrium lauril sulfat : 3,5 g
   - Karbopol : 1,8 g
   - Propilenglikol : 10 g
   - Nipasol : 0,1 g
   - Nipagin : 0,01 g
   - TEA :9 tetes
   - Aquadest

   :100 g-(10+3,5+1,8+10+0,1+0,01)g = 74,59 g

3. Formula 3
   - Minyak atsiri sereh dapur : 10 g
   - Natrium lauril sulfat : 3,5 g
   - Karbopol : 2,0 g
   - Propilenglikol : 10 g
   - Nipasol : 0,1 g
   - Nipagin : 0,01 g
   - TEA :9 tetes
   - Aquadest

   :100 g(10+3,5+2,0+10+0,1+0,01)g = 74,39 g

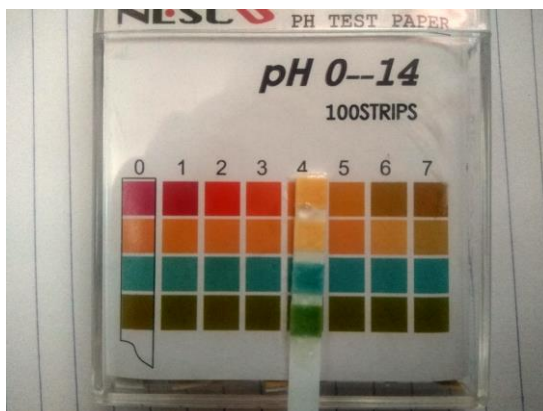**Lampiran 3. Gambar bahan formula gel sampo minyak atsiri sereh dapur**

Lampiran 4. Gambar sediaan gel sampo minyak atsiri sereh dapur

Lampiran 5. Gambar Alat dan uji sediaan gel sampo minyak atsiri sereh dapur
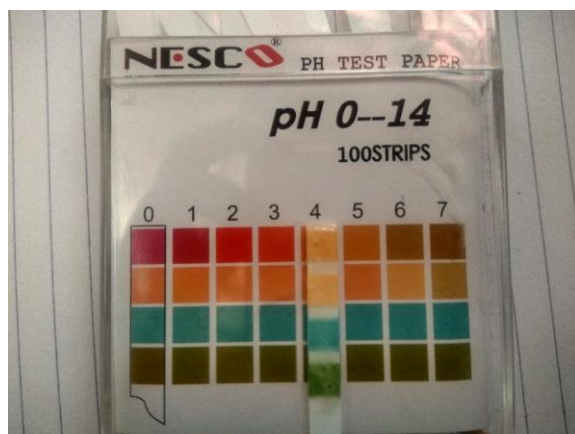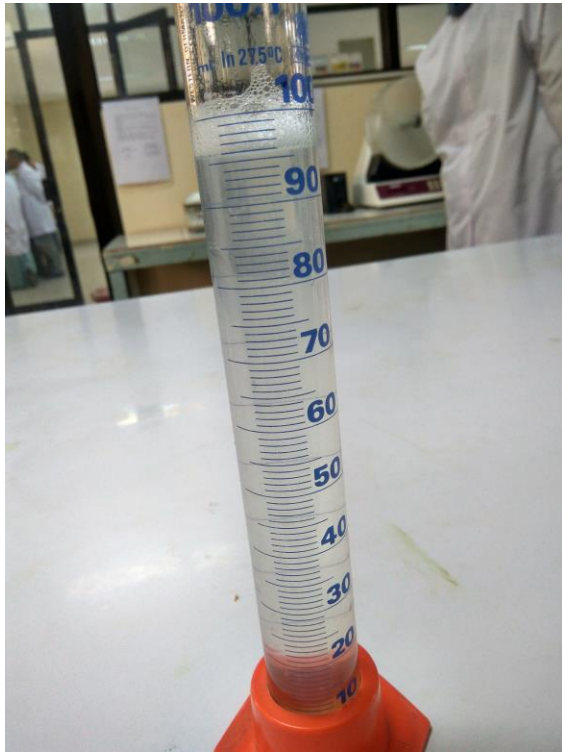
1. Uji pH

Formula 1
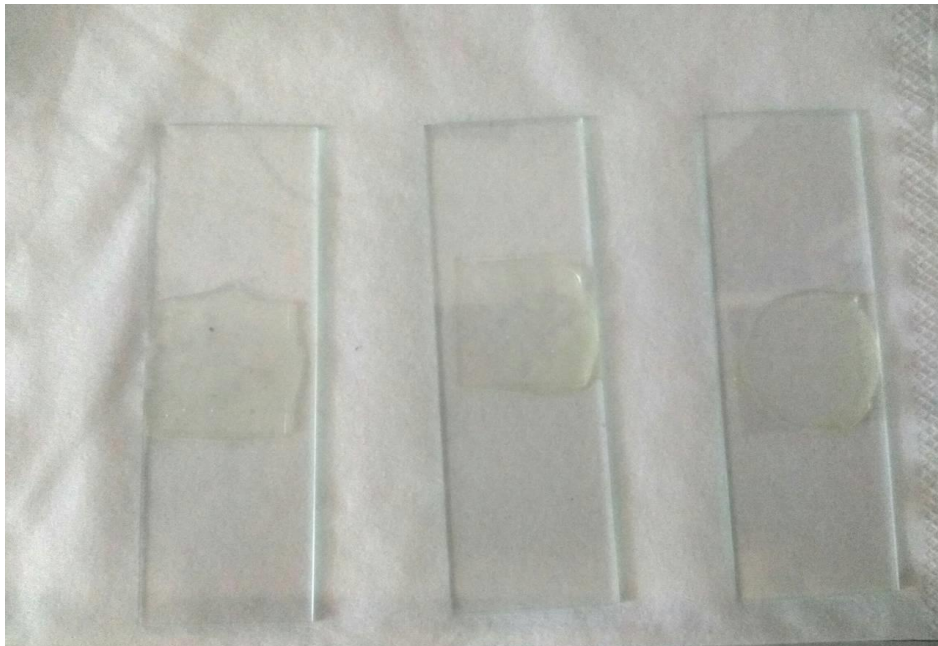

Formula 2

Formula 3

2. Uji viskositas

3. Uji stabilitas busa

4. Uji homogenitas

5. Uji indek bias minyak atsiri

Lampiran 6. Hasil uji statistik viskositas gel sampo minyak atsiri sereh dapur dengan menggunakan one way ANOVA.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
formula 1	12	8.217	1.0161	7.0	9.8
formula 2	12	10.500	1.1677	9.0	12.0
formula 3	12	15.000	1.7056	13.0	17.0

One-Sample Kolmogorov-Smirnov Test

		formula 1	formula 2	formula 3
N		12	12	12
Normal Parameters[a,b]	Mean	8.217	10.500	15.000
	Std. Deviation	1.0161	1.1677	1.7056
Most Extreme Differences	Absolute	.251	.332	.213
	Positive	.251	.332	.213
	Negative	-.190	-.234	-.213
Kolmogorov-Smirnov Z		.870	1.151	.737
Asymp. Sig. (2-tailed)		.436	.141	.648

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
formula 1	.028	3	8	.993
formula 2	2.133	3	8	.174
formula 3	.267	3	8	.848

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
formula 1	Between Groups	.390	3	.130	.095	.961
	Within Groups	10.967	8	1.371		
	Total	11.357	11			
formula 2	Between Groups	8.333	3	2.778	3.333	.077
	Within Groups	6.667	8	.833		
	Total	15.000	11			
formula 3	Between Groups	10.667	3	3.556	1.333	.330
	Within Groups	21.333	8	2.667		
	Total	32.000	11			

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
formula 1	Equal variances assumed	.030	.871	-.313	4	.770	-.3000	.9586	-2.9615	2.3615
	Equal variances not assumed			-.313	3.985	.770	-.3000	.9586	-2.9655	2.3655
formula 2	Equal variances assumed	.000	1.000	.000	4	1.000	.0000	.4714	-1.3088	1.3088

	Equal variances not assumed			.000	4.000	1.000	.0000	.4714	-1.3088	1.3088
	Equal variances assumed	.400	.561	-1.000	4	.374	-1.3333	1.3333	-5.0353	2.3686
formula 3	Equal variances not assumed			-1.000	3.200	.387	-1.3333	1.3333	-5.4304	2.7638

Lampiran 7. Hasil uji statistik stabilitas busa gel sampo minyak atsiri sereh dapur dengan menggunakan one way ANOVA.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
formula 1	12	33.00	3.490	26	37
formula 2	12	31.42	3.370	22	35
formula 3	12	22.92	3.630	17	30

One-Sample Kolmogorov-Smirnov Test

		formula 1	formula 2	formula 3
N		12	12	12
Normal Parameters[a,b]	Mean	33.00	31.42	22.92
	Std. Deviation	3.490	3.370	3.630
Most Extreme Differences	Absolute	.138	.254	.183
	Positive	.138	.153	.183
	Negative	-.133	-.254	-.134
Kolmogorov-Smirnov Z		.479	.879	.634
Asymp. Sig. (2-tailed)		.976	.422	.816

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
formula 1	.780	2	9	.487
formula 2	5.460	2	9	.028
formula 3	.014	2	9	.986

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
formula 1	Between Groups	98.000	2	49.000	12.250	.003
	Within Groups	36.000	9	4.000		
	Total	134.000	11			
formula 2	Between Groups	73.167	2	36.583	6.362	.019
	Within Groups	51.750	9	5.750		
	Total	124.917	11			
formula 3	Between Groups	37.167	2	18.583	1.552	.264
	Within Groups	107.750	9	11.972		
	Total	144.917	11			

Post Hoc Tests

formula 1

Tukey HSD[a]

menit uji	N	Subset for alpha = 0.05	
		1	2
Menit ke-5	4	29.50	
Menit ke-3	4	33.00	33.00
Menit ke-1	4		36.50
Sig.		.082	.082

Means for groups in homogeneous subsets are
displayed.

a. Uses Harmonic Mean Sample Size = 4,000.

formula 2

Tukey HSD[a]

menit uji	N	Subset for alpha = 0.05	
		1	2
Menit ke-5	4	28.00	
Menit ke-3	4	32.50	32.50
Menit ke-1	4		33.75
Sig.		.062	.748

Means for groups in homogeneous subsets are
displayed.

a. Uses Harmonic Mean Sample Size = 4,000.

T-Test

Group Statistics

	menit uji	N	Mean	Std. Deviation	Std. Error Mean
formula 1	Menit ke-1	4	36.50	1.000	.500
	Menit ke-3	4	33.00	2.160	1.080
formula 2	Menit ke-1	4	33.75	.957	.479
	Menit ke-3	4	32.50	.577	.289
formula 3	Menit ke-1	4	25.25	3.686	1.843
	Menit ke-3	4	22.50	3.317	1.658

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
formula 1	Equal variances assumed	1.174	.320	2.941	6	.026	3.500	1.190	.588	6.412
	Equal variances not assumed			2.941	4.229	.040	3.500	1.190	.265	6.735
formula 2	Equal variances assumed	1.500	.267	2.236	6	.067	1.250	.559	-.118	2.618
	Equal variances not assumed			2.236	4.927	.076	1.250	.559	-.193	2.693
formula 3	Equal variances assumed	.006	.940	1.109	6	.310	2.750	2.479	-3.316	8.816

			1.109	5.934	.310	2.750	2.479	-3.332	8.832
Equal variances not assumed									