L A M P I R A N

Lampiran 1. Setifikat analisis minyak atsiri nilam (*Pogostemon cablin*)

RUMAH ATSIRI INDONESIA

#ExperienceTheEssence

Certificate of Analysis

Product Name : Patchouli Oil

Botanical Name : *Pogostemon cablin* Benth

Spesifikasi	Hasil
Color	Yellowish brown
Odor	Earthy, woody, balsamic, resinous
Specific Gravity (25°C/25°C)	0.961
Refractive Index (20°C)	1.509
Optical Rotation (25°C)	(-)49.9°
Patchouli Alcohol (%)	30.20

STORAGE
Store product in full, tightly closed containers in a cool dry place away from heat and direct sunlight.

**Salinan ini dibuat sebagaimana mestinya. Segala hal tentang penyalahgunaan data tersebut di atas bukan tanggung jawab kami PT Rumah Atsiri Indonesia.*

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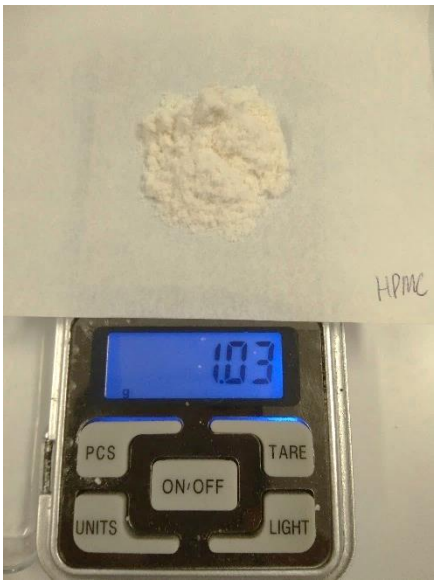
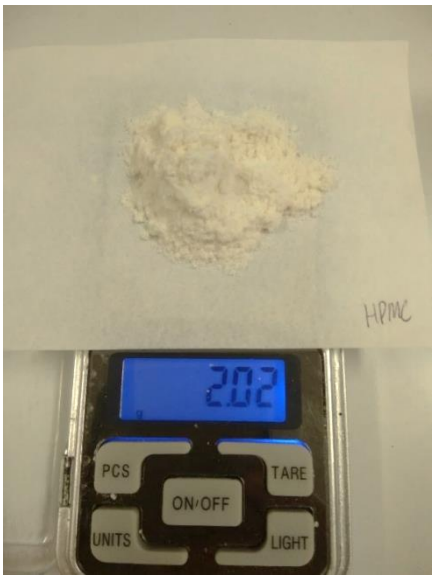
Lampiran 2. Rangkaian kegiatan dan alat yang digunakan

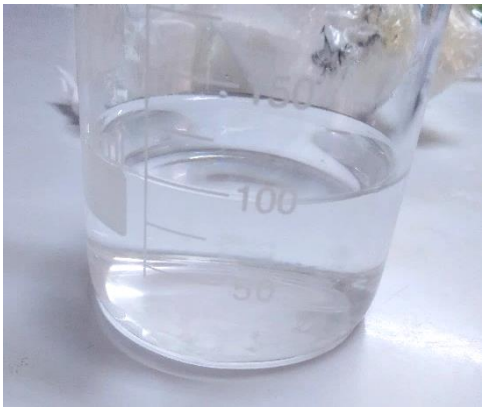
Penimbangan benzil all

Penimbangan asam stearat

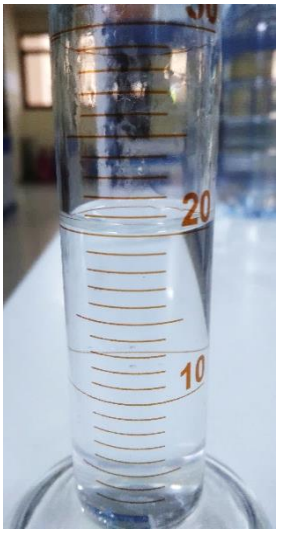




Penimbangan HPMC



Pembuatan larutan KOH 2%

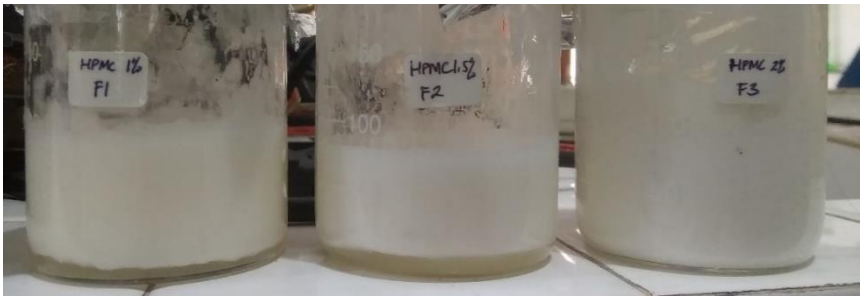


KOH 2% sebanyak 20 mL

Proses pemanasan VCO dan peleburan asam stearat

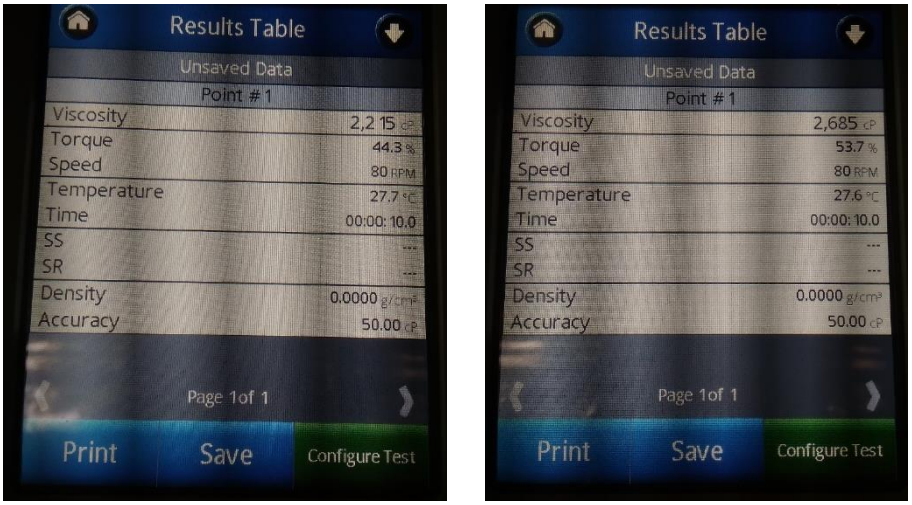
Proses pencampuran VCO dan KOH

Sabun cair minyak atsiri nilam sebelum penyimpanan

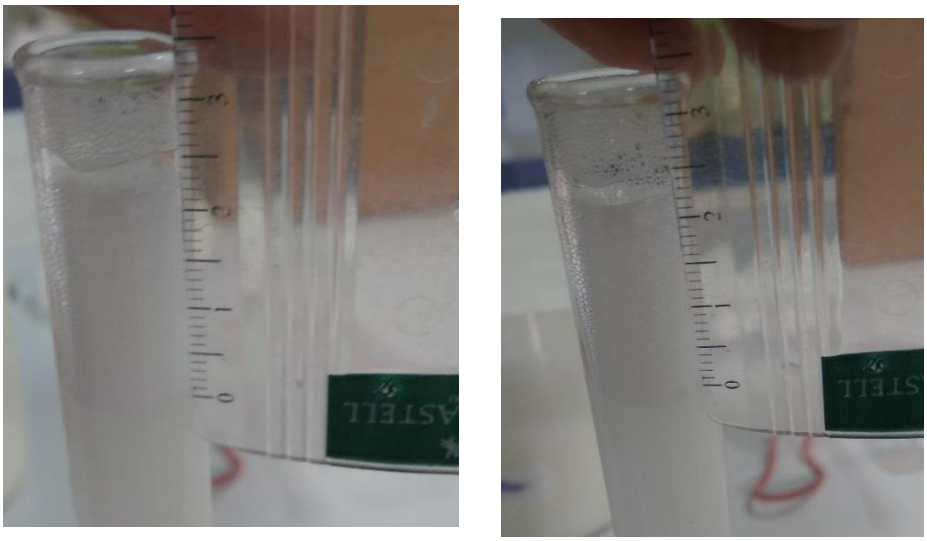


Sabun cair minyak atsiri nilam setelah penyimpanan

Uji pH dengan pH meter



Uji viskositas dengan viscometer Brookfield



Uji tinggi busa

Lampiran 3. Hasil uji pH sabun cair minyak atsiri nilam

Hasil pH			
Formula		Hari ke-0	Hari ke-28
F1	P1	8.88	8.12
	P2	8.91	8.17
	P3	8.95	8.18
rata-rata		**8.913333**	**8.156667**
SD		**0.035119**	**0.032146**
F2	P1	8.8	7.9
	P2	8.87	7.95
	P3	8.92	8.03
rata-rata		**8.863333**	**7.96**
SD		**0.060277**	**0.065574**
F3	P1	8.77	7.59
	P2	8.81	7.6
	P3	8.84	7.65
rata-rata		**8.806667**	**7.613333**
SD		**0.035119**	**0.032146**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum penyimpanan	Formula 1	.204	3	.	.993	3	.843
	Formula 2	.211	3	.	.991	3	.817
	Formula 3	.204	3	.	.993	3	.843
Sesudah penyimpanan	Formula 1	.328	3	.	.871	3	.298
	Formula 2	.227	3	.	.983	3	.747
	Formula 3	.328	3	.	.871	3	.298

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sebelum penyimpanan	Based on Mean	.580	2	6	.588
	Based on Median	.385	2	6	.696
	Based on Median and with adjusted df	.385	2	4.545	.701
	Based on trimmed mean	.568	2	6	.595
Sesudah	Based on Mean	1.133	2	6	.382

penyimpanan	Based on Median	.538	2	6	.609
	Based on Median and with adjusted df	.538	2	5.045	.614
	Based on trimmed mean	1.086	2	6	.396

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Sebelum penyimpanan	Between Groups	.017	2	.009	4.202	.072
	Within Groups	.012	6	.002		
	Total	.029	8			
Sesudah penyimpanan	Between Groups	.454	2	.227	106.979	.000
	Within Groups	.013	6	.002		
	Total	.467	8			

Post Hoc Tests

Sebelum penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05
Formula	N	1
Formula 3	3	8.8067
Formula 2	3	8.8633
Formula 1	3	8.9133
Sig.		.062

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Sesudah penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05		
Formula	N	1	2	3
Formula 3	3	7.6133		
Formula 2	3		7.9600	
Formula 1	3			8.1567
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 4. Hasil uji viskositas sabun cair minyak atsiri nilam

Hasil viskositas			
Formula		Hari ke-0	Hari ke-28
F1	P1	2215	4215
	P2	2225	4290
	P3	2245	4395
rata-rata		**2228.333**	**4300**
SD		**15.27525**	**90.41571**
F2	P1	2620	4610
	P2	2660	4650
	P3	2685	4665
rata-rata		**2655**	**4641.667**
SD		**32.78719**	**28.4312**
F3	P1	206800	304000
	P2	239300	323200
	P3	265200	345200
rata-rata		**237100**	**324133.3**
SD		**29262.09**	**20615.85**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum penyimpanan	Formula 1	.253	3	.	.964	3	.637
	Formula 2	.227	3	.	.983	3	.747
	Formula 3	.197	3	.	.996	3	.876
Sesudah penyimpanan	Formula 1	.211	3	.	.991	3	.817
	Formula 2	.282	3	.	.936	3	.510
	Formula 3	.185	3	.	.998	3	.925

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sebelum penyimpanan	Based on Mean	5.004	2	6	.053
	Based on Median	3.846	2	6	.084
	Based on Median and with adjusted df	3.846	2	2.000	.206
	Based on trimmed mean	4.934	2	6	.054
Sesudah penyimpanan	Based on Mean	4.554	2	6	.063
	Based on Median	3.923	2	6	.081

	Based on Median and with adjusted df	3.923	2	2.000	.203
	Based on trimmed mean	4.518	2	6	.064

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Sebelum penyimpanan	Between Groups	110129339872.222	2	55064669936.111	192.923	.000
	Within Groups	1712542616.667	6	285423769.444		
	Total	111841882488.889	8			
Sesudah penyimpanan	Between Groups	204368402916.667	2	102184201458.333	721.262	.000
	Within Groups	850044633.333	6	141674105.556		
	Total	205218447550.000	8			

Post Hoc Tests

Sebelum penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05	
Formula	N	1	2
Formula 1	3	2228.33	
Formula 2	3	2655.00	
Formula 3	3		237100.00
Sig.		.999	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Sesudah penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05	
Formula	N	1	2
Formula 1	3	4300.00	
Formula 2	3	4641.67	
Formula 3	3		324133.33
Sig.		.999	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 5. Hasil uji tinggi busa sabun cair minyak atsiri nilam

Hasil uji tinggi busa			
Formula		Hari ke-0	Hari ke-28
F1	P1	24	13
	P2	22	15
	P3	31	16
rata-rata		**25.66667**	**14.66667**
SD		**4.725816**	**1.527525**
F2	P1	23	13
	P2	21	15
	P3	25	18
rata-rata		**23**	**15.33333**
SD		**2**	**2.516611**
F3	P1	10	8
	P2	13	6
	P3	11	7
rata-rata		**11.33333**	**7**
SD		**1.527525**	**1**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum penyimpanan	Formula 1	.304	3	.	.907	3	.407
	Formula 2	.175	3	.	1.000	3	1.000
	Formula 3	.253	3	.	.964	3	.637
Setelah penyimpanan	Formula 1	.253	3	.	.964	3	.637
	Formula 2	.219	3	.	.987	3	.780
	Formula 3	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sebelum penyimpanan	Based on Mean	3.171	2	6	.115
	Based on Median	.674	2	6	.544
	Based on Median and with adjusted df	.674	2	2.737	.578
	Based on trimmed mean	2.896	2	6	.132
Setelah	Based on Mean	1.169	2	6	.373

penyimpanan	Based on Median	.636	2	6	.562
	Based on Median and with adjusted df	.636	2	4.102	.575
	Based on trimmed mean	1.132	2	6	.383

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Sebelum penyimpanan	Between Groups	348.667	2	174.333	18.244	.003
	Within Groups	57.333	6	9.556		
	Total	406.000	8			
Setelah penyimpanan	Between Groups	128.667	2	64.333	19.966	.002
	Within Groups	19.333	6	3.222		
	Total	148.000	8			

Post Hoc Tests

Sebelum penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05	
Formula	N	1	2
Formula 3	3	11.33	
Formula 2	3		23.00
Formula 1	3		25.67
Sig.		1.000	.572

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Setelah penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05	
Formula	N	1	2
Formula 3	3	7.00	
Formula 1	3		14.67
Formula 2	3		15.33
Sig.		1.000	.894

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 6. Hasil uji stabilitas busa sabun cair minyak atsiri nilam

Formula		Hasil stabilitas busa (%)					
		Tinggi busa hari ke-0 (mm)		Stabilitas busa hari ke-0 (%)	Tinggi busa hari ke-28 (mm)		Stabilitas busa hari ke-28 (%)
		menit ke-0	menit ke-5		menit ke-0	menit ke-5	
F1	P1	24	23	95	13	12	92
	P2	22	22	100	15	13	86
	P3	31	28	90	16	15	93
rata-rata		**25.6666667**	**24.33333333**	**95**	**14.6666667**	**13.3333333**	**90.33333333**
SD		**4.72581563**	**3.214550254**	**5**	**1.52752523**	**1.52752523**	**3.785938897**
F2	P1	23	20	86	13	12	92
	P2	21	20	95	15	15	100
	P3	25	25	100	18	16	88
rata-rata		**23**	**21.66666667**	**93.66666667**	**15.3333333**	**14.3333333**	**93.33333333**
SD		**2**	**2.886751346**	**7.094598885**	**2.51661148**	**2.081666**	**6.110100927**
F3	P1	10	10	100	8	7	87
	P2	13	10	76	6	5	83
	P3	11	10	90	7	6	85
rata-rata		**11.3333333**	**10**	**88.66666667**	**7**	**6**	**85**
SD		**1.52752523**	**0**	**12.05542755**	**1**	**1**	**2**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum penyimpanan	Formula 1	.175	3	.	1.000	3	1.000
	Formula 2	.241	3	.	.974	3	.688
	Formula 3	.211	3	.	.991	3	.817
Sesudah penyimpanan	Formula 1	.337	3	.	.855	3	.253
	Formula 2	.253	3	.	.964	3	.637
	Formula 3	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Sebelum penyimpanan	Based on Mean	1.047	2	6	.407
	Based on Median	.645	2	6	.558

	Based on Median and with adjusted df	.645	2	4.084	.571
	Based on trimmed mean	1.021	2	6	.415
Sesudah penyimpanan	Based on Mean	2.007	2	6	.215
	Based on Median	.590	2	6	.583
	Based on Median and with adjusted df	.590	2	4.199	.594
	Based on trimmed mean	1.869	2	6	.234

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Sebelum penyimpanan	Between Groups	66.889	2	33.444	.455	.655
	Within Groups	441.333	6	73.556		
	Total	508.222	8			
Sesudah penyimpanan	Between Groups	106.889	2	53.444	2.880	.133
	Within Groups	111.333	6	18.556		
	Total	218.222	8			

Sebelum penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05
Formula	N	1
Formula 3	3	88.67
Formula 2	3	93.67
Formula 1	3	95.00
Sig.		.657

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Sesudah penyimpanan

Tukey HSD[a]

		Subset for alpha = 0.05
Formula	N	1
Formula 3	3	85.00
Formula 1	3	90.33
Formula 2	3	93.33
Sig.		.121

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.