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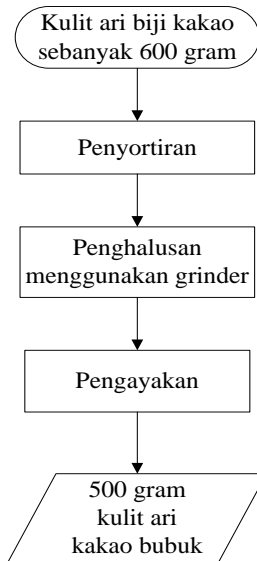
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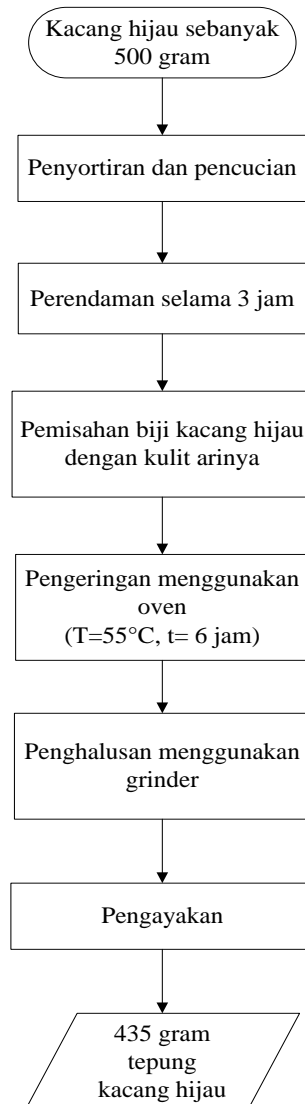
LAMPIRAN

Lampiran 1. Diagram Alir Prosedur Penelitian

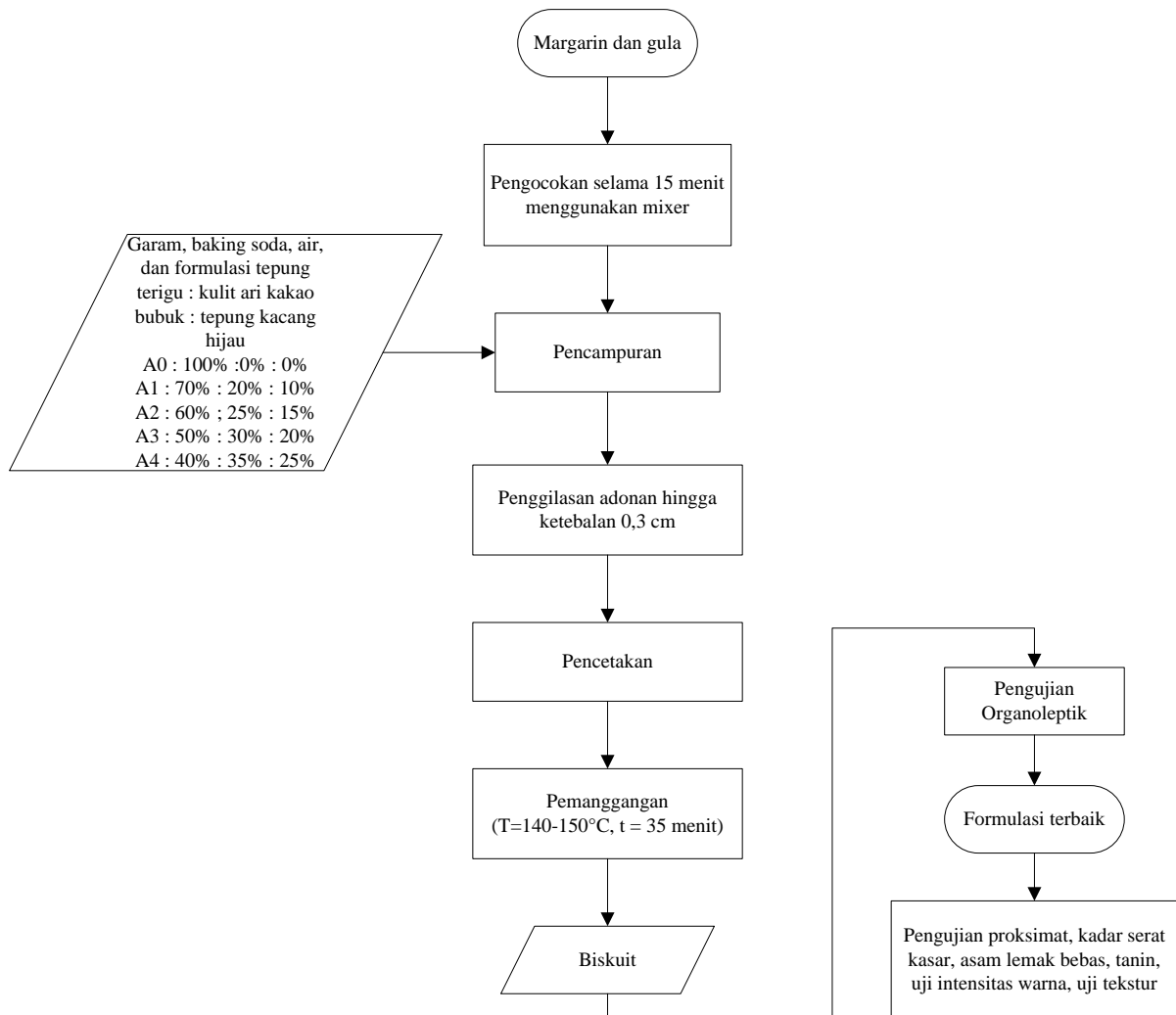
1. Pembuatan Kulit ari biji kakao Bubuk



2. Pembuatan Tepung Kacang Hijau



3. Pembuatan Biskuit



Lampiran 2. Dokumentasi Penelitian

Preparasi Sampel (Kulit ari biji kakao bubuk dan tepung kacang hijau)



Pembuatan Biskuit



Pengujian Organoleptik



Pengujian Kadar Air



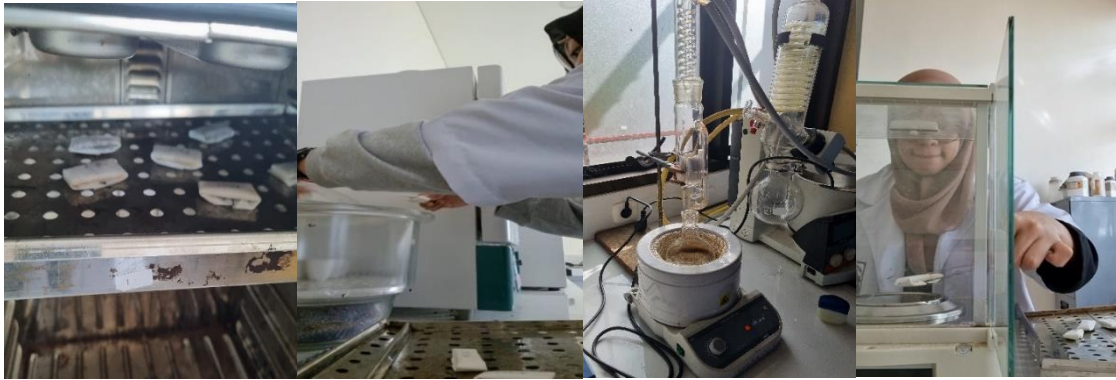
Pengujian Kadar Abu



Pengujian Kadar Protein



Pengujian Kadar Lemak



Pengujian Kadar Asam Lemak Bebas



Pengujian Kadar Tanin



Pengujian Kadar Serat Kasar



Uji Warna (Analisis Fisik)

Uji Tekstur (Analisis Fisik)



Lampiran 3. Hasil Analisis Data Pengujian Organoleptik Warna

Perlakuan	Ulangan	Rata-rata warna dari 25 panelis
A0	U1	3.64
	U2	3.36
	U3	3.28
A1	U1	3.36
	U2	3.48
	U3	3.32
A2	U1	3.4
	U2	3.48
	U3	3.44
A3	U1	3.44
	U2	3.56
	U3	3.6
A4	U1	3.64
	U2	3.52
	U3	3.56

Descriptives

Rata_rata_warna

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A0	3	3.4267	.18903	.10914	2.9571	3.8962	3.28	3.64
A1	3	3.3867	.08327	.04807	3.1798	3.5935	3.32	3.48
A2	3	3.4400	.04000	.02309	3.3406	3.5394	3.40	3.48
A3	3	3.5333	.08327	.04807	3.3265	3.7402	3.44	3.60
A4	3	3.5333	.06110	.03528	3.3816	3.6851	3.48	3.60
Total	15	3.4640	.10776	.02782	3.4043	3.5237	3.28	3.64

ANOVA

Rata_rata_warna

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.053	4	.013	1.199	.370
Within Groups	.110	10	.011		
Total	.163	14			

Lampiran 4. Hasil Analisis Data Pengujian Organoleptik Aroma

Perlakuan	Ulangan	Rata-rata dari aroma 25 panelis
A0	U1	2.8
	U2	3.08
	U3	3.24
A1	U1	3.12
	U2	3.56
	U3	3.2
A2	U1	3.48
	U2	3.52
	U3	3.24
A3	U1	3.12
	U2	3.52
	U3	3.48
A4	U1	3.48
	U2	3.44
	U3	3.4

Descriptives

rata_rata_aroma

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A0	3	3.0400	.22271	.12858	2.4868	3.5932	2.80	3.24
A1	3	3.2933	.23438	.13532	2.7111	3.8756	3.12	3.56
A2	3	3.4133	.15144	.08743	3.0371	3.7895	3.24	3.52
A3	3	3.4533	.16166	.09333	3.0518	3.8549	3.28	3.60
A4	3	3.3867	.02309	.01333	3.3293	3.4440	3.36	3.40
Total	15	3.3173	.21352	.05513	3.1991	3.4356	2.80	3.60

ANOVA

rata_rata_aroma

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.330	4	.083	2.676	.094
Within Groups	.308	10	.031		
Total	.638	14			

Lampiran 5. Hasil Analisis Data Pengujian Organoleptik Tekstur

Perlakuan	Ulangan	Rata-rata tekstur dari 25 panelis
A0	U1	3.52
	U2	3.4
	U3	3.48
A1	U1	3.68
	U2	4.12
	U3	3.68
A2	U1	3.52
	U2	3.6
	U3	3.64
A3	U1	3.28
	U2	3.52
	U3	3.44
A4	U1	3.28
	U2	3.28
	U3	3.68

Descriptives

Rata_rata_tekstur

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A0	3	3.4667	.06110	.03528	3.3149	3.6184	3.40	3.52
A1	3	3.8267	.25403	.14667	3.1956	4.4577	3.68	4.12
A2	3	3.5867	.06110	.03528	3.4349	3.7384	3.52	3.64
A3	3	3.5333	.12220	.07055	3.2298	3.8369	3.40	3.64
A4	3	3.4000	.20785	.12000	2.8837	3.9163	3.28	3.64
Total	15	3.5627	.20366	.05259	3.4499	3.6755	3.28	4.12

ANOVA

Rata_rata_tekstur

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.320	4	.080	3.078	.068
Within Groups	.260	10	.026		
Total	.581	14			

Lampiran 6. Hasil Analisis Data Pengujian Organoleptik Rasa

Perlakuan	Ulangan	Rata-rata rasa dari 25 panelis
A0	U1	2.72
	U2	2.28
	U3	2.72
A1	U1	3.2
	U2	3.84
	U3	3.44
A2	U1	3.16
	U2	3.32
	U3	2.76
A3	U1	2.88
	U2	3.44
	U3	3.2
A4	U1	3.12
	U2	3.24
	U3	3.32

Descriptives

Rata_rata_rasa

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A0	3	2.5733	.25403	.14667	1.9423	3.2044	2.28	2.72
A1	3	3.4933	.32332	.18667	2.6902	4.2965	3.20	3.84
A2	3	3.0800	.28844	.16653	2.3635	3.7965	2.76	3.32
A3	3	3.1733	.28095	.16221	2.4754	3.8713	2.88	3.44
A4	3	3.0000	.04000	.02309	2.9006	3.0994	2.96	3.04
Total	15	3.0640	.37700	.09734	2.8552	3.2728	2.28	3.84

ANOVA

Rata_rata_rasa

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.324	4	.331	4.974	.018
Within Groups	.666	10	.067		
Total	1.990	14			

Rata_rata_rasa

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A0	3	2.5733	
A4	3	3.0000	3.0000
A2	3		3.0800
A3	3		3.1733
A1	3		3.4933
Sig.		.070	.054

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 7. Hasil Analisis Data Pengujian Kadar Air

Perlakuan	Ulangan	Kadar Air (%)
A0	U1	6.569
	U2	6.697
	U3	6.535
A1	U1	6.480
	U2	6.303
	U3	6.844

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_air A0	3	6.60041	.085402	.049307
A1	3	6.54210	.275777	.159220

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
Kadar_air	Equal variances assumed	3.392	.139	.350	4	.744	.058309	.166680	-.404468	.521085
	Equal variances not assumed			.350	2.380	.755	.058309	.166680	-.559545	.676162

Lampiran 8. Hasil Analisis Data Pengujian Kadar Abu

Perlakuan	Ulangan	Kadar Abu (%)
A0	U1	2.464
	U2	2.858
	U3	2.379
A1	U1	3.521
	U2	2.714
	U3	3.169

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_abu A0	3	2.56713	.255124	.147296
A1	3	3.13492	.404545	.233564

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
Kadar_abu	.415	.555	-2.056	4	.109	-.567785	.276131	-1.334448	.198877
			-2.056	3.374	.122	-.567785	.276131	-1.393990	.258419

Lampiran 9. Hasil Analisis Data Pengujian Kadar Protein

Perlakuan	Ulangan	Kadar Protein (%)
A0	U1	6.346
	U2	5.218
	U3	4.552
A1	U1	11.327
	U2	8.719
	U3	10.768

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_protein A0	3	5.37205	.906915	.523607
A1	3	10.27153	1.373019	.792713

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	
Kadar_protein	.950	.385	-5.157	4	.007	-4.899479	.950031	-7.537188	-2.261771	
			-5.157	3.466	.010	-4.899479	.950031	-7.705416	-2.093542	

Lampiran 10. Hasil Analisis Data Pengujian Kadar Lemak

Perlakuan	Ulangan	Kadar Lemak (%)
A0	U1	20.720
	U2	21.646
	U3	21.987
A1	U1	24.828
	U2	24.959
	U3	26.705

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_lemak A0	3	21.4507	.65552	.37847
A1	3	25.4975	1.04800	.60507

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	
Kadar_lemak	1.521	.285	-5.670	4	.005	-4.04683	.71368	-6.02833	-2.06533	
			-5.670	3.357	.008	-4.04683	.71368	-6.18730	-1.90636	

Lampiran 11. Hasil Analisis Data Pengujian Kadar Karbohidrat

Perlakuan	Ulangan	Kadar Karbohidrat (%)
A0	U1	63.900
	U2	63.582
	U3	64.547
A1	U1	53.843
	U2	57.305
	U3	52.514

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_karbohidrat A0	3	64.00973	.491520	.283779
A1	3	54.55394	2.473275	1.427946

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
Kadar_karbohidrat	Equal variances assumed	5.825	.073	6.495	4	.003	9.455785	1.455871	5.413639	13.497932
	Equal variances not assumed			6.495	2.158	.019	9.455785	1.455871	3.610663	15.300908

Lampiran 12. Hasil Analisis Data Pengujian Kadar Asam Lemak Bebas

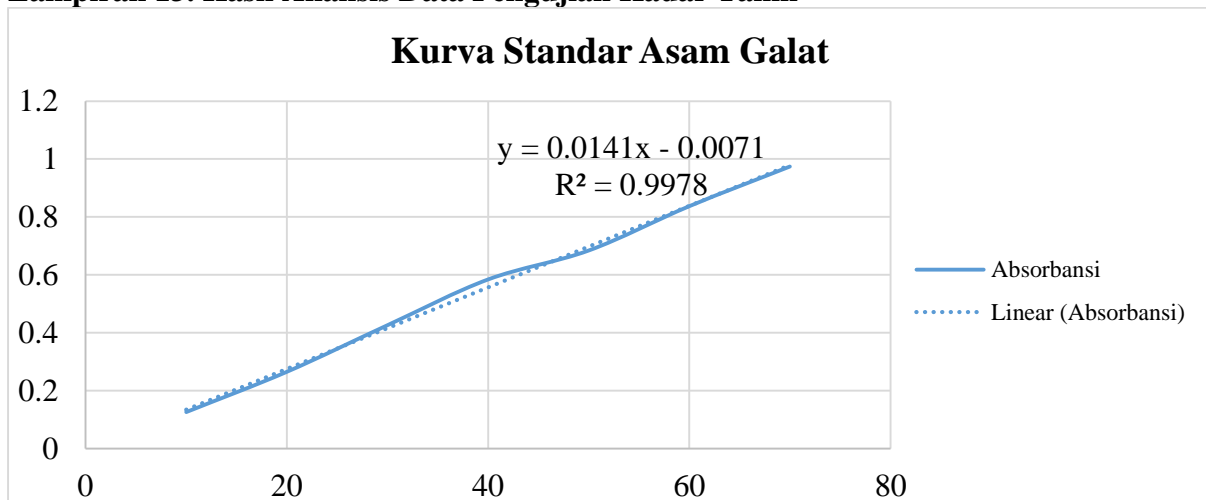
Perlakuan	Ulangan	Kadar Asam Lemak Bebas (%)
A0	U1	0.395
	U2	0.310
	U3	0.592
A1	U1	0.282
	U2	0.536
	U3	0.423

Group Statistics

	Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_ALB	A0	3	.43240	.144711	.083549
	A1	3	.41360	.127161	.073416

		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
Kadar_ ALB	Equal variances assumed	.124	.742	.169	4	.874	.018800	.111222	-.290003	.327603
	Equal variances not assumed			.169	3.935	.874	.018800	.111222	-.292026	.329626

Lampiran 13. Hasil Analisis Data Pengujian Kadar Tanin



Perlakuan	Ulangan	Kadar Tanin (mgGAE/g)
A0	U1	0.0011
	U2	0.0011
	U3	0.0012
A1	U1	0.0032
	U2	0.0032
	U3	0.0033

		Group Statistics			
Perlakuan		N	Mean	Std. Deviation	Std. Error Mean
Kadar_tanin	A0	3	.001174	.0000489	.0000283
	A1	3	.003232	.0000463	.0000267

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	
Kadar_tanin	.099	.769	Equal variances assumed	-52.911	4	.000	-.0020576	.0000389	-.0021656	-.0019496
			Equal variances not assumed	-52.911	3.988	.000	-.0020576	.0000389	-.0021657	-.0019495

Lampiran 14. Hasil Analisis Data Pengujian Serat Kasar

Perlakuan	Ulangan	Kadar Serat (%)
A0	U1	17.214
	U2	19.000
	U3	19.190
A1	U1	15.797
	U2	25.190
	U3	25.950

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
Kadar_serat A0	3	18.46807	1.090167	.629408
A1	3	22.31227	5.655537	3.265226

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	
Kadar_serat	9.658	.036	Equal variances assumed	-1.156	4	.312	-3.844199	3.325335	-13.076809	5.388412
			Equal variances not assumed	-1.156	2.148	.360	-3.844199	3.325335	-17.245264	9.556867

Lampiran 15. Hasil Analisis Data nilai L*

Perlakuan	Ulangan	Nilai L*
A0	U1	71.93
	U2	72.73
	U3	71.05
A1	U1	44.41
	U2	44.78
	U3	43.81

Group Statistics

perlakuan	N	Mean	Std. Deviation	Std. Error Mean
nilai_L A0	3	71.9033	.84032	.48516
A1	3	44.3333	.48952	.28263

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
nilai_L	.523	.510	49.103	4	.000	27.57000	.56148	26.01109	29.12891
			49.103	3.217	.000	27.57000	.56148	25.84949	29.29051

Lampiran 16. Hasil Analisis Data nilai a*

Perlakuan	Ulangan	Nilai a*
A0	U1	3.36
	U2	3.45
	U3	4.24
A1	U1	3.49
	U2	4.01
	U3	3.21

Group Statistics

perlakuan	N	Mean	Std. Deviation	Std. Error Mean
nilai_a A0	3	3.6833	.48418	.27954
A1	3	3.5700	.40596	.23438

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
nilai_a	.285	.621	.311	4	.772	.11333	.36480	-89951	1.12618
			.311	3.882	.772	.11333	.36480	-91178	1.13844

Lampiran 17. Hasil Analisis Data nilai b*

Perlakuan	Ulangan	Nilai b*
A0	U1	13.77
	U2	13.16
	U3	14.17
A1	U1	-2.09
	U2	-1.7
	U3	-2.67

Group Statistics

perlakuan	N	Mean	Std. Deviation	Std. Error Mean
nilai_b A0	3	13.7000	.50863	.29366
A1	3	-2.1533	.48809	.28180

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
nilai_b	.006	.943	38.952	4	.000	15.85333	.40699	14.72334	16.98333
			38.952	3.993	.000	15.85333	.40699	14.72258	16.98409

Lampiran 18. Hasil Analisis Data Nilai Tekstur Kekerasan

Perlakuan	Ulangan	Nilai Tekstur (N)
A0	U1	34.92
	U2	39.13
	U3	28.77
A1	U1	34.45
	U2	32.45
	U3	26.29

Group Statistics

Perlakuan	N	Mean	Std. Deviation	Std. Error Mean
rata_rata_uji A0	3	34.2733	5.21019	3.00810
_tekstur A1	3	31.0633	4.25306	2.45551

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
rata_rata_uji _tekstur	Equal variances assumed	.072	.802	.827	4	.455	3.21000	3.88306	-7.57112	13.99112
	Equal variances not assumed			.827	3.846	.457	3.21000	3.88306	-7.74375	14.16375