

LAMPIRAN

Lampiran 1. Tabel Data Hasil *Chromatisitas* Resin Aktilik Polimerisasi Panas (*Heat Cured*) Yang Ditemukan Dalam Meliti Konsentrasi Ekstrak Rosella (*Hibiscus sabdariffa L.*)

Sampel	Konsentrasi Ekstrak Rosella																	
	Kontrol		30%		40%		50%		60%		100%							
	L*	a*	b*	L*	a*	b*	L*	a*	b*	L*	a*	b*						
1	99,70	-0,18	-0,21	99,89	0,02	-0,52	100,04	0,03	0,08	99,01	0,09	-0,12	98,77	0,19	-0,23	98,40	0,20	-0,04
2	99,72	-0,25	-0,40	99,76	0,18	-0,52	100,08	0,15	0,05	98,88	0,10	-0,26	98,81	0,17	-0,53	98,47	0,07	-0,06
3	99,82	-0,17	-0,58	99,87	0,30	-0,67	100,03	0,28	0,08	98,93	0,08	-0,15	98,94	0,20	-0,17	98,44	-0,00	-0,04
4	99,66	-0,12	-0,27	99,77	0,22	-0,50	100,17	0,06	0,17	98,93	0,01	-0,25	98,94	0,13	-0,12	98,50	0,04	-0,12
5	99,87	-0,16	-0,13	99,80	0,30	-0,66	100,22	0,08	0,26	99,01	0,04	-0,20	98,89	0,08	-0,23	98,53	-0,03	0,19
\bar{Y}_X	498,77	-0,88	-1,39	499,09	1,02	-2,87	500,54	0,61	0,64	494,76	0,32	-0,98	494,35	0,77	-1,28	492,34	0,28	-0,07
X	99,75	-0,18	-0,28	99,82	0,20	-0,57	100,11	0,12	0,13	98,95	0,06	-0,20	98,87	0,15	-0,26	98,47	0,06	-0,01

Keterangan :

L* : menunjukkan *lightness* yang berskala 0-100, dimana 0 menunjukkan warna yang paling gelap dan 100 menunjukkan warna yang paling terang

a* : *chromatisitas* menunjukkan kearah warna merah (+a*) dan hijau (-a*)

b* : *chromatisitas* menunjukkan kearah warna kuning (+b*) dan biru (-b*).

Lampiran II. Perhitungan Nilai *Chromatisitas* Resin Akrilik Polimerisasi Panas (*Heat Cured*) Yang Direndam Dalam Multi Konsentrasi Ekstrak Rosella (*Hisbiscus Sabdariffa L.*)

Perhitungan nilai *chromatisitas* hasil uji warna lempeng resin akrilik dapat dilakukan dengan menggunakan rumus sebagai berikut :

$$\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

Berikut hasil perhitungan nilai *chromatisitas* dengan menggunakan rumus diatas.

Konsentrasi 30%

1. $\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$
 $= [(99,70 - 99,89)^2 + (-0,18 - 0,02)^2 + (-0,21 - (-0,52))^2]^{1/2}$
 $= [0,0361 + 0,04 + 0,0961]^{1/2}$
 $= 0,414969878$
 $= 0,4145$
2. $\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$
 $= [(99,72 - 99,76)^2 + (-0,25 - 0,18)^2 + (-0,40 - (-0,52))^2]^{1/2}$
 $= [0,0016 + 0,1849 + 0,0144]^{1/2}$
 $= [0,2009]^{1/2}$
 $= 0,448218696$
 $= 0,4482$
3. $\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$
 $= [(99,82 - 99,87)^2 + (-0,17 - 0,30)^2 + (-0,38 - (-0,67))^2]^{1/2}$
 $= [0,0025 + 0,2209 + 0,0841]^{1/2}$
 $= [0,3075]^{1/2}$
 $= 0,554526825$
 $= 0,5545$
4. $\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$
 $= [(99,66 - 99,77)^2 + (-0,12 - 0,22)^2 + (-0,27 - (-0,50))^2]^{1/2}$
 $= [0,0121 + 0,01 + 0,5929]^{1/2}$
 $= 0,784219357$
 $= 0,7842$
5. $\Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$
 $= [(99,87 - 99,80)^2 + (-0,16 - 0,30)^2 + (-0,13 - (-0,66))^2]^{1/2}$
 $= [0,0049 + 0,2116 + 0,2809]^{1/2}$
 $= 0,705265907$

$$= 0,811541742$$

$$= 0,8115$$

$$2. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,72 - 98,88)^2 + (-0,25 - 0,10)^2 + (-0,40 - (-0,26))^2]^{1/2}$$

$$= [0,7056 + 0,1225 + 0,0196]^{1/2}$$

$$= [0,8477]^{1/2}$$

$$= 0,92070625$$

$$= 0,9207$$

$$3. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,82 - 98,93)^2 + (-0,17 - 0,08)^2 + (-0,38 - (-0,15))^2]^{1/2}$$

$$= [0,7921 + 0,0625 + 0,0529]^{1/2}$$

$$= [0,9075]^{1/2}$$

$$= 0,952627944$$

$$= 0,9526$$

$$4. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,66 - 98,93)^2 + (-0,12 - 0,01)^2 + (-0,27 - 0,25)^2]^{1/2}$$

$$= [0,5329 + 0,0169 + 0,2704]^{1/2}$$

$$= [0,8202]^{1/2}$$

$$= 0,905648938$$

$$= 0,9056$$

$$5. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,87 - 99,01)^2 + (-0,16 - 0,04)^2 + (-0,13 - (-0,20))^2]^{1/2}$$

$$= [0,7396 + 0,04 + 0,0049]^{1/2}$$

$$= [0,7845]^{1/2}$$

$$= 0,885420046$$

$$= 0,8854$$

Konsentrasi 60%

$$1. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,70 - 98,70)^2 + (-0,18 - 0,19)^2 + (-0,21 - (-0,23))^2]^{1/2}$$

$$= [1 + 0,1369 + 0,0004]^{1/2}$$

$$= [1,1373]^{1/2}$$

$$= 1,066442685$$

$$= 1,0664$$

$$2. \Delta E^*_{ab} = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2}$$

$$= [(99,72 - 98,81)^2 + (-0,25 - 0,17)^2 + (-0,40 - (-0,53))^2]^{1/2}$$

$$= [0,8281 + 0,1764 + 0,0169]^{1/2}$$

$$\begin{aligned}
 &= [1,0214]^{1/2} \\
 &= 1.010643359 \\
 &= 1,0106
 \end{aligned}$$

$$\begin{aligned}
 3. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,82-98,94)^2 + (-0,17-0,20)^2 + (-0,38-(-0,17))^2]^{1/2} \\
 &= [0,7744 + 0,1369 + 0,0441]^{1/2} \\
 &= [0,9554]^{1/2} \\
 &= 0,97744565 \\
 &= 0,9774
 \end{aligned}$$

$$\begin{aligned}
 4. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,66-98,94)^2 + (-0,12-0,13)^2 + (-0,27-(-0,12))^2]^{1/2} \\
 &= [0,5184 + 0,0625 + 0,0225]^{1/2} \\
 &= [0,6034]^{1/2} \\
 &= 0,776778259 \\
 &= 0,7768
 \end{aligned}$$

$$\begin{aligned}
 5. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,87-98,89)^2 + (-0,16-0,08)^2 + (-0,13-(-0,23))^2]^{1/2} \\
 &= [0,9604 + 0,0576 + 0,01]^{1/2} \\
 &= [1,028]^{1/2} \\
 &= 1,013903348 \\
 &= 1,0139
 \end{aligned}$$

Konsentrasi 100 %

$$\begin{aligned}
 1. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,70-98,40)^2 + (-0,18-0,20)^2 + (-0,21-(-0,44))^2]^{1/2} \\
 &= [1,69 + 0,1444 + 0,0529]^{1/2} \\
 &= [1,8873]^{1/2} \\
 &= 1,373790377 \\
 &= 1,374
 \end{aligned}$$

$$\begin{aligned}
 2. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,72-98,47)^2 + (-0,25-0,07)^2 + (-0,40-(-0,06))^2]^{1/2} \\
 &= [1,5625 + 0,1024 + 0,1156]^{1/2} \\
 &= [1,7805]^{1/2} \\
 &= 1,334353776 \\
 &= 1,334
 \end{aligned}$$

$$\begin{aligned}
 3. \Delta E^{*ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,82-98,44)^2 + (-0,17-0,00)^2 + (-0,38-(-0,04))^2]^{1/2} \\
 &= [1,9044 + 0,0289 + 0,1156]^{1/2}
 \end{aligned}$$

$$\begin{aligned}
 &= [2,0489]^{1/2} \\
 &= 1,431397918 \\
 &= 1,431
 \end{aligned}$$

$$\begin{aligned}
 4. \Delta E^*_{ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,66-98,50)^2 + (-0,12-0,04)^2 + (-0,27-(-0,12))^2]^{1/2} \\
 &= [1,3456 + 0,0256 + 0,0225]^{1/2} \\
 &= [1,3937]^{1/2} \\
 &= 1,180550719 \\
 &= 1,181
 \end{aligned}$$

$$\begin{aligned}
 5. \Delta E^*_{ab} &= [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]^{1/2} \\
 &= [(99,87-98,53)^2 + (-0,16-(-0,03))^2 + (-0,13-0,19))^2]^{1/2} \\
 &= [1,7956 + 0,0169 + 0,1024]^{1/2} \\
 &= [1,9149]^{1/2} \\
 &= 1,383799118 \\
 &= 1,384
 \end{aligned}$$

Lampiran III. Hasil Olah Data Nilai *Chromatisitas* Resin Akrilik *Heat Cured* Setelah Direndam Dengan Multi Konsentrasi Ekstrak Rosella Dengan Menggunakan SPSS

Case Processing Summary

	Perlakuan	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Hasil	30%	5	100,0%	0	,0%	5	100,0%
	40%	5	100,0%	0	,0%	5	100,0%
	50%	5	100,0%	0	,0%	5	100,0%
	60%	5	100,0%	0	,0%	5	100,0%
	100%	5	100,0%	0	,0%	5	100,0%

Descriptives

Perlakuan			Statistic	Std. Error
Hasil	30%	Mean	,581340	,0716940
		95% Confidence Interval for Mean		
		Lower Bound	,382286	
		Upper Bound	,780394	
		5% Trimmed Mean	,579339	
		Median	,554500	
		Variance	,026	
	Std. Deviation	,1603126		
	Minimum	,4145		
	Maximum	,7842		
	Range	,3697		
	Interquartile Range	,3134		
	Skewness	,327	,913	
	Kurtosis	-2,286	2,000	
40%	40%	Mean	,625520	,0443405
		95% Confidence Interval for Mean		
		Lower Bound	,502411	
		Upper Bound	,748629	
		5% Trimmed Mean	,629861	
		Median	,676900	
		Variance	,010	
	Std. Deviation	,0991485		
	Minimum	,4714		
	Maximum	,7015		
	Range	,2301		
	Interquartile Range	,1734		
	Skewness	-1,201	,913	
	Kurtosis	,213	2,000	

50%	Mean		,853480	,0455785
	95% Confidence Interval for Mean	Lower Bound	,726934	
		Upper Bound	,980026	
	5% Trimmed Mean		,856656	
	Median		,885400	
	Variance		,010	
	Std. Deviation		,1019166	
	Minimum		,6972	
	Maximum		,9526	
	Range		,2554	
	Interquartile Range		,1823	
	Skewness		-1,016	,913
	Kurtosis		,314	2,000
	60%	Mean		,969020
95% Confidence Interval for Mean		Lower Bound	,829858	
		Upper Bound	1,108182	
5% Trimmed Mean			,974289	
Median			1,010600	
Variance			,013	
Std. Deviation			,1120767	
Minimum			,7768	
Maximum			1,0664	
Range			,2896	
Interquartile Range			,1631	
Skewness			-1,781	,913
Kurtosis			3,584	2,000
100%		Mean		1,340800
	95% Confidence Interval for Mean	Lower Bound	1,221887	
		Upper Bound	1,459713	
	5% Trimmed Mean		1,344667	
	Median		1,374000	
	Variance		,009	
	Std. Deviation		,0957690	
	Minimum		1,1810	
	Maximum		1,4310	
	Range		,2500	
	Interquartile Range		,1500	
	Skewness		-1,532	,913
	Kurtosis		2,743	2,000

Tests of Normality

Perlakuan	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Hasil 30%	,197	5	,200(*)	,921	5	,539
40%	,298	5	,168	,834	5	,149
50%	,223	5	,200(*)	,926	5	,567
60%	,330	5	,080	,806	5	,091
100%	,272	5	,200(*)	,866	5	,250

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Test of Homogeneity of Variance

	Levene Statistic	df1	df2	Sig.
Hasil Based on Mean	,905	4	20	,480
Based on Median	,512	4	20	,728
Based on Median and with adjusted df	,512	4	19,149	,728
Based on trimmed mean	,873	4	20	,498

Test of Homogeneity of Variances

Hasil

Levene Statistic	df1	df2	Sig.
,905	4	20	,480

ANOVA

Hasil

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,874	4	,468	34,621	,000
Within Groups	,271	20	,014		
Total	2,144	24			

**Post-hoc test
Multiple Comparisons**

Dependent Variable: Hasil
Tukey HSD

(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
30%	40%	-,0441800	,0735665	,973	-,264319	,175959
	50%	-,2721400(*)	,0735665	,011	-,492279	-,052001
	60%	-,3876800(*)	,0735665	,000	-,607819	-,167541
	100%	-,7594600(*)	,0735665	,000	-,979599	-,539321
40%	30%	,0441800	,0735665	,973	-,175959	,264319
	50%	-,2279600(*)	,0735665	,040	-,448099	-,007821
	60%	-,3435000(*)	,0735665	,001	-,563639	-,123361
	100%	-,7152800(*)	,0735665	,000	-,935419	-,495141
50%	30%	,2721400(*)	,0735665	,011	,052001	,492279
	40%	,2279600(*)	,0735665	,040	,007821	,448099
	60%	-,1155400	,0735665	,532	-,335679	,104599
	100%	-,4873200(*)	,0735665	,000	-,707459	-,267181
60%	30%	,3876800(*)	,0735665	,000	,167541	,607819
	40%	,3435000(*)	,0735665	,001	,123361	,563639
	50%	,1155400	,0735665	,532	-,104599	,335679
	100%	-,3717800(*)	,0735665	,001	-,591919	-,151641
100%	30%	,7594600(*)	,0735665	,000	,539321	,979599
	40%	,7152800(*)	,0735665	,000	,495141	,935419
	50%	,4873200(*)	,0735665	,000	,267181	,707459
	60%	,3717800(*)	,0735665	,001	,151641	,591919

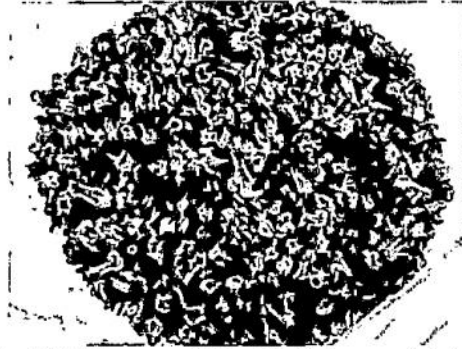
* The mean difference is significant at the .05 level.

**Homogeneous subsets
Hasil**

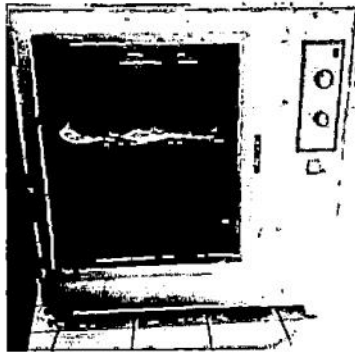
Tukey HSD

Perlakuan	N	Subset for alpha = .05			
		1	2	3	1
30%	5		,581340		
40%	5		,625520		
50%	5			,853480	
60%	5			,969020	
100%	5				1,340800
Sig.			,973	,532	1,000

Means for groups in homogeneous subsets are displayed.
a Uses Harmonic Mean Sample Size = 5,000.

Lampiran IV. Foto Alat dan Bahan Penelitian**Alat untuk mengekstrak rosella (*Hisbiscus sabdariffa L.*)**

Bunga rosella (*Hisbiscus sabdariffa L.*) yang telah dikeringkan



Oven yang digunakan untuk mengeringkan kelopak bunga rosella



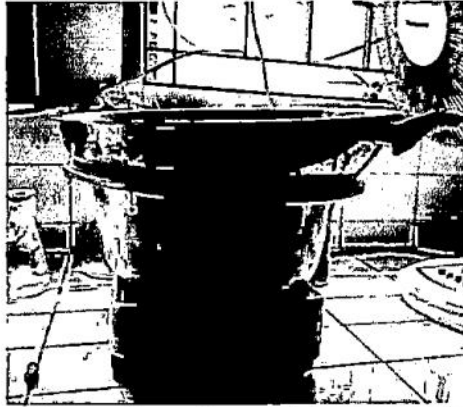
Alat untuk menggiling bunga rosella yang telah dikeringkan



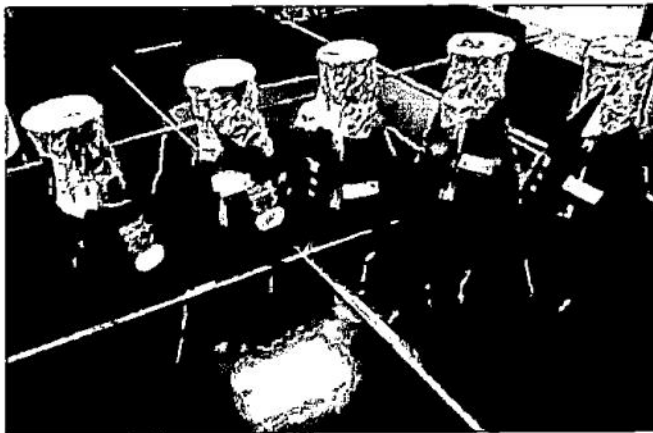
Saringan



Toples yang digunakan untuk merendam serbuk rosella dengan alkohol 95%



Kompur dan panci yang digunakan untuk menguapkan alkohol 95%

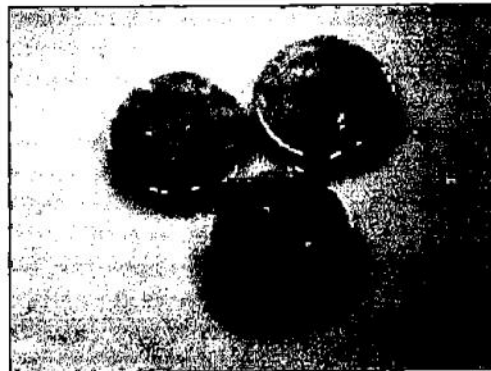


Ekstrak rosella yang telah di encerkan menjadi konsentrasi 30%, 40%, 50%, 60% dan 100%

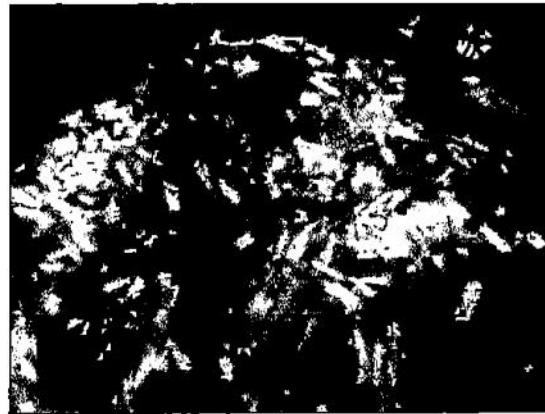
Alat dan Bahan untuk membuat Lempeng resin akrilik



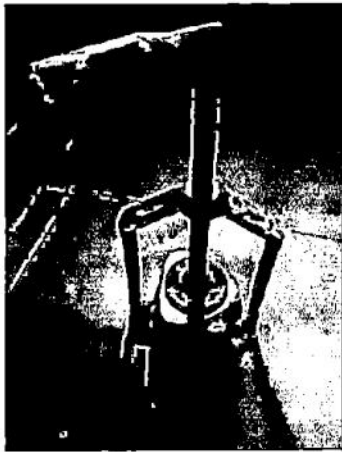
Resin akrilik *heat cured* QC-20



Master model



Serat kaca potongan kecil



Press



Timbangan elektronik

Lampiran V. Surat Keterangan Melakukan Pengujian Laboratorium



UNIVERSITAS ISLAM INDONESIA FAKULTAS TEKNOLOGI INDUSTRI

LABORATORIUM EVALUASI TEKSTIL JUR. TEKNIK KIMIA-TEKSTIL-FTI-UII
Jl Kalurang Km 14,5 Yogyakarta 55584 Telp. (0274)895287 ext. 130, 137, Fax (0274) 895007
Website: <http://labtektstiltiuii.wordpress.com> /CP : 081 328 77 6858

Nomor : 052/Kalab.ET/10/Lab.ET/X/2014
Lamp. : Rincian biaya dan Hasil pengujian
Hal : *Keterangan uji Lab.*

Kepada Yth :

Bapak Dekan /Sdri. Dewi Puspita Sari
Fakultas Kedokteran dan Ilmu Kesehatan-UMY
di- Yogyakarta

Assalamu'alaikum wr.wb.

Menunjuk surat dari Bapak tertanggal 26 Mei 2014 Nomor : 333/C.6-III/PN-FKIK UMY/V/2014 Tentang permohonan pengujian di Lab.Evaluasi Tekstil.

,Dengan ini Kepala Laboratorium Evaluasi Tekstil Jurusan Teknik Kimia Bidang Studi Teknik Tekstil Fakultas Teknologi Industri Universitas Islam Indonesia menerangkan :

Nama Mhs. : Dewi Puspita Sari
NIM : 20110340074
Fakultas : Kedokteran dan Ilmu Kesehatan (KG-UMY)

Bahwa dari nama tersebut diatas Betul-betul telah Mengulikan Gigi dengan Pengaruh perubahan warna Lempeng Resin Akrilik Polimerisasi Panas (Head Cured) yang ditambah Serat Kaca 1 % dalam Multi Konsentrasi Ekstrak Bunga Rasela Konsentrasi : 30%,40%,50%,60%,100%. untuk di analisa di Laboratorium Evaluasi Tekstil Jur. Teknik Kimia Bidang Studi Teknik Tekstil FTI-UII dengan jenis pengujian antara lain :

1. Pengujian Beda Warna ($L^* a^* b^*$) dengan memakai Spectrophotometer.

(Dengan data hasil pengujian lab. terlampir)

Demikian surat.keterangan dari kami, semoga dapat dipergunakan sebagaimana mestinya terima kasih.

Wassalamu'alaikum wr.wb.

Yogyakarta, 31 Oktober 2014
Kepala Lab. Evaluasi Tekstil

