Lampiran 1

PERNYATAAN KEASLIAN TULISAN

Saya yang bertanda tangan di bawah ini:

Nama : Bagus Dermawan

NIM : 0910730059

Program Studi : Program Studi Ilmu Gizi Kesehatan

Fakultas Kedokteran Universitas Brawijaya,

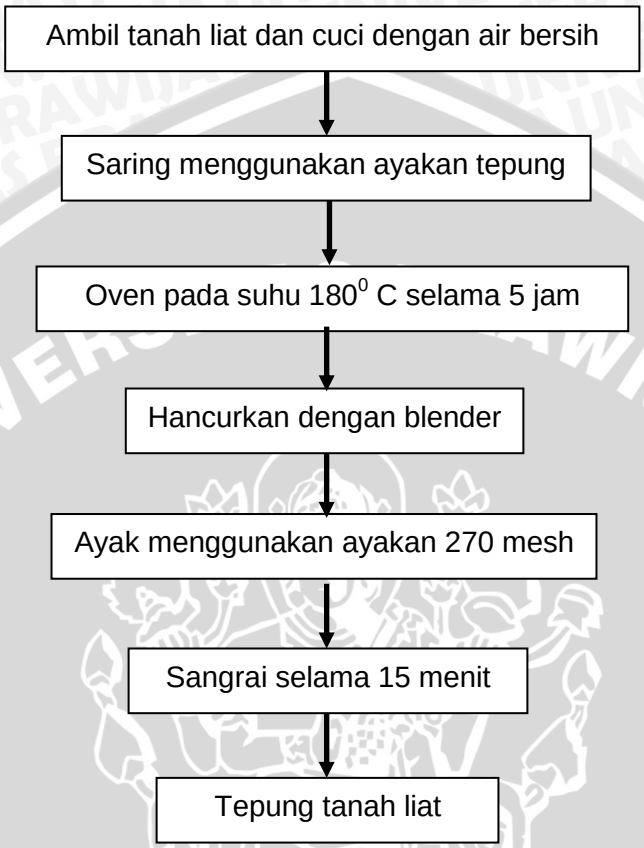
menyatakan dengan sebenarnya bahwa Tugas Akhir yang saya tulis ini benar-benar hasil karya saya sendiri, bukan merupakan pengambilan tulisan atau pikiran orang lain yang saya akui sebagai tulisan atau pikiran saya sendiri. Apabila di kemudian hari dapat dibuktikan bahwa Tugas Akhir ini adalah jiplakan, maka saya bersedia menerima sanksi atas perbuatan tersebut.

Malang, Juli 2013

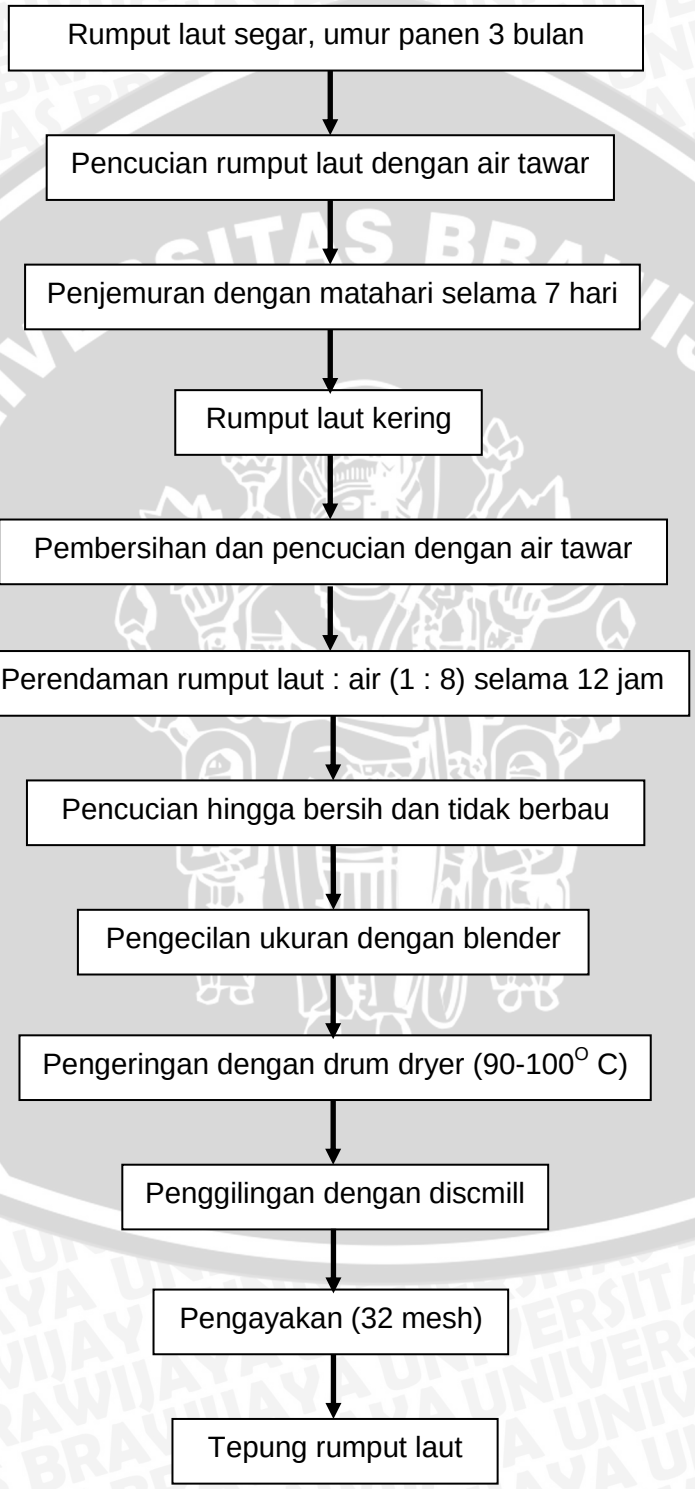
Yang membuat pernyataan,

Bagus Dermawan
NIM. 0910730059

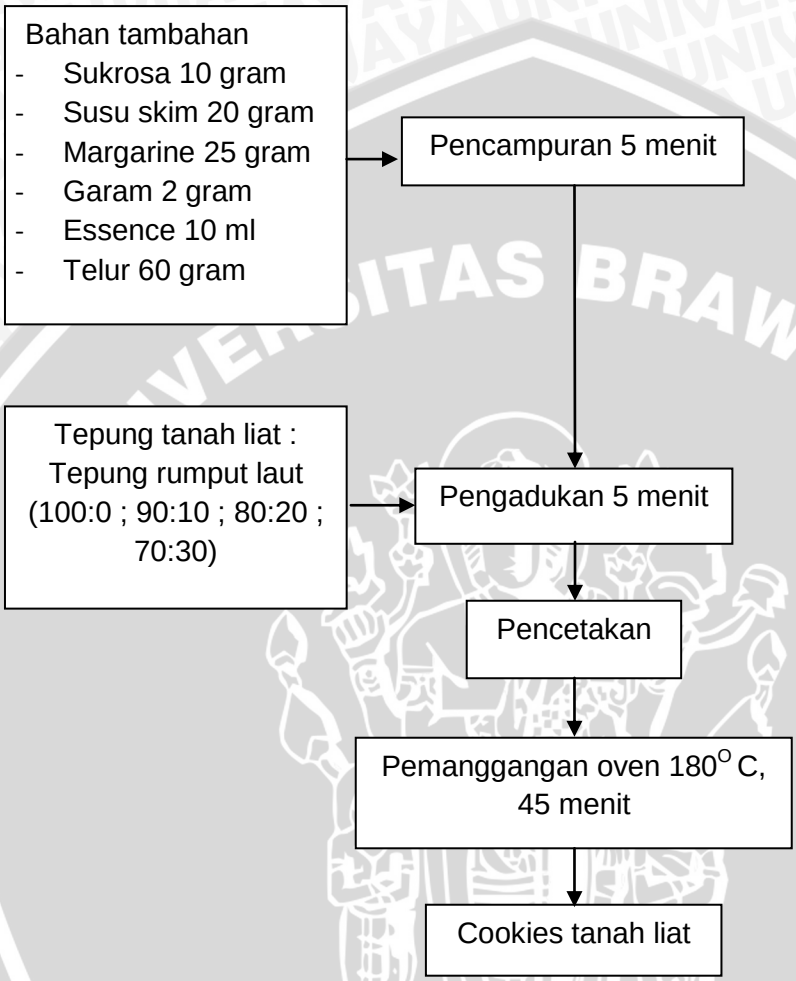
Lampiran 2 Diagram Alur Pembuatan Tepung Tanah Liat



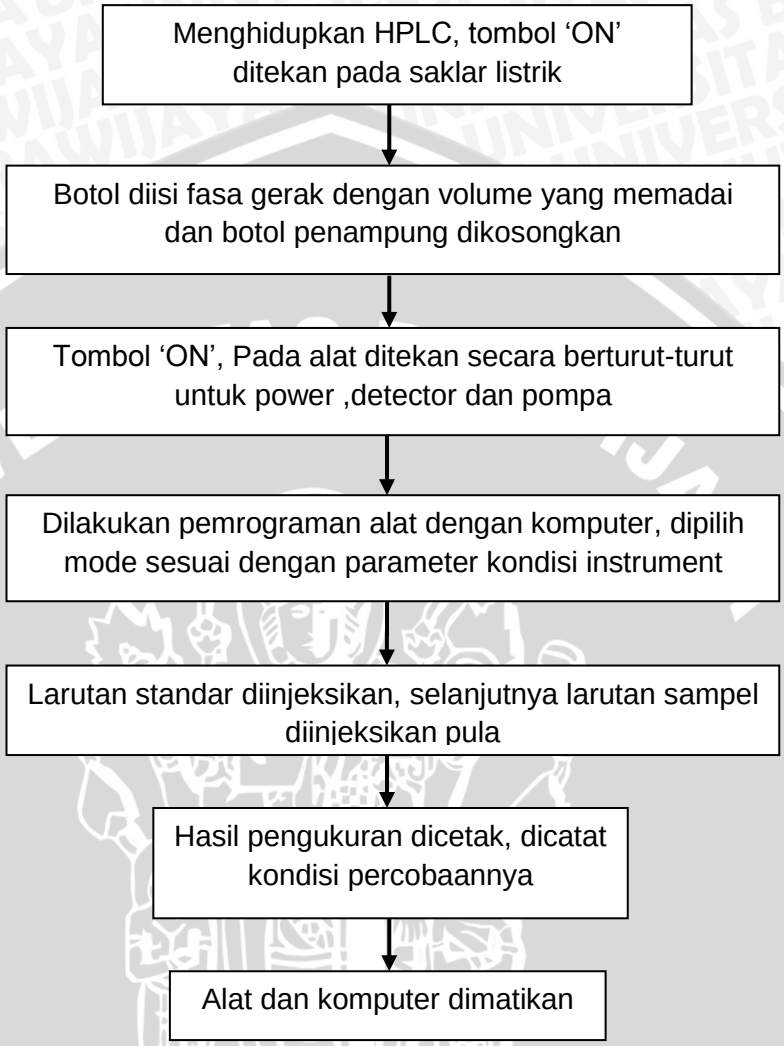
Lampiran 3 Diagram Alur Pembuatan Tepung Rumput Laut



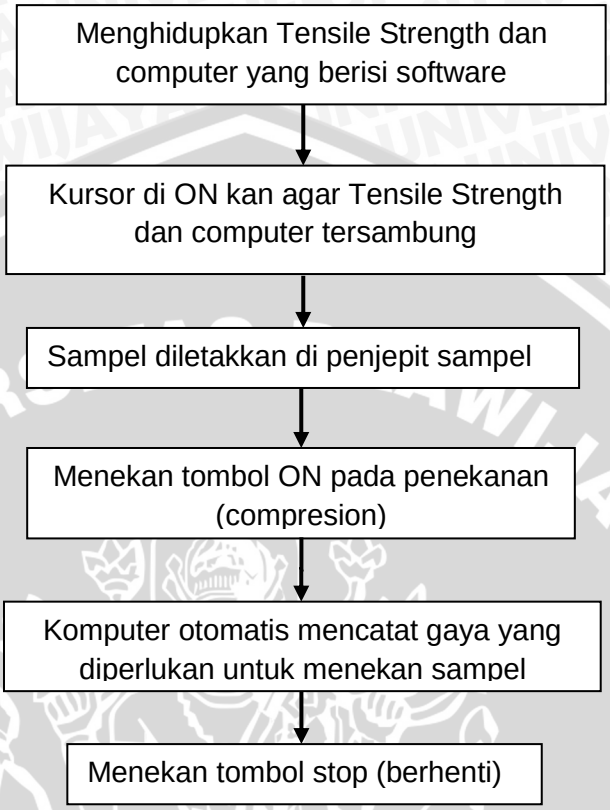
Lampiran 4 Diagram Alur Pembuatan *Cookies*



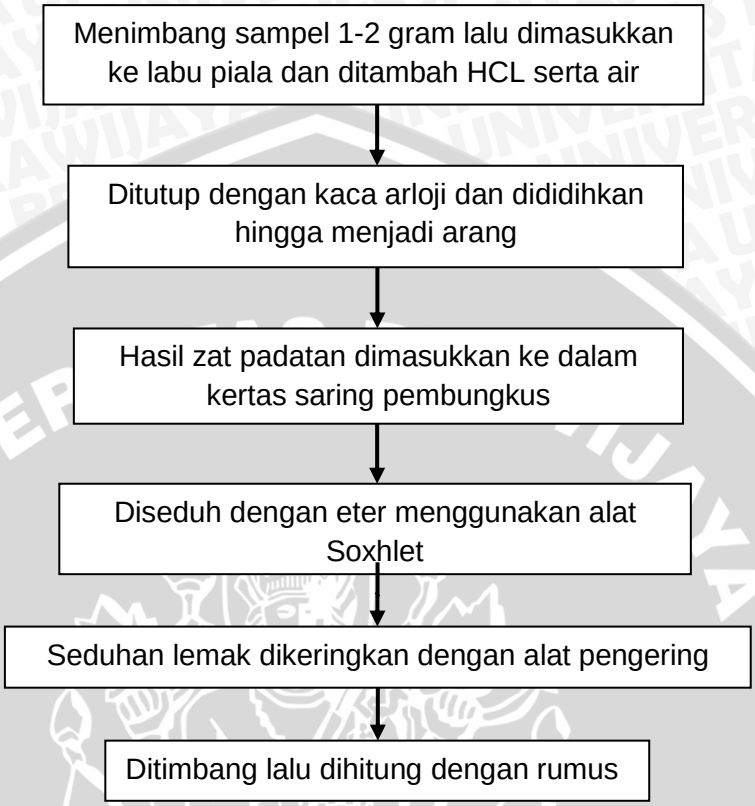
Lampiran 5. Diagram Pengujian Omega-3



Lampiran 6 Diagram Pengujian Kerenyahan



Lampiran 7. Diagram Pengujian Kandungan Lemak



Lampiran 8 Hasil Uji Laboratorium

Jenis Sampel *(Sample Name)*	No. Rujukan *(Reference Number)*	Jenis Uji *(Analysis)*	Hasil Analisa *(Analysis Result)*		Metode Analisis *(Analysis Method)*
			Nilai *(Value)*	Satuan *(Unit)*	
Cookies Tanah Liat P0 R1	214/S-UJ/LSIH-UB/III/2013	Kadar Protein	8.34	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8.15	%	
		Kadar Lemak	13.84	%	SNI 01-2891-1992 Butir 8.1
			13.88	%	
		Kadar Air	1.56	%	SNI 01-2891-1992 Butir 5.1
			1.38	%	
		Kadar Abu	56.25	%	SNI 01-2891-1992 Butir 6.1
			55.87	%	
		Karbohidrat (by different)	20.01	%	Karbohidrat (by different)
			20.72	%	
		Serat Kasar	4.16	%	Gravimetri
			3.98	%	
Cookies Tanah Liat P0 R2	215/S-UJ/LSIH-UB/III/2013	Kadar Protein	8.14	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8.39	%	
		Kadar Lemak	15.31	%	SNI 01-2891-1992 Butir 8.1
			15.11	%	
		Kadar Air	1.9	%	SNI 01-2891-1992 Butir 5.1
			1.91	%	
		Kadar Abu	54.58	%	SNI 01-2891-1992 Butir 6.1
			54.3	%	
		Karbohidrat (by different)	20.07	%	Karbohidrat (by different)
			20.29	%	
		Serat Kasar	3.06	%	Gravimetri
			3.44	%	
Cookies Tanah Liat P0 R3	216/S-UJ/LSIH-UB/III/2013	Kadar Protein	8.5	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8.55	%	
		Kadar Lemak	15.25	%	SNI 01-2891-1992 Butir 8.1
			14.97	%	
		Kadar Air	2.81	%	SNI 01-2891-1992 Butir 5.1
			2.9	%	
		Kadar Abu	53.54	%	SNI 01-2891-1992 Butir 6.1
			53.56	%	
		Karbohidrat (by different)	19.9	%	Karbohidrat (by different)
			20.02	%	
		Serat Kasar	4.24	%	Gravimetri
			3.28	%	
Cookies Tanah	217/S-UJ/LSIH-	Kadar Protein	8,97	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,92	%	

Liat P1 R1	UB/III/2013	Kadar Lemak	15,66	%	SNI 01-2891-1992 Butir 8.1
			15,47	%	
		Kadar Air	2,65	%	SNI 01-2891-1992 Butir 5.1
			2,64	%	
		Kadar Abu	49,06	%	SNI 01-2891-1992 Butir 6.1
			49,1	%	
		Karbohidrat (by different)	23,66	%	Karbohidrat (by different)
			23,87	%	
		Serat Kasar	4,47	%	Gravimetri
			4,55	%	
Cookies Tanah Liat P1 R2	218/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,41	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,39	%	
		Kadar Lemak	14,56	%	SNI 01-2891-1992 Butir 8.1
			14,55	%	
		Kadar Air	3,04	%	SNI 01-2891-1992 Butir 5.1
			3	%	
		Kadar Abu	49,31	%	SNI 01-2891-1992 Butir 6.1
			49,53	%	
		Karbohidrat (by different)	24,68	%	Karbohidrat (by different)
			24,53	%	
		Serat Kasar	4,14	%	Gravimetri
			4,16	%	
Cookies Tanah Liat P1 R3	219/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,28	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,32	%	
		Kadar Lemak	13,39	%	SNI 01-2891-1992 Butir 8.1
			13,47	%	
		Kadar Air	5,96	%	SNI 01-2891-1992 Butir 5.1
			6,06	%	
		Kadar Abu	48,36	%	SNI 01-2891-1992 Butir 6.1
			48,38	%	
		Karbohidrat (by different)	24,01	%	Karbohidrat (by different)
			23,77	%	
		Serat Kasar	3,30	%	Gravimetri
			4,10	%	

Cookies Tanah Liat P1 R1	217/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,97	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,92	%	
		Kadar Lemak	15,66	%	SNI 01-2891-1992 Butir 8.1
			15,47	%	
		Kadar Air	2,65	%	SNI 01-2891-1992 Butir 5.1
			2,64	%	
		Kadar Abu	49,06	%	SNI 01-2891-1992 Butir 6.1
			49,1	%	
		Karbohidrat (by different)	23,66	%	Karbohidrat (by different)
			23,87	%	
		Serat Kasar	4,47	%	Gravimetri
			4,55	%	
Cookies Tanah Liat P1 R2	218/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,41	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,39	%	
		Kadar Lemak	14,56	%	SNI 01-2891-1992 Butir 8.1
			14,55	%	
		Kadar Air	3,04	%	SNI 01-2891-1992 Butir 5.1
			3	%	
		Kadar Abu	49,31	%	SNI 01-2891-1992 Butir 6.1
			49,53	%	
		Karbohidrat (by different)	24,68	%	Karbohidrat (by different)
			24,53	%	
		Serat Kasar	4,14	%	Gravimetri
			4,16	%	
Cookies Tanah Liat P1 R3	219/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,28	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,32	%	
		Kadar Lemak	13,39	%	SNI 01-2891-1992 Butir 8.1
			13,47	%	
		Kadar Air	5,96	%	SNI 01-2891-1992 Butir 5.1
			6,06	%	
		Kadar Abu	48,36	%	SNI 01-2891-1992 Butir 6.1
			48,38	%	
		Karbohidrat (by different)	24,01	%	Karbohidrat (by different)
			23,77	%	
		Serat Kasar	3,30	%	Gravimetri
			4,10	%	

Cookies Tanah Liat P3 R1	223/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,49	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,48	%	
		Kadar Lemak	13,54	%	SNI 01-2891-1992 Butir 8.1
			13,75	%	
		Kadar Air	4,61	%	SNI 01-2891-1992 Butir 5.1
			4,51	%	
		Kadar Abu	40,53	%	SNI 01-2891-1992 Butir 6.1
			40,47	%	
		Karbohidrat (by different)	32,83	%	Karbohidrat (by different)
			32,79	%	
		Serat Kasar	4,23	%	Gravimetri
			4,74	%	
Cookies Tanah Liat P3 R2	224/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,83	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,73	%	
		Kadar Lemak	14,61	%	SNI 01-2891-1992 Butir 8.1
			14,57	%	
		Kadar Air	2,43	%	SNI 01-2891-1992 Butir 5.1
			2,53	%	
		Kadar Abu	41,12	%	SNI 01-2891-1992 Butir 6.1
			41,16	%	
		Karbohidrat (by different)	33,01	%	Karbohidrat (by different)
			33,01	%	
		Serat Kasar	4,51	%	Gravimetri
			5,11	%	
Cookies Tanah Liat P3 R3	225/S-UJ/LSIH-UB/III/2013	Kadar Protein	8,58	%	Inhouse method (IKP/1.0.4.03/LSIH)
			8,47	%	
		Kadar Lemak	14	%	SNI 01-2891-1992 Butir 8.1
			13,65	%	
		Kadar Air	5,83	%	SNI 01-2891-1992 Butir 5.1
			5,71	%	
		Kadar Abu	39,84	%	SNI 01-2891-1992 Butir 6.1
			39,83	%	
		Karbohidrat (by different)	31,75	%	Karbohidrat (by different)
			32,24	%	
		Serat Kasar	4,48	%	Gravimetri
			4,75	%	

Lampiran 9 Hasil Uji Kerenyahan

LABORATORIUM PENGUJIAN MUTU DAN KEAMANAN PANGAN
(TESTING LABORATORY OF FOOD QUALITY AND FOOD SAFETY)
JURUSAN TEKNOLOGI HASIL PERTANIAN
FAKULTAS TEKNOLOGI PERTANIAN
UNIVERSITAS BRAWIJAYA
Jl. Veteran, Malang 65145, Telp/Fax. (0341) 573358
E-mail : labujipangan_thpub@yahoo.com

KEPADA : Bagus Dermawan
TO* *FK Gizi - UB
MALANG

LAPORAN HASIL UJI
REPORT OF ANALYSIS

Nomor / *Number* : 3618/THP/LAB/2013
Nomor Analisis / *Analysis Number* : 3618
Tanggal penerbitan / *Date of issue* : 28 Maret 2013

Yang bertanda tangan di bawah ini menerangkan, bahwa hasil pengujian
The undersigned ratifies that examination

Dari contoh / *of the sample (s) of* : Cookies Tanah Liat
Untuk analisis / *For analysis* :
Keterangan contoh / *Description of sample* :
Diambil dari / *Taken from* : -
Oleh / *By* : -
Tanggal penerimaan contoh / *Received* : 15 Maret 2013
Tanggal pelaksanaan analisis / *Date of analysis* : 15 Maret 2013

Hasil adalah sebagai berikut / *Resulted as follows* :

Kode	Daya Patah (N)	
	I	II
P0.R1	30,5	34,6
P0.R2	33,1	29,4
P0.R3	43,1	42,7
P1.R1	25,4	21,8
P1.R2	27,8	22,7
P1.R3	16,3	15,6
P2.R1	24,8	19,2
P2.R2	18,3	11,7
P2.R3	19,9	20,5
P3.R1	14,7	17,2
P3.R2	11,6	12,8
P3.R3	14,9	10,8
Good Time	13,1	–
Oat 25	27,1	–
Rich n Rich	11,1	–

HASIL PENGUJIAN INI HANYA BERLAKU UNTUK CONTOH-CONTOH TERSEBUT DI ATAS. PENGAMBIL CONTOH BERTANGGUNG JAWAB ATAS KEBENARAN TANDING BARANG

Ketua,

Lampiran 10 Hasil Uji Omega-3

Lampiran Surat No. 134 /LK-B/IV/2013

Hasil Analisis Kimia Sampel Cookies

Sampel	Ulangan	Total Asam lemak omega 3 (%)
P1 1	1	3.187
	2	3.211
P1 2	1	3.070
	2	3.108
P1 3	1	3.148
	2	3.142
P2 1	1	3.327
	2	3.349
P2 2	1	3.365
	2	3.356
P2 3	1	3.310
	2	3.295
P3 1	1	3.535
	2	3.499
P3 2	1	3.570
	2	3.562
P3 3	1	3.462
	2	3.475
P4 1	1	3.713
	2	3.750
P4 2	1	3.767
	2	3.789
P4 3	1	3.683
	2	3.714

Malang, 17 April 2013
Analis,

M. Ariesandy, SP

Lampiran 11 Hasil Uji Taksonomi

LABORATORIUM TAKSONOMI, STRUKTUR DAN PERKEMBANGAN TUMBUHAN
JURUSAN BIOLOGI, FAKULTAS MIPA
UNIVERSITAS BRAWIJAYA
JALAN VETERAN, MALANG 65145
Telepon/faks: 0341-575841

KETERANGAN IDENTIFIKASI

No. 0076/Takso.Identifikasi/03/2013

Kepala Laboratorium Taksonomi, Struktur dan Perkembangan Tumbuhan, Jurusan Biologi, Fakultas MIPA, Universitas Brawijaya, menerangkan bahwa spesimen yang dibawa oleh:

Nama	:	Khunto Ajie Wijoyo (NIM. 0910733027)
Instansi	:	Gizi, Fakultas Kedokteran, Universitas Brawijaya

Berdasarkan deskripsi karakter dan kunci identifikasi pada Plant Resource of South East Asia. 15. Cryptogams: Algae. Prosea Foundation Bogor (W.F.P. von Reine & G.C. Trono, tahun 2002), halaman 150-153 diidentifikasi sebagai:

Familia	**: Solieraceae**
Genus	**: *Eucheuma***
Species	**: *Eucheuma cottonii***

Demikian surat keterangan identifikasi ini dibuat untuk digunakan seperlunya.

Malang, 4 Maret 2013

Kepala Laboratorium
Taksonomi, Struktur dan
Perkembangan Tumbuhan,

Dr. Serafinah Indriyani, M.Si.
NIP. 19630909 198802 2 001

Lampiran 12 Hasil Uji Statistik

1. Kandungan Lemak

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Lemak	.136	24	.200*	.952	24	.302

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Lemak	Based on Mean	2.851	3	20	.063
	Based on Median	1.569	3	20	.228
	Based on Median and with adjusted df	1.569	3	13.369	.243
	Based on trimmed mean	2.791	3	20	.067

ANOVA

Lemak

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.043	3	.681	1.622	.216
Within Groups	8.394	20	.420		
Total	10.437	23			

Multiple Comparisons

Lemak

Tukey HSD

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
P0	P1	.21000	.37404	.942	-.8369	1.2569
	P2	-.01500	.37404	1.000	-1.0619	1.0319
	P3	.70667	.37404	.264	-.3402	1.7536
P1	P0	-.21000	.37404	.942	-1.2569	.8369
	P2	-.22500	.37404	.930	-1.2719	.8219
	P3	.49667	.37404	.557	-.5502	1.5436
P2	P0	.01500	.37404	1.000	-1.0319	1.0619
	P1	.22500	.37404	.930	-.8219	1.2719
	P3	.72167	.37404	.248	-.3252	1.7686
P3	P0	-.70667	.37404	.264	-1.7536	.3402
	P1	-.49667	.37404	.557	-1.5436	.5502
	P2	-.72167	.37404	.248	-1.7686	.3252

2. Omega-3

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Omega_tiga	.117	24	.200*	.944	24	.203

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Omega_tiga	Based on Mean	.759	3	20	.530
	Based on Median	.739	3	20	.541
	Based on Median and with adjusted df	.739	3	13.033	.547
	Based on trimmed mean	.758	3	20	.530

ANOVA

Omega_tiga

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.153	3	.384	219.508	.000
Within Groups	.035	20	.002		
Total	1.188	23			

Multiple Comparisons

Omega_tiga

Tukey HSD

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
P0	P1	-.189333*	.024154	.000	-.25694	-.12173
	P2	-.372833*	.024154	.000	-.44044	-.30523
	P3	-.591667*	.024154	.000	-.65927	-.52406
P1	P0	.189333*	.024154	.000	.12173	.25694
	P2	-.183500*	.024154	.000	-.25110	-.11590
	P3	-.402333*	.024154	.000	-.46994	-.33473
P2	P0	.372833*	.024154	.000	.30523	.44044
	P1	.183500*	.024154	.000	.11590	.25110
	P3	-.218833*	.024154	.000	-.28644	-.15123

P3	P0	.591667*	.024154	.000	.52406	.65927
	P1	.402333*	.024154	.000	.33473	.46994
	P2	.218833*	.024154	.000	.15123	.28644

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

Correlations

			Perlakuan	Omega_tiga
Spearman's rho	Perlakuan	Correlation Coefficient	1.000	.969**
		Sig. (2-tailed)	.	.000
		N	24	24
	Omega_tiga	Correlation Coefficient	.969**	1.000
		Sig. (2-tailed)	.000	.
		N	24	24

**. Correlation is significant at the 0.01 level (2-tailed).

3. Kerenyahan

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kerenyahan	.126	24	.200*	.922	24	.064

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Kerenyahan	Based on Mean	1.647	3	20	.210
	Based on Median	.973	3	20	.425
	Based on Median and with adjusted df	.973	3	15.104	.431
	Based on trimmed mean	1.603	3	20	.220

ANOVA

Kerenyahan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1568.165	3	522.722	25.168	.000
Within Groups	415.380	20	20.769		
Total	1983.545	23			

Multiple Comparisons

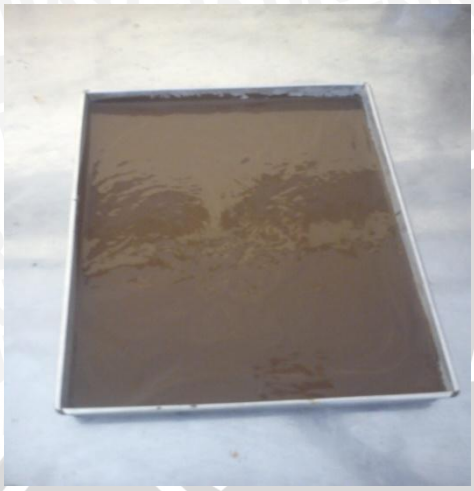
Kerenyahan

Tukey HSD

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
P0	P1	13.96667*	2.63116	.000	6.6022	21.3311
	P2	16.50000*	2.63116	.000	9.1356	23.8644
	P3	21.90000*	2.63116	.000	14.5356	29.2644
P1	P0	-13.96667*	2.63116	.000	-21.3311	-6.6022
	P2	2.53333	2.63116	.772	-4.8311	9.8978
	P3	7.93333*	2.63116	.032	.5689	15.2978
P2	P0	-16.50000*	2.63116	.000	-23.8644	-9.1356
	P1	-2.53333	2.63116	.772	-9.8978	4.8311
	P3	5.40000	2.63116	.203	-1.9644	12.7644
P3	P0	-21.90000*	2.63116	.000	-29.2644	-14.5356
	P1	-7.93333*	2.63116	.032	-15.2978	-.5689
	P2	-5.40000	2.63116	.203	-12.7644	1.9644

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

Lampiran 13. Dokumentasi Penelitian



Selai Tanah Liat Siap Dikeringkan Dengan Oven

Tanah Liat Kering Yang Siap Dihancurkan dan Diayak Menjadi Tepung

Penyangraian Tepung Tanah Liat

Pengayakan Serbuk Rumput Laut

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