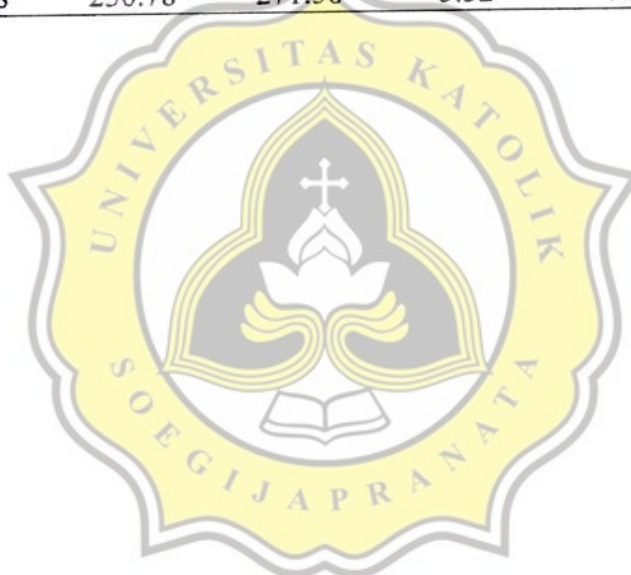


**Lampiran 1.** Kandungan Karoten dan Aktivitas Antioksidan dalam Penelitian Pendahuluan

Waktu perebusan (menit)	Kandungan karoten (mg $\beta$ -karoten / 100 g <i>dry basis</i> )			Aktivitas antioksidan (%)		
	Batch 1	Batch 2	Rerata	Batch 1	Batch 2	Rerata
0	122.11	94.42	108.27	15.36	14.14	14.75
6	163.85	127.46	145.66	17.31	15.24	16.28
12	178.31	160.55	169.43	17.85	15.86	16.86
18	208.90	162.89	185.90	19.72	21.35	20.54
24	225.31	190.82	208.07	18.87	23.24	21.06
30	258.55	196.20	227.38	17.01	20.28	18.65
45	308.75	216.06	262.41	13.83	11.48	12.66
60	315.57	225.41	270.49	10.66	9.51	10.09
75	304.81	217.64	261.23	10.37	9.14	9.76
90	309.12	223.04	266.08	9.85	8.59	9.22
105	314.04	232.82	273.43	7.75	8.08	7.92
120	312.38	230.78	271.58	5.52	7.72	6.62



**Lampiran 2.** Analisa Warna dalam Penelitian Pendahuluan

Waktu perebusan (menit)	L* (lightness)			a* (redness)			b* (yellowness)		
	Batch 1	Batch 2	Rerata	Batch 1	Batch 2	Rerata	Batch 1	Batch 2	Rerata
	0	48.20	47.63	47.92	21.98	24.56	23.27	20.65	19.55
6	46.40	47.45	46.93	18.18	25.83	22.01	21.67	22.55	22.11
12	45.81	45.49	45.65	14.78	22.72	18.75	21.5	21.76	21.63
18	45.81	45.34	45.58	18.01	19.92	18.97	22.29	21.99	22.14
24	46.60	47.31	46.96	18.62	22.48	20.55	22.35	23.08	22.72
30	45.74	46.62	46.18	16.25	21.18	18.72	21.8	22.37	22.09
45	46.38	47.70	47.04	18.13	18.74	18.44	22.29	23.37	22.83
60	45.71	47.86	46.79	18.46	20.56	19.51	21.56	23.66	22.61
75	44.22	47.53	45.88	17.57	19.89	18.73	20.89	23.36	22.13
90	44.39	46.60	45.50	16.23	19.40	17.82	20.71	22.67	21.69
105	43.61	46.00	44.81	18.52	18.35	18.44	20.18	22.32	21.25
120	42.93	45.47	44.20	14.13	17.73	15.93	19.74	21.75	20.75



**Lampiran 3.** Analisis Statistik Deskriptif Data Hasil Pengukuran Karoten dan Aktivitas Antioksidan

		Descriptives							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			Minimum	Maximum
					Lower Bound	Upper Bound			
KAROTEN									
0'	3	127.9233	11.70850	6.75990	98.8378	157.0089	117.39	140.53	
6'	3	175.8200	19.94471	11.51508	126.2746	225.3654	160.35	198.33	
12'	3	223.7200	26.96348	15.56737	156.7390	290.7010	198.26	251.97	
18'	3	255.6538	34.05274	19.66036	171.0616	340.2450	229.47	294.15	
24'	3	271.3633	27.38440	15.81039	208.3367	339.3900	248.67	301.78	
30'	3	296.8000	20.32889	11.73689	246.3002	347.2998	278.62	318.75	
40'	3	321.7000	15.98240	9.22744	281.9975	361.4025	308.89	339.61	
50'	3	324.0067	15.73126	9.08245	284.9281	363.0853	312.02	341.82	
60'	3	327.7633	15.12507	8.73246	290.1906	365.3361	318.57	345.22	
Total	27	258.3056	70.18905	13.50789	230.5397	286.0714	117.39	345.22	
ANTI-OX									
0'	3	15.8767	2.83313	1.63571	8.8388	22.9146	13.70	19.08	
6'	3	19.9067	5.49482	3.17244	6.2568	33.5566	15.52	26.07	
12'	3	24.6300	5.47543	3.16124	11.0283	38.2317	19.36	30.29	
18'	3	26.2733	4.89486	2.82605	14.1138	38.4328	21.72	31.45	
24'	3	27.5167	4.97635	2.87310	15.1547	39.8786	22.18	32.03	
30'	3	22.4133	4.37467	2.52572	11.5461	33.2806	19.70	27.46	
40'	3	18.8200	2.87397	1.65929	11.6807	25.9593	15.74	21.43	
50'	3	17.5500	3.19381	1.84395	9.6161	25.4839	14.45	20.83	
60'	3	13.0467	2.52773	1.45939	6.7674	19.3259	10.22	15.09	
Total	27	20.6704	5.87465	1.13058	18.3464	22.9943	10.22	32.03	



**Lampiran 4.** Analisis Variansi Satu Arah (*One-Way Anova*) Data Hasil Pengukuran Karoten dan Aktivitas Antioksidan

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
KAROTEN	Between Groups	119456.4	8	14932.045	31.135	.000
	Within Groups	8632.690	18	479.594		
	Total	128089.1	26			
ANTIOX	Between Groups	575.477	8	71.935	4.023	.007
	Within Groups	321.822	18	17.879		
	Total	897.299	26			

## KAROTEN

Duncan<sup>a</sup>

WAKTU	N	Subset for alpha = .05					
		1	2	3	4	5	6
0'	3	127.9233					
6'	3		175.8200				
12'	3			223.7200			
18'	3			255.6533			
24'	3				255.6533		
30'	3				271.3633		
40'	3					271.3633	
50'	3					296.8000	296.8000
60'	3						321.7000
							324.0067
							327.7633
Sig.		1.000	1.000	.091	.391	.172	.128

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

## ANTIOX

Duncan<sup>a</sup>

WAKTU	N	Subset for alpha = .05				
		1	2	3	4	5
60'	3	13.0467				
0'	3	15.8767	15.8767			
50'	3	17.5500	17.5500	17.5500		
40'	3	18.8200	18.8200	18.8200	18.8200	
6'	3	19.9067	19.9067	19.9067	19.9067	19.9067
30'	3		22.4133	22.4133	22.4133	22.4133
12'	3			24.6300	24.6300	24.6300
18'	3				26.2733	26.2733
24'	3					27.5167
Sig.		.089	.104	.080	.066	.061

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 5. Analisis Statistik Deskriptif Data Hasil Analisa Warna

## Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LIGHT								
0'	3	49.8700	1.09986	.63501	47.1378	52.6022	49.23	51.14
6'	3	46.6000	1.41206	.81525	43.0923	50.1077	45.75	48.23
12'	3	46.3067	.79607	.45961	44.3291	48.2842	45.42	46.96
18'	3	46.6067	1.05624	.60982	43.9828	49.2305	45.45	47.52
24'	3	45.8167	1.70986	.98719	41.5691	50.0642	43.92	47.24
30'	3	46.3333	1.16967	.67531	43.4277	49.2390	45.06	47.36
40'	3	47.4033	1.43431	.82810	43.8403	50.9663	46.10	48.94
50'	3	46.9933	2.38316	1.37592	41.0732	52.9134	45.21	49.70
60'	3	46.4633	1.44756	.83575	42.8674	50.0593	45.52	48.13
Total	27	46.9326	1.66427	.32028	46.2742	47.5910	43.92	51.14
RED								
0'	3	24.5867	2.15825	1.24606	19.2253	29.9481	22.50	26.81
6'	3	15.5567	2.24598	1.29672	9.9773	21.1360	13.35	17.84
12'	3	15.3967	2.51468	1.45185	9.1498	21.6435	12.50	17.02
18'	3	16.0500	2.17419	1.25527	10.6490	21.4510	14.75	18.56
24'	3	15.1100	1.89433	.92049	11.1495	19.0705	13.36	16.48
30'	3	15.6100	2.55992	1.47797	9.2508	21.9692	12.83	17.87
40'	3	17.1100	.34395	.19856	16.2556	17.9644	16.82	17.49
50'	3	16.9567	1.27610	.73676	13.7867	20.1267	15.58	18.10
60'	3	16.6000	.93600	.54040	14.2748	18.9252	15.69	17.56
Total	27	16.9974	3.23037	.62109	15.7195	18.2753	12.50	26.81
YELLOW								
0'	3	20.9700	.93723	.54111	18.6418	23.2982	20.37	22.05
6'	3	22.0867	1.28189	.74010	18.9023	25.2710	21.05	23.52
12'	3	22.7567	.45633	.26346	21.6231	23.8902	22.37	23.26
18'	3	22.8067	.67855	.38176	21.1210	24.4923	22.40	23.59
24'	3	22.1833	1.03848	.59956	19.6036	24.7631	21.36	23.35
30'	3	22.7967	.57951	.33458	21.3571	24.2363	22.18	23.33
40'	3	22.5067	.73078	.42191	20.6913	24.3220	22.06	23.35
50'	3	22.1600	.84149	.48583	20.0696	24.2504	21.41	23.07
60'	3	23.1533	.84180	.48602	21.0622	25.2445	22.38	24.05
Total	27	22.3800	.93909	.18073	22.0085	22.7515	20.37	24.05

**Lampiran 6.** Analisis Variansi Satu Arah (*One-Way Anova*) Data Hasil Analisa Warna

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
LIGHT	Between Groups	33.861	8	4.233	1.997	.106
	Within Groups	38.154	18	2.120		
	Total	72.014	26			
RED	Between Groups	206.376	8	25.797	7.150	.000
	Within Groups	64.942	18	3.608		
	Total	271.318	26			
YELLOW	Between Groups	9.819	8	1.227	1.685	.170
	Within Groups	13.111	18	.728		
	Total	22.929	26			

**RED**

Duncan<sup>a</sup>

WAKTU	N	Subset for alpha = .05	
		1	2
24'	3	15.1100	
12'	3	15.3967	
6'	3	15.5567	
30'	3	15.6100	
18'	3	16.0500	
60'	3	16.6000	
50'	3	16.9567	
40'	3	17.1100	
0'	3		24.5867
Sig.		.272	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.



### Lampiran 7. Analisis Korelasi

#### Correlations

		KAROTEN	ANTIOX	WAKTU
KAROTEN	Pearson Correlation	1	.099	.925**
	Sig. (2-tailed)	.	.622	.000
	N	27	27	27
ANTIOX	Pearson Correlation	.099	1	-.253
	Sig. (2-tailed)	.622	.	.203
	N	27	27	27
WAKTU	Pearson Correlation	.925**	-.253	1
	Sig. (2-tailed)	.000	.203	.
	N	27	27	27

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

Hasil analisis korelasi menunjukkan bahwa kandungan karoten berkorelasi positif secara signifikan pada tingkat kepercayaan 99% dengan waktu perebusan, dengan koefisien korelasi 0,925.

