7. LAMPIRAN

Lampiran 1. Analisa SPSS

Normalitas (D Intrinsik)

Data dikatakan normal apabila D Observasi < D 0,05

Variabel	D Intrinsik	
	D Observasi	D 0,05
Vitamin C	0,0410	0,0568
Aktivitas antioksidan	0,0302	0,0568
Tekstur	0,0320	0,0568
Kadar air	0,0372	0,0568
L bunga	0,0126	0,0603
b bunga	0,0308	0,0568
L batang	0,0663	0,0682
b batang	0,0205	0,0568
△E bunga	0,0578	0,0603
△E batang	0,0685	0,0763

Uji T

Uji T ini digunakan untuk mengetahui ada atau tidaknya beda nyata antara waktu pengukusan 0 menit/segar dan 3 menit pada pengujian vitamin C dan warna (L* bunga, L* batang, ΔE bunga, dan ΔE batang) karena nilainya yang jauh berbeda dan apabila pengujiannya dijadikan satu dengan menggunakan *two way anova*, maka menjadi tidak adil untuk sampel segar.

Group Statistics

	waktu	N	Mean	Std. Deviation	Std. Error Mean
vit_c	segar	27	6.11008	.831722	.160065
	3'	27	52.41985	28.373219	5.460428
L_bunga	segar	27	48.48393	1.179103	.226919
	3'	27	45.78485	1.541710	.296702
L_btg	segar	27	54.00281	1.809948	.348325
	3'	27	52.54785	1.879217	.361656
deltaE_bunga	segar	27	.00000	.000000	.000000
	3'	27	4.80130	1.443284	.277760
deltaE_btg	segar	27	.00000	.000000	.000000
	3'	27	3.52085	1.692635	.325748

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
vit_c	Equal variances assumed	158.734	.000	-8.477	52	.000	-46.309773	5.462774	-57.2716	-35.3479
	Equal variances not assumed			-8.477	26.045	.000	-46.309773	5.462774	-57.5377	-35.0818
L_bunga	Equal variances assumed	1.068	.306	7.226	52	.000	2.699074	.373529	1.949532	3.448616
	Equal variances not assumed			7.226	48.662	.000	2.699074	.373529	1.948307	3.449841
L_btg	Equal variances assumed	.084	.773	2.898	52	.005	1.454963	.502120	.447385	2.462541
	Equal variances not assumed			2.898	51.927	.005	1.454963	.502120	.447351	2.462575
deltaE_bunga	Equal variances assumed	39.586	.000	-17.286	52	.000	-4.801296	.277760	-5.358663	-4.243930
	Equal variances not assumed			-17.286	26.000	.000	-4.801296	.277760	-5.372240	-4.230352
deltaE_btg	Equal variances assumed	70.936	.000	-10.809	52	.000	-3.520852	.325748	-4.174512	-2.867191
	Equal variances not assumed			-10.809	26.000	.000	-3.520852	.325748	-4.190436	-2.851268

Two Way ANOVA Completely Randomized

Vitamin C

Descriptive Statistics

Dependent Variable: vit_c

suhu	waktu	Mean	Std. Deviation	N
80C	3'	38,35444	,638129	9
	6'	76,65944	,934230	9
	9'	75,12344	,935249	9
	12'	74,09400	,674582	9
	15'	71,49000	1,301760	9
	30'	57,49322	,809931	9
	45'	48,12744	1,110075	9
	60'	43,47833	1,093433	9
	Total	60,60254	14,805713	72
85C	3'	27,62167	1,336611	9
	6'	86,65778	,714642	9
	9'	80,34578	1,345024	9
	12'	77,56133	,961097	9
	15'	74,67800	,536548	9
	30'	58,34311	1,270793	9
	45'	53,15767	,852402	9
	60'	49,20678	,633216	9
	Total	63,44651	18,755220	72
95C	3'	91,28344	,790366	9
	6'	82,66156	,986429	9
	9'	71,82322	1,092235	9
	12'	68,24389	1,221152	9
	15'	66,17511	,897447	9
	30'	62,13978	1,157550	9
	45'	55,46644	,863678	9
	60'	47,37289	,921721	9
	Total	68,14579	13,316632	72
Total	3'	52,41985	28,373219	27
	6'	81,99293	4,273072	27
	9'	75,76415	3,738617	27
	12'	73,29974	4,029424	27
	15'	70,78104	3,692167	27
	30'	59,32537	2,312749	27
	45'	52,25052	3,252939	27
	60'	46,68600	2,584022	27
	Total	64,06495	16,026001	216

Levene's Test of Equality of Error Variances[a]

Dependent Variable: vit_c

F	df1	df2	Sig.
1,178	23	192	,269

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: vit_c

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	55031,265[a]	23	2392,664	2446,557	,000
Intercept	886532,623	1	886532,623	906501,4	,000
suhu	2089,728	2	1044,864	1068,399	,000
waktu	32085,487	7	4583,641	4686,885	,000
suhu * waktu	20856,050	14	1489,718	1523,273	,000
Error	187,771	192	,978		
Total	941751,659	216			
Corrected Total	55219,036	215			

a. R Squared = ,997 (Adjusted R Squared = ,996)

vit_c

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5	6	7
60'	27	46,68600						
45'	27		52,25052					
3'	27		52,41985					
30'	27			59,32537				
15'	27				70,78104			
12'	27					73,29974		
9'	27						75,76415	
6'	27							81,99293
Sig.		1,000	,530	1,000	1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,978.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

vit_c

Duncan[a,b]

suhu	N	Subset 1	2	3
80C	72	60,60254		
85C	72		63,44651	
95C	72			68,14579
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,978.

a. Uses Harmonic Mean Sample Size = 72,000.

b. Alpha = ,05.

Aktivitas Antioksidan

Descriptive Statistics

Dependent Variable: antioksidan

suhu	waktu	Mean	Std. Deviation	N
80C	segar	34,79800	,735018	9
	3'	32,96311	,619792	9
	6'	35,66089	,153666	9
	9'	37,71589	,930230	9
	12'	35,77933	,890842	9
	15'	32,51856	,976939	9
	30'	28,72456	1,026287	9
	45'	26,12678	,884274	9
	60'	25,24889	,704682	9
	Total	32,17067	4,310499	81
85C	segar	32,48889	1,308071	9
	3'	30,59622	,232355	9
	6'	37,40533	,751761	9
	9'	39,78889	,880384	9
	12'	36,60744	,976534	9
	15'	31,54411	1,124149	9
	30'	30,65356	,788608	9
	45'	28,77211	,994080	9
	60'	23,47556	1,199354	9
	Total	32,37023	4,798079	81
95C	segar	33,24944	,796180	9
	3'	37,89500	1,159064	9
	6'	41,74644	,616651	9
	9'	40,68100	,714105	9
	12'	32,98111	,930935	9
	15'	29,97533	,910936	9
	30'	25,15522	,853777	9
	45'	22,86133	,674493	9
	60'	19,26433	,841682	9
	Total	31,53436	7,560341	81
Total	segar	33,51211	1,358832	27
	3'	33,81811	3,185581	27
	6'	38,27089	2,663999	27
	9'	39,39526	1,504583	27
	12'	35,12263	1,817746	27
	15'	31,34600	1,441409	27
	30'	28,17778	2,475351	27
	45'	25,92007	2,598781	27
	60'	22,66293	2,712008	27
	Total	32,02509	5,725010	243

Levene's Test of Equality of Error Variances[a]

Dependent Variable: antioksidan

F	df1	df2	Sig.
1,699	26	216	,022

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: antioksidan

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7765,965[a]	26	298,691	389,211	,000
Intercept	249222,297	1	249222,297	324750,2	,000
suhu	30,872	2	15,436	20,114	,000
waktu	6710,435	8	838,804	1093,008	,000
suhu * waktu	1024,658	16	64,041	83,449	,000
Error	165,764	216	,767		
Total	257154,026	243			
Corrected Total	7931,729	242			

a. R Squared = ,979 (Adjusted R Squared = ,977)

antioksidan

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5	6	7	8
60'	27	22,66293							
45'	27		25,92007						
30'	27			28,17778					
15'	27				31,34600				
segar	27					33,51211			
3'	27					33,81811			
12'	27						35,12263		
6'	27							38,27089	
9'	27								39,39526
Sig.		1,000	1,000	1,000	1,000	,201	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,767.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

antioksidan

Duncan[a,b]

suhu	N	Subset 1	2
95C	81	31,53436	
80C	81		32,17067
85C	81		32,37023
Sig.		1,000	,149

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,767.

a. Uses Harmonic Mean Sample Size = 81,000.

b. Alpha = ,05.

Tekstur

Descriptive Statistics

Dependent Variable: tekstur

suhu	waktu	Mean	Std. Deviation	N
80C	segar	9405,061	499,929272	9
	3'	8440,431	297,703291	9
	6'	6597,025	573,032324	9
	9'	6206,603	587,902599	9
	12'	5247,094	488,713391	9
	15'	4716,959	426,660265	9
	30'	3780,587	375,949742	9
	45'	1704,422	199,333038	9
	60'	1588,247	142,187868	9
	Total	5298,492	2598,676695	81
85C	segar	8346,767	683,807866	9
	3'	8057,727	975,532370	9
	6'	7044,332	513,036664	9
	9'	6947,476	206,291983	9
	12'	5606,462	198,772439	9
	15'	4659,482	538,003426	9
	30'	3195,285	408,638321	9
	45'	2961,833	504,332753	9
	60'	1508,107	389,669966	9
	Total	5369,719	2364,956096	81
95C	segar	8376,191	590,731055	9
	3'	6199,566	432,839900	9
	6'	5160,557	460,815449	9
	9'	3546,214	839,392782	9
	12'	2835,277	547,290159	9
	15'	1870,521	278,328430	9
	30'	1057,003	312,212275	9
	45'	666,94633	31,534933	9
	60'	555,91133	74,822482	9
	Total	3363,132	2622,521989	81
Total	segar	8709,340	761,328802	27
	3'	7565,908	1171,508577	27
	6'	6267,304	958,118755	27
	9'	5566,765	1597,203673	27
	12'	4562,944	1322,867467	27
	15'	3748,987	1414,799455	27
	30'	2677,625	1244,134250	27
	45'	1777,734	1002,544132	27
	60'	1217,422	531,967180	27
	Total	4677,114	2687,499419	243

Levene's Test of Equality of Error Variances[a]

Dependent Variable: tekstur

F	df1	df2	Sig.
4,992	26	216	,000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: tekstur

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1698312573[a]	26	65319714,33	284,632	,000
Intercept	5315721807	1	5315721807	23163,362	,000
suhu	209981299	2	104990649,3	457,499	,000
waktu	1435655995	8	179456999,4	781,987	,000
suhu * waktu	52675278,8	16	3292204,925	14,346	,000
Error	49569484,7	216	229488,355		
Total	7063603864	243			
Corrected Total	1747882057	242			

a. R Squared = ,972 (Adjusted R Squared = ,968)

tekstur

Duncan[a,b]

		Subset								
waktu	N	1	2	3	4	5	6	7	8	9
60'	27	1217,422								
45'	27		1777,734							
30'	27			2677,625						
15'	27				3748,987					
12'	27					4562,944				
9'	27						5566,765			
6'	27							6267,304		
3'	27								7565,908	
segar	27									8709,340
Sig.		1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 229488,355.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

tekstur

Duncan[a,b]

		Subset	
suhu	N	1	2
95C	81	3363,132	
80C	81		5298,492
85C	81		5369,719
Sig.		1,000	,345

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 229488,355.

a. Uses Harmonic Mean Sample Size = 81,000.

b. Alpha = ,05.

Kadar Air

Descriptive Statistics

Dependent Variable: kdr_air

suhu	waktu	Mean	Std. Deviation	N
80C	segar	91,70222	,815380	9
	3'	91,40667	,622736	9
	6'	91,83556	,364250	9
	9'	91,26000	,652380	9
	12'	90,84556	,296947	9
	15'	90,95556	,330118	9
	30'	90,32667	,360416	9
	45'	90,39778	,408221	9
	60'	90,58667	,383927	9
	Total	91,03519	,705768	81
85C	segar	91,85256	,567621	9
	3'	91,56556	,432756	9
	6'	91,57333	,272167	9
	9'	91,43333	,279643	9
	12'	91,43556	,379049	9
	15'	91,34667	,270185	9
	30'	91,19111	,306449	9
	45'	91,35111	,376180	9
	60'	91,42222	,385804	9
	Total	91,46349	,396878	81
95C	segar	91,56222	,424199	9
	3'	91,19556	,576088	9
	6'	91,34333	,475500	9
	9'	91,26111	,409098	9
	12'	91,06222	,510827	9
	15'	90,98556	,560872	9
	30'	91,19556	,541089	9
	45'	91,24667	,584294	9
	60'	91,23778	,535859	9
	Total	91,23222	,514172	81
Total	segar	91,70567	,611283	27
	3'	91,38926	,550377	27
	6'	91,58407	,418544	27
	9'	91,31815	,461953	27
	12'	91,11444	,461839	27
	15'	91,09593	,430798	27
	30'	90,90444	,576444	27
	45'	90,99852	,623808	27
	60'	91,08222	,559377	27
	Total	91,24363	,578702	243

Levene's Test of Equality of Error Variances[a]

Dependent Variable: kdr_air

F	df1	df2	Sig.
2,217	26	216	,001

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: kdr_air

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	33,710[a]	26	1,297	5,916	,000
Intercept	2023072,370	1	2023072,370	9231777	,000
suhu	7,445	2	3,723	16,988	,000
waktu	16,087	8	2,011	9,176	,000
suhu * waktu	10,177	16	,636	2,903	,000
Error	47,335	216	,219		
Total	2023153,415	243			
Corrected Total	81,045	242			

a. R Squared = ,416 (Adjusted R Squared = ,346)

kdr_air

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5
30'	27	90,90444				
45'	27	90,99852				
60'	27	91,08222	91,08222			
15'	27	91,09593	91,09593			
12'	27	91,11444	91,11444			
9'	27		91,31815	91,31815		
3'	27			91,38926	91,38926	
6'	27				91,58407	91,58407
segar	27					91,70567
Sig.		,146	,092	,577	,128	,341

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,219.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

kdr_air

Duncan[a,b]

suhu	N	Subset 1	2	3
80C	81	91,03519		
95C	81		91,23222	
85C	81			91,46349
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,219.

a. Uses Harmonic Mean Sample Size = 81,000.

b. Alpha = ,05.

L* Bunga

Descriptive Statistics

Dependent Variable: L_bunga

suhu	waktu	Mean	Std. Deviation	N
80C	3'	46.85244	1.744327	9
	6'	45.95811	1.902674	9
	9'	45.29656	1.783332	9
	12'	45.34111	1.511261	9
	15'	44.93856	1.346565	9
	30'	44.12167	1.228579	9
	45'	43.92056	1.409741	9
	60'	44.10867	1.177573	9
	Total	45.06721	1.743654	72
85C	3'	45.01700	.979709	9
	6'	44.47044	1.103397	9
	9'	44.14733	.609677	9
	12'	43.65889	.371113	9
	15'	42.94600	.950061	9
	30'	42.90511	1.064248	9
	45'	41.99544	.980564	9
	60'	41.97856	.584404	9
	Total	43.38985	1.340938	72
95C	3'	45.48511	1.294497	9
	6'	45.24878	1.465116	9
	9'	44.57856	1.671298	9
	12'	44.59567	1.647446	9
	15'	44.04889	1.753289	9
	30'	42.63300	1.486744	9
	45'	41.90189	1.546430	9
	60'	41.15811	1.676451	9
	Total	43.70625	2.128119	72
Total	3'	45.78485	1.541710	27
	6'	45.22578	1.591323	27
	9'	44.67415	1.478413	27
	12'	44.53189	1.439485	27
	15'	43.97781	1.572033	27
	30'	43.21993	1.388553	27
	45'	42.60596	1.594365	27
	60'	42.41511	1.732699	27
	Total	44.05444	1.904049	216

Levene's Test of Equality of Error Variances[a]

Dependent Variable: L_bunga

F	df1	df2	Sig.
2.582	23	192	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: L_bunga

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	422.144[a]	23	18.354	9.862	.000
Intercept	419211.344	1	419211.344	225257.7	.000
suhu	114.381	2	57.190	30.730	.000
waktu	282.585	7	40.369	21.692	.000
suhu * waktu	25.178	14	1.798	.966	.489
Error	357.318	192	1.861		
Total	419990.805	216			
Corrected Total	779.461	215			

a. R Squared = .542 (Adjusted R Squared = .487)

L_bunga

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5
60'	27	42.41511				
45'	27	42.60596	42.60596			
30'	27		43.21993			
15'	27			43.97781		
12'	27			44.53189	44.53189	
9'	27			44.67415	44.67415	
6'	27				45.22578	45.22578
3'	27					45.78485
Sig.		.608	.100	.077	.078	.134

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1.861.

a. Uses Harmonic Mean Sample Size = 27.000.

b. Alpha = .05.

L_bunga

Duncan[a,b]

suhu	N	Subset 1	2
85C	72	43.38985	
95C	72	43.70625	
80C	72		45.06721
Sig.		.166	1.000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1.861.

a. Uses Harmonic Mean Sample Size = 72.000.

b. Alpha = .05.

b* Bunga

Descriptive Statistics

Dependent Variable: b_bunga

suhu	waktu	Mean	Std. Deviation	N
80C	segar	12,66267	,894270	9
	3'	11,55489	1,362240	9
	6'	11,89956	1,122107	9
	9'	11,90156	1,261325	9
	12'	12,01400	1,321054	9
	15'	12,51933	1,325459	9
	30'	12,57933	1,140633	9
	45'	12,68744	1,259992	9
	60'	13,37856	1,355513	9
	Total	12,35526	1,286300	81
85C	segar	11,29911	1,082930	9
	3'	11,38333	1,000987	9
	6'	11,68744	1,203241	9
	9'	11,66900	1,408085	9
	12'	11,82000	1,364240	9
	15'	12,27667	1,456139	9
	30'	12,44589	,868966	9
	45'	12,60111	1,116677	9
	60'	12,93367	1,095306	9
	Total	12,01291	1,254345	81
95C	segar	11,89044	,855723	9
	3'	11,60178	,854682	9
	6'	12,01711	,687986	9
	9'	12,25811	,787586	9
	12'	12,48722	,791563	9
	15'	12,37244	,698377	9
	30'	12,82511	,970943	9
	45'	13,03878	,538585	9
	60'	13,44378	,663494	9
	Total	12,43720	,917801	81
Total	segar	11,95074	1,075132	27
	3'	11,51333	1,055084	27
	6'	11,86804	,998930	27
	9'	11,94289	1,162495	27
	12'	12,10707	1,176428	27
	15'	12,38948	1,163354	27
	30'	12,61678	,973832	27
	45'	12,77578	,999313	27
	60'	13,25200	1,059860	27
	Total	12,26846	1,174507	243

Levene's Test of Equality of Error Variances[a]

Dependent Variable: b_bunga

F	df1	df2	Sig.
1,413	26	216	,096

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: b_bunga

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	78,905[a]	26	3,035	2,571	,000
Intercept	36575,153	1	36575,153	30990,355	,000
suhu	8,206	2	4,103	3,477	,033
waktu	62,754	8	7,844	6,647	,000
suhu * waktu	7,945	16	,497	,421	,976
Error	254,926	216	1,180		
Total	36908,984	243			
Corrected Total	333,831	242			

a. R Squared = ,236 (Adjusted R Squared = ,144)

b_bunga

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5
3'	27	11,51333				
6'	27	11,86804	11,86804			
9'	27	11,94289	11,94289			
segar	27	11,95074	11,95074			
12'	27	12,10707	12,10707	12,10707		
15'	27		12,38948	12,38948	12,38948	
30'	27			12,61678	12,61678	
45'	27				12,77578	12,77578
60'	27					13,25200
Sig.		,074	,119	,105	,221	,109

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,180.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

b_bunga

Duncan[a,b]

suhu	N	Subset 1	2
85C	81	12,01291	
80C	81		12,35526
95C	81		12,43720
Sig.		1,000	,632

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,180.

a. Uses Harmonic Mean Sample Size = 81,000.

b. Alpha = ,05.

L* batang

Descriptive Statistics

Dependent Variable: L_btg

suhu	waktu	Mean	Std. Deviation	N
80C	3'	51,45033	1,033008	9
	6'	51,39211	1,039499	9
	9'	51,11244	1,067799	9
	12'	51,31756	1,369438	9
	15'	50,95211	1,220245	9
	30'	50,67011	1,465691	9
	45'	50,24500	1,446898	9
	60'	49,71056	1,355091	9
	Total	50,85628	1,330463	72
85C	3'	54,77000	1,246495	9
	6'	54,51811	1,305374	9
	9'	54,24667	1,431697	9
	12'	54,07678	1,571204	9
	15'	53,72522	1,374189	9
	30'	53,12400	1,316232	9
	45'	52,57278	,896020	9
	60'	52,04144	,847708	9
	Total	53,63438	1,512938	72
95C	3'	51,42322	,723318	9
	6'	51,35256	,901682	9
	9'	50,98178	,672397	9
	12'	51,30600	,696291	9
	15'	51,09667	,774201	9
	30'	50,27433	,833440	9
	45'	49,71478	1,146994	9
	60'	49,20889	1,012947	9
	Total	50,66978	1,135583	72
Total	3'	52,54785	1,879217	27
	6'	52,42093	1,841438	27
	9'	52,11363	1,867087	27
	12'	52,23344	1,802806	27
	15'	51,92467	1,706044	27
	30'	51,35615	1,748616	27
	45'	50,84419	1,701800	27
	60'	50,32030	1,638148	27
	Total	51,72014	1,900734	216

Levene's Test of Equality of Error Variances[a]

Dependent Variable: L_btg

F	df1	df2	Sig.
1,414	23	192	,108

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: L_btg

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	524,289[a]	23	22,795	17,336	,000
Intercept	577794,221	1	577794,221	439420,9	,000
suhu	396,995	2	198,497	150,960	,000
waktu	121,384	7	17,341	13,188	,000
suhu * waktu	5,910	14	,422	,321	,991
Error	252,461	192	1,315		
Total	578570,971	216			
Corrected Total	776,750	215			

a. R Squared = ,675 (Adjusted R Squared = ,636)

L_btg

Duncan[a,b]

waktu	N	Subset 1	2	3	4
60'	27	50,32030			
45'	27	50,84419	50,84419		
30'	27		51,35615	51,35615	
15'	27			51,92467	51,92467
9'	27				52,11363
12'	27				52,23344
6'	27				52,42093
3'	27				52,54785
Sig.		,095	,103	,070	,076

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,315.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

L_btg

Duncan[a,b]

suhu	N	Subset 1	2
95C	72	50,66978	
80C	72	50,85628	
85C	72		53,63438
Sig.		,330	1,000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,315.

a. Uses Harmonic Mean Sample Size = 72,000.

b. Alpha = ,05.

b* Batang

Descriptive Statistics

Dependent Variable: b_btg

suhu	waktu	Mean	Std. Deviation	N
80C	segar	19,67000	1,222625	9
	3'	19,14511	,981696	9
	6'	19,32467	1,130731	9
	9'	19,20878	,958575	9
	12'	18,28844	1,293248	9
	15'	18,00122	1,347474	9
	30'	17,09211	1,829260	9
	45'	17,06200	1,373815	9
	60'	16,36633	1,667582	9
	Total	18,23985	1,697640	81
85C	segar	16,58944	,950330	9
	3'	15,74200	,750784	9
	6'	15,08044	1,360333	9
	9'	14,45711	1,550431	9
	12'	14,34967	1,205751	9
	15'	14,00667	1,063233	9
	30'	13,01489	1,141137	9
	45'	12,68700	1,772173	9
	60'	12,64656	1,902609	9
	Total	14,28598	1,824153	81
95C	segar	15,82978	1,443390	9
	3'	16,27622	1,601214	9
	6'	15,93544	1,818178	9
	9'	15,63900	1,571754	9
	12'	15,67722	1,592259	9
	15'	15,65878	1,451834	9
	30'	14,68378	1,258952	9
	45'	14,26322	,999329	9
	60'	13,50156	1,087523	9
	Total	15,27389	1,624114	81
Total	segar	17,36307	2,059623	27
	3'	17,05444	1,891495	27
	6'	16,78019	2,338412	27
	9'	16,43496	2,453415	27
	12'	16,10511	2,126549	27
	15'	15,88889	2,084289	27
	30'	14,93026	2,196972	27
	45'	14,67074	2,292024	27
	60'	14,17148	2,227381	27
	Total	15,93324	2,399849	243

Levene's Test of Equality of Error Variances[a]

Dependent Variable: b_btg

F	df1	df2	Sig.
1,445	26	216	,082

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: b_btg

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	982,868[a]	26	37,803	19,873	,000
Intercept	61689,947	1	61689,947	32430,741	,000
suhu	685,963	2	342,982	180,307	,000
waktu	270,155	8	33,769	17,753	,000
suhu * waktu	26,749	16	1,672	,879	,594
Error	410,876	216	1,902		
Total	63083,691	243			
Corrected Total	1393,744	242			

a. R Squared = ,705 (Adjusted R Squared = ,670)

b_btg

Duncan[a,b]

waktu	N	Subset 1	2	3	4	5
60'	27	14,17148				
45'	27	14,67074				
30'	27	14,93026				
15'	27		15,88889			
12'	27		16,10511	16,10511		
9'	27		16,43496	16,43496	16,43496	
6'	27			16,78019	16,78019	16,78019
3'	27				17,05444	17,05444
segar	27					17,36307
Sig.		,056	,172	,090	,121	,145

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,902.

a. Uses Harmonic Mean Sample Size = 27,000.

b. Alpha = ,05.

b_btg

Duncan[a,b]

suhu	N	Subset 1	2	3
85C	81	14,28598		
95C	81		15,27389	
80C	81			18,23985
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 1,902.

a. Uses Harmonic Mean Sample Size = 81,000.

b. Alpha = ,05.

△E Bunga

Descriptive Statistics

Dependent Variable: deltaE_bunga

suhu	waktu	Mean	Std. Deviation	N
80C	3'	6.35400	1.293873	9
	6'	5.68156	.414505	9
	9'	5.49411	.853047	9
	12'	5.19956	.237579	9
	15'	4.20389	.915600	9
	30'	5.15700	.939584	9
	45'	6.67089	.575235	9
	60'	7.00878	.532543	9
	Total	5.72122	1.143750	72
85C	3'	3.97211	.571595	9
	6'	3.95622	.837886	9
	9'	3.75656	.410403	9
	12'	3.98744	.676041	9
	15'	4.74756	.689631	9
	30'	5.34522	.774172	9
	45'	6.76200	.900523	9
	60'	7.66411	.649976	9
	Total	5.02390	1.536330	72
95C	3'	4.07778	.833361	9
	6'	4.19200	1.515946	9
	9'	4.70233	1.321357	9
	12'	5.01144	1.081177	9
	15'	5.45611	1.373091	9
	30'	7.79733	.943370	9
	45'	9.35589	.844163	9
	60'	10.59700	.876201	9
	Total	6.39874	2.599481	72
Total	3'	4.80130	1.443284	27
	6'	4.60993	1.257732	27
	9'	4.65100	1.156226	27
	12'	4.73281	.901257	27
	15'	4.80252	1.121321	27
	30'	6.09985	1.494036	27
	45'	7.59626	1.476390	27
	60'	8.42330	1.726605	27
	Total	5.71462	1.938929	216

Levene's Test of Equality of Error Variances[a]

Dependent Variable: deltaE_bunga

F	df1	df2	Sig.
3.378	23	192	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: deltaE_bunga

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	655.549[a]	23	28.502	35.830	.000
Intercept	7053.887	1	7053.887	8867.493	.000
suhu	68.051	2	34.025	42.774	.000
waktu	432.204	7	61.743	77.618	.000
suhu * waktu	155.294	14	11.092	13.944	.000
Error	152.732	192	.795		
Total	7862.168	216			
Corrected Total	808.281	215			

a. R Squared = .811 (Adjusted R Squared = .788)

deltaE_bunga

Duncan[a,b]

waktu	N	Subset 1	2	3	4
6'	27	4.60993			
9'	27	4.65100			
12'	27	4.73281			
3'	27	4.80130			
15'	27	4.80252			
30'	27		6.09985		
45'	27			7.59626	
60'	27				8.42330
Sig.		.490	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = .795.

a. Uses Harmonic Mean Sample Size = 27.000.

b. Alpha = .05.

deltaE_bunga

Duncan[a,b]

suhu	N	Subset 1	2	3
85C	72	5.02390		
80C	72		5.72122	
95C	72			6.39874
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = .795.

a. Uses Harmonic Mean Sample Size = 72.000.

b. Alpha = .05.

△E batang

Descriptive Statistics

Dependent Variable: deltaE_btg

suhu	waktu	Mean	Std. Deviation	N
80C	3'	4.65244	1.452996	9
	6'	4.20922	1.286832	9
	9'	3.63100	.290226	9
	12'	3.79622	1.172937	9
	15'	3.89278	.431971	9
	30'	5.54556	1.166222	9
	45'	6.75933	.872755	9
	60'	7.92256	1.051943	9
	Total	5.05114	1.776269	72
85C	3'	1.69500	.729920	9
	6'	2.15322	.798702	9
	9'	3.13644	.836420	9
	12'	3.53178	.780347	9
	15'	4.10956	.361617	9
	30'	6.17344	.890330	9
	45'	7.13556	.776479	9
	60'	8.12067	1.010736	9
	Total	4.50696	2.352217	72
95C	3'	4.21511	.966462	9
	6'	3.69489	1.307266	9
	9'	3.72122	.972039	9
	12'	3.27256	1.404219	9
	15'	2.50622	1.352107	9
	30'	3.77978	.566331	9
	45'	5.38278	.723377	9
	60'	6.83178	.635756	9
	Total	4.17554	1.607572	72
Total	3'	3.52085	1.692635	27
	6'	3.35244	1.422723	27
	9'	3.49622	.774934	27
	12'	3.53352	1.124662	27
	15'	3.50285	1.088137	27
	30'	5.16626	1.351829	27
	45'	6.42589	1.081829	27
	60'	7.62500	1.054837	27
	Total	4.57788	1.963006	216

Levene's Test of Equality of Error Variances[a]

Dependent Variable: deltaE_btg

F	df1	df2	Sig.
2.488	23	192	.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+suhu+waktu+suhu * waktu

Tests of Between-Subjects Effects

Dependent Variable: deltaE_btg

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	650.036[a]	23	28.262	30.410	.000
Intercept	4526.708	1	4526.708	4870.618	.000
suhu	28.143	2	14.072	15.141	.000
waktu	515.204	7	73.601	79.192	.000
suhu * waktu	106.689	14	7.621	8.200	.000
Error	178.443	192	.929		
Total	5355.188	216			
Corrected Total	828.480	215			

a. R Squared = .785 (Adjusted R Squared = .759)

deltaE_btg

Duncan[a,b]

waktu	N	Subset 1	2	3	4
6'	27	3.35244			
9'	27	3.49622			
15'	27	3.50285			
3'	27	3.52085			
12'	27	3.53352			
30'	27		5.16626		
45'	27			6.42589	
60'	27				7.62500
Sig.		.548	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = .929.

a. Uses Harmonic Mean Sample Size = 27.000.

b. Alpha = .05.

deltaE_btg

Duncan[a,b]

suhu	N	Subset 1	2	3
95C	72	4.17554		
85C	72		4.50696	
80C	72			5.05114
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = .929.

a. Uses Harmonic Mean Sample Size = 72.000.

b. Alpha = .05.