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LAMPIRAN



Gambar 2. Daging Kerang Darah



Gambar 1. Daging Kerang Darah Lumat



Gambar 3. Fermentasi Kerang Darah



Gambar 5. Analisis pH Kecap Kerang Darah



Gambar 4. Uji Organoleptik Kecap Kerang Darah

Lampiran Data Statistik Analisis Kadar Garam Kecap Kerang Darah

Univariate Analysis of Variance

Descriptive Statistics

Dependent Variable: Kadar_Garam

Lama_Fermentasi	Konsentrasi_Garam	Ulangan	Mean	Std. Deviation	N
Kontrol	Kontrol	Ulangan 1	25.4800	.	1
		Ulangan 2	25.3200	.	1
		Ulangan 3	25.4500	.	1
		Total	25.4167	.08505	3
	Total	Ulangan 1	25.4800	.	1
		Ulangan 2	25.3200	.	1
		Ulangan 3	25.4500	.	1
		Total	25.4167	.08505	3
B1	A1	Ulangan 1	18.7800	.	1
		Ulangan 2	18.2900	.	1
		Ulangan 3	18.5300	.	1
		Total	18.5333	.24502	3
	A2	Ulangan 1	19.9200	.	1
		Ulangan 2	19.6200	.	1
		Ulangan 3	19.3100	.	1
		Total	19.6167	.30501	3
	Total	Ulangan 1	19.3500	.80610	2
		Ulangan 2	18.9550	.94045	2
		Ulangan 3	18.9200	.55154	2
		Total	19.0750	.64289	6
B2	A1	Ulangan 1	18.8800	.	1
		Ulangan 2	18.8300	.	1
		Ulangan 3	18.8500	.	1
		Total	18.8533	.02517	3
	A2	Ulangan 1	19.2100	.	1
		Ulangan 2	19.5900	.	1
		Ulangan 3	19.4500	.	1

		Total	19.4167	.19218	3
	Total	Ulangan 1	19.0450	.23335	2
		Ulangan 2	19.2100	.53740	2
		Ulangan 3	19.1500	.42426	2
		Total	19.1350	.33201	6
B3	A1	Ulangan 1	18.6900	.	1
		Ulangan 2	18.4400	.	1
		Ulangan 3	18.5600	.	1
		Total	18.5633	.12503	3
	A2	Ulangan 1	19.8700	.	1
		Ulangan 2	19.7100	.	1
		Ulangan 3	19.8000	.	1
		Total	19.7933	.08021	3
	Total	Ulangan 1	19.2800	.83439	2
		Ulangan 2	19.0750	.89803	2
		Ulangan 3	19.1800	.87681	2
		Total	19.1783	.68022	6
Total	Kontrol	Ulangan 1	25.4800	.	1
		Ulangan 2	25.3200	.	1
		Ulangan 3	25.4500	.	1
		Total	25.4167	.08505	3
	A1	Ulangan 1	18.7833	.09504	3
		Ulangan 2	18.5200	.27875	3
		Ulangan 3	18.6467	.17673	3
		Total	18.6500	.20616	9
	A2	Ulangan 1	19.6667	.39627	3
		Ulangan 2	19.6400	.06245	3
		Ulangan 3	19.5200	.25239	3
		Total	19.6089	.24645	9
	Total	Ulangan 1	20.1186	2.41655	7
		Ulangan 2	19.9714	2.42967	7
		Ulangan 3	19.9929	2.45213	7
		Total	20.0276	2.30894	21

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Garam

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	8529.489 ^a	9	947.721	32363.836	.000
Lama_Fermentasi	.032	2	.016	.552	.590
Konsentrasi_Garam	4.138	1	4.138	141.296	.000
Ulangan	.088	2	.044	1.511	.260
Lama_Fermentasi * Konsentrasi_Garam	.368	2	.184	6.286	.014
Error	.351	12	.029		
Total	8529.840	21			

a. R Squared = 1.000 (Adjusted R Squared = 1.000)

Oneway

Descriptives

Dependent Variable: Kadar_Garam

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Kontrol	3	25.4167	.08505	.04910	25.2054	25.6279
A1B1	3	18.5333	.24502	.14146	17.9247	19.1420
A1B2	3	18.8533	.02517	.01453	18.7908	18.9158
A1B3	3	18.5633	.12503	.07219	18.2527	18.8739
A2B1	3	19.6167	.30501	.17610	18.8590	20.3744
A2B2	3	19.4167	.19218	.11096	18.9393	19.8941
A2B3	3	19.7933	.08021	.04631	19.5941	19.9926
Total	21	20.0276	2.30894	.50385	18.9766	21.0786

ANOVA

Kadar_Garam

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	106.185	6	17.697	563.270	.000
Within Groups	.440	14	.031		
Total	106.624	20			

Post Hoc Tests

Homogeneous Subsets

Kadar_Garam

Duncan^a

Interaksi	N	Subset for alpha = 0.05			
		1	2	3	4
A1B1	3	18.5333			
A1B3	3	18.5633			
A1B2	3	18.8533			
A2B2	3		19.4167		
A2B1	3		19.6167	19.6167	
A2B3	3			19.7933	
Kontrol	3				25.4167
Sig.		.053	.189	.242	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran Data Statistik Analisis pH Kecap Kerang Darah

Univariate Analysis of Variance

Descriptive Statistics

Dependent Variable: pH

Lama_Fermentasi	Konsentrasi_Garam	Ulangan	Mean	Std. Deviation	N
Kontrol	Kontrol	Ulangan 1	5.0900	.	1
		Ulangan 2	5.0600	.	1
		Ulangan 3	5.0500	.	1
	Total	Total	5.0667	.02082	3
		Ulangan 1	5.0900	.	1
		Ulangan 2	5.0600	.	1
		Ulangan 3	5.0500	.	1
		Total	5.0667	.02082	3
B1	A1	Ulangan 1	5.7100	.	1
		Ulangan 2	5.6700	.	1
		Ulangan 3	5.7000	.	1
		Total	5.6933	.02082	3
	A2	Ulangan 1	5.8000	.	1
		Ulangan 2	5.6400	.	1
		Ulangan 3	5.9000	.	1
		Total	5.7800	.13115	3
	Total	Ulangan 1	5.7550	.06364	2
		Ulangan 2	5.6550	.02121	2
		Ulangan 3	5.8000	.14142	2
		Total	5.7367	.09647	6
B2	A1	Ulangan 1	5.5800	.	1
		Ulangan 2	5.5900	.	1
		Ulangan 3	5.5000	.	1
		Total	5.5567	.04933	3
	A2	Ulangan 1	5.7300	.	1
		Ulangan 2	5.7400	.	1
		Ulangan 3	5.7000	.	1
		Total	5.7233	.02082	3

		Total	Ulangan 1	5.6550	.10607	2
			Ulangan 2	5.6650	.10607	2
			Ulangan 3	5.6000	.14142	2
			Total	5.6400	.09737	6
B3	A1		Ulangan 1	5.5400	.	1
			Ulangan 2	5.5600	.	1
			Ulangan 3	5.5000	.	1
			Total	5.5333	.03055	3
	A2		Ulangan 1	5.6700	.	1
			Ulangan 2	5.7000	.	1
			Ulangan 3	5.6000	.	1
			Total	5.6567	.05132	3
	Total		Ulangan 1	5.6050	.09192	2
			Ulangan 2	5.6300	.09899	2
			Ulangan 3	5.5500	.07071	2
			Total	5.5950	.07740	6
Total	Kontrol		Ulangan 1	5.0900	.	1
			Ulangan 2	5.0600	.	1
			Ulangan 3	5.0500	.	1
			Total	5.0667	.02082	3
	A1		Ulangan 1	5.6100	.08888	3
			Ulangan 2	5.6067	.05686	3
			Ulangan 3	5.5667	.11547	3
			Total	5.5944	.08095	9
	A2		Ulangan 1	5.7333	.06506	3
			Ulangan 2	5.6933	.05033	3
			Ulangan 3	5.7333	.15275	3
			Total	5.7200	.08902	9
	Total		Ulangan 1	5.5886	.23703	7
			Ulangan 2	5.5657	.23136	7
			Ulangan 3	5.5643	.26570	7
			Total	5.5729	.23285	21

Tests of Between-Subjects Effects

Dependent Variable: pH

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	653.230 ^a	9	72.581	18770.963	.000
Lama_Fermentasi	.063	2	.031	8.131	.006
Konsentrasi_Garam	.071	1	.071	18.346	.001
Ulangan	.003	2	.001	.336	.721
Lama_Fermentasi *	.005	2	.002	.622	.553
Konsentrasi_Garam					
Error	.046	12	.004		
Total	653.276	21			

a. R Squared = 1.000 (Adjusted R Squared = 1.000)

Oneway

Descriptives

pH

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Kontrol	3	5.0667	.02082	.01202	5.0150	5.1184
A1B1	3	5.6933	.02082	.01202	5.6416	5.7450
A1B2	3	5.5567	.04933	.02848	5.4341	5.6792
A1B3	3	5.5333	.03055	.01764	5.4574	5.6092
A2B1	3	5.7800	.13115	.07572	5.4542	6.1058
A2B2	3	5.7233	.02082	.01202	5.6716	5.7750
A2B3	3	5.6567	.05132	.02963	5.5292	5.7841
Total	21	5.5729	.23285	.05081	5.4669	5.6789

ANOVA

pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.035	6	.173	49.306	.000
Within Groups	.049	14	.004		
Total	1.084	20			

Post Hoc Tests
Homogeneous Subsets

Interaksi	N	Subset for alpha = 0.05				
		1	2	3	4	5
Kontrol	3	5.0667				
A1B3	3		5.5333			
A1B2	3			5.5567	5.5567	
A2B3	3				5.6567	5.6567
A1B1	3					5.6933
A2B2	3					5.7233
A2B1	3					5.7800
Sig.		1.000	.637	.057	.211	.110

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran Data Statistik Analisis Warna Kecap Kerang Darah

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable: L

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	22791.626 ^a	9	2532.403	4064.992	.000
Lama_Fermentasi	13.531	2	6.765	10.860	.002
Konsentrasi_Garam	8.862	1	8.862	14.225	.003
Ulangan	3.272	2	1.636	2.626	.113
Lama_Fermentasi *	9.938	2	4.969	7.976	.006
Konsentrasi_Garam					
Error	7.476	12	.623		
Total	22799.101	21			

a. R Squared = 1.000 (Adjusted R Squared = .999)

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable: a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	796.513 ^a	9	88.501	430.952	.000
Lama_Fermentasi	1.754	2	.877	4.270	.040
Konsentrasi_Garam	2.268	1	2.268	11.046	.006
Ulangan	.647	2	.323	1.575	.247
Lama_Fermentasi *	4.612	2	2.306	11.228	.002
Konsentrasi_Garam					
Error	2.464	12	.205		
Total	798.977	21			

a. R Squared = .997 (Adjusted R Squared = .995)

Univariate Analysis of Variance

Tests of Between-Subjects Effects

Dependent Variable: b

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	2890.695 ^a	9	321.188	1642.627	.000
Lama_Fermentasi	62.776	2	31.388	160.524	.000
Konsentrasi_Garam	6.944	1	6.944	35.513	.000
Ulangan	.938	2	.469	2.400	.133
Lama_Fermentasi * Konsentrasi_Garam	13.672	2	6.836	34.961	.000
Error	2.346	12	.196		
Total	2893.042	21			

a. R Squared = .999 (Adjusted R Squared = .999)

Oneway

		Descriptives					
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
L	Kontrol	3	10.8400	1.89388	1.09343	6.1353	15.5447
	A1B1	3	35.5533	.16503	.09528	35.1434	35.9633
	A1B2	3	36.2833	.55302	.31929	34.9096	37.6571
	A1B3	3	36.1067	.52539	.30333	34.8015	37.4118
	A2B1	3	34.1700	.59775	.34511	32.6851	35.6549
	A2B2	3	36.6900	.90072	.52003	34.4525	38.9275
	A2B3	3	32.8733	.09713	.05608	32.6321	33.1146
	Total	21	31.7881	8.88526	1.93892	27.7436	35.8326
a	Kontrol	3	14.1967	.57770	.33353	12.7616	15.6317
	A1B1	3	3.3367	.61101	.35277	1.8188	4.8545
	A1B2	3	1.8233	.53678	.30991	.4899	3.1568
	A1B3	3	3.3300	.03000	.01732	3.2555	3.4045
	A2B1	3	2.9067	.53154	.30688	1.5863	4.2271

	A2B2	3	3.8533	.52520	.30322	2.5487	5.1580
	A2B3	3	3.8600	.03464	.02000	3.7739	3.9461
	Total	21	4.7581	4.02212	.87770	2.9273	6.5889
b	Kontrol	3	17.0200	.61612	.35572	15.4895	18.5505
	A1B1	3	10.1167	.61501	.35507	8.5889	11.6444
	A1B2	3	10.8800	.71358	.41199	9.1074	12.6526
	A1B3	3	8.2633	.05686	.03283	8.1221	8.4046
	A2B1	3	10.3600	.29462	.17010	9.6281	11.0919
	A2B2	3	14.5733	.53267	.30754	13.2501	15.8965
	A2B3	3	8.0533	.04041	.02333	7.9529	8.1537
	Total	21	11.3238	3.16417	.69048	9.8835	12.7641

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
L	Between Groups	1568.210	6	261.368	340.454	.000
	Within Groups	10.748	14	.768		
	Total	1578.958	20			
a	Between Groups	320.437	6	53.406	240.311	.000
	Within Groups	3.111	14	.222		
	Total	323.548	20			
b	Between Groups	196.955	6	32.826	139.903	.000
	Within Groups	3.285	14	.235		
	Total	200.240	20			

Post Hoc Tests
Homogeneous Subset

L*

Duncan^a

Interaksi	N	Subset for alpha = 0.05			
		1	2	3	4
Kontrol	3	10.8400			
A2B3	3		32.8733		
A2B1	3			34.1700	34.1700
A1B1	3				35.5533
A1B3	3				36.1067
A1B2	3				36.2833
A2B2	3				36.6900
Sig.		1.000	.091	.074	.164

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

a*

Duncan^a

Interaksi	N	Subset for alpha = 0.05			
		1	2	3	4
A1B2	3	1.8233			
A2B1	3		2.9067		
A1B3	3			3.3300	3.3300
A1B1	3			3.3367	3.3367
A2B2	3				3.8533
A2B3	3				3.8600
Kontrol	3				14.1967
Sig.		1.000	.307	.224	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

b*Duncan^a

Interaksi	N	Subset for alpha = 0.05			
		1	2	3	4
A2B3	3	8.0533			
A1B3	3	8.2633			
A1B1	3		10.1167		
A2B1	3		10.3600		
A1B2	3		10.8800		
A2B2	3			14.5733	
Kontrol	3				17.0200
Sig.		.604	.087	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran Data Skor Panelis Organoleptik Kecap Kerang Darah

Tabel 1. Data Skor Hedonik Panelis Parameter Warna

Panelis	Warna						
	A0B0	A1B1	A1B2	A1B3	A2B1	A2B2	A2B3
1	5	3	3	3	3	3	3
2	4	3	3	3	3	3	3
3	4	2	4	3	3	2	3
4	4	2	4	3	3	2	3
5	4	3	3	3	2	3	3
6	5	3	3	3	2	3	3
7	5	4	4	4	4	3	3
8	5	4	4	4	4	3	3
9	5	3	4	2	3	2	4
10	4	3	4	3	3	2	4
11	4	4	3	3	4	2	4
12	4	4	3	3	4	2	4
13	4	4	3	3	4	3	3
14	5	4	3	2	4	3	3
15	5	3	3	3	3	3	2
16	4	3	3	3	3	3	2
17	4	3	4	2	4	4	2
18	5	3	4	2	4	4	2
19	5	3	2	3	2	3	3
20	4	3	3	3	2	3	3
21	4	3	3	4	3	2	4
22	4	3	3	4	3	2	4
23	4	4	3	3	4	4	3
24	4	4	2	3	4	4	3
25	4	3	3	2	3	4	2
26	4	3	3	2	3	4	2
27	4	4	2	2	4	3	2
28	5	4	2	2	4	3	2
29	5	3	3	2	4	4	2
30	5	3	3	2	3	4	2
31	5	3	4	3	3	3	3
32	5	3	4	3	4	3	3

33	5	4	3	4	4	2	4
34	4	4	3	4	4	2	4
35	4	3	2	3	3	4	3
36	4	3	2	3	3	4	3
37	4	3	1	3	3	5	3
38	5	3	1	3	3	5	3
39	5	3	4	4	3	3	4
40	5	3	4	4	3	3	4
Rata-rata	4,45	3,25	3,05	2,95	3,3	3,1	3
SD	0,50	0,54	0,81	0,68	0,65	0,84	0,72

Tabel 2. Data Skor Hedonik Panelis Parameter Aroma

Panelis	Aroma						
	A0B0	A1B1	A1B2	A1B3	A2B1	A2B2	A2B3
1	4	3	4	2	3	3	4
2	4	3	4	2	3	3	4
3	5	2	3	3	2	2	4
4	5	2	3	3	2	4	4
5	4	2	2	3	3	4	4
6	4	2	2	3	3	2	4
7	5	2	3	2	2	2	3
8	5	2	3	2	2	2	3
9	5	3	2	3	4	4	4
10	5	3	2	3	4	4	4
11	4	4	2	2	3	4	3
12	4	3	2	2	3	4	3
13	3	2	4	4	3	3	1
14	3	4	4	4	3	3	1
15	5	4	3	3	3	2	3
16	5	4	3	3	3	2	3
17	5	2	3	3	2	3	3
18	5	2	3	4	2	3	3
19	4	3	3	4	3	3	3
20	4	3	3	3	3	3	3
21	4	2	3	2	3	2	3
22	4	2	3	2	3	2	3
23	4	3	2	3	2	3	2

24	4	3	2	3	2	3	2
25	3	3	2	3	2	2	2
26	3	3	2	3	2	2	2
27	3	2	2	2	3	2	2
28	3	2	2	2	3	2	2
29	4	2	4	2	3	2	3
30	4	2	4	2	3	2	3
31	3	3	3	3	4	3	3
32	3	3	3	3	4	3	3
33	4	3	3	3	2	3	4
34	4	3	3	3	2	3	4
35	5	3	3	4	4	4	2
36	5	3	3	4	4	4	2
37	4	3	3	2	3	2	3
38	4	3	3	2	2	2	3
39	5	3	1	4	2	3	2
40	5	3	1	4	2	3	4
Rata-rata	4,15	2,725	2,75	2,85	2,78	2,80	2,95
SD	0,74	0,64	0,78	0,74	0,70	0,76	0,85

Tabel 3. Data Skor Hedonik Panelis Parameter Rasa

Panelis	Rasa						
	A0B0	A1B1	A1B2	A1B3	A2B1	A2B2	A2B3
1	5	3	3	4	4	4	4
2	4	3	3	4	4	4	4
3	5	4	3	3	3	4	3
4	5	2	4	3	3	4	3
5	4	2	4	4	4	3	3
6	4	2	4	3	2	3	5
7	5	3	4	2	3	2	5
8	5	3	4	2	3	2	3
9	4	3	2	3	2	3	2
10	4	3	2	3	2	3	2
11	5	2	3	2	4	4	2
12	5	2	4	2	4	4	2
13	5	4	4	3	2	2	3
14	5	4	4	3	2	2	3

15	4	4	3	2	3	3	4
16	4	4	3	3	2	3	4
17	4	2	3	3	4	2	3
18	4	2	3	2	4	2	3
19	5	3	4	4	2	2	3
20	5	3	4	4	2	2	3
21	4	2	5	3	3	2	3
22	4	2	5	4	2	2	3
23	4	1	3	3	4	3	2
24	4	4	3	3	4	3	4
25	4	2	2	4	2	3	4
26	4	2	3	4	2	3	4
27	5	3	2	3	4	4	5
28	4	2	2	3	4	4	5
29	4	3	2	4	1	2	4
30	4	3	2	4	1	2	4
31	5	2	4	4	2	3	2
32	5	2	4	4	2	3	2
33	5	4	3	3	2	3	4
34	5	4	3	3	3	3	4
35	4	4	3	4	3	2	4
36	4	4	3	4	3	2	4
37	4	3	3	2	3	3	2
38	4	3	3	2	3	3	2
39	4	3	1	4	2	4	4
40	4	4	1	4	2	4	4
Rata-rata	4,40	2,88	3,13	3,20	2,78	2,90	3,35
SD	0,50	0,85	0,94	0,76	0,92	0,78	0,95

Lampiran Data Analisis Hedonik Warna Kecap Kerang Darah

NPar Tests

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
Warna	280	3.27	.845	1	5
Perlakuan	280	4.00	2.004	1	7

Kruskal-Wallis Test

Ranks			
	Perlakuan	N	Mean Rank
Warna	Kontrol	40	241.35
	A1B1	40	139.00
	A1B2	40	124.90
	A1B3	40	111.20
	A2B1	40	145.30
	A2B2	40	105.25
	A2B3	40	116.50
	Total	280	

Test Statistics^{a,b}

Warna	
Kruskal-Wallis H	91.438
df	6
Asymp. Sig.	.000

Mann-Whitney Test A1B1-A1B2

Ranks				
	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B1	40	42.65	1706.00
	A1B2	40	38.35	1534.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	714.000
Wilcoxon W	1534.000
Z	-.936
Asymp. Sig. (2-tailed)	.349

Mann-Whitney Test A1B1-A1B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B1	40	45.20	1808.00
	A1B3	40	35.80	1432.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	612.000
Wilcoxon W	1432.000
Z	-2.068
Asymp. Sig. (2-tailed)	.039

Mann-Whitney Test A1B1-A2B1**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B1	40	39.30	1572.00
	A2B1	40	41.70	1668.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	752.000
Wilcoxon W	1572.000
Z	-.527
Asymp. Sig. (2-tailed)	.598

Mann-Whitney Test A1B1-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B1	40	46.30	1852.00
	A2B2	40	34.70	1388.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	568.000
Wilcoxon W	1388.000
Z	-2.474
Asymp. Sig. (2-tailed)	.013

Mann-Whitney Test A1B1-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B1	40	44.25	1770.00
	A2B3	40	36.75	1470.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	650.000
Wilcoxon W	1470.000
Z	-1.628
Asymp. Sig. (2-tailed)	.103

Mann-Whitney Test A1B2-A1B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B2	40	42.55	1702.00
	A1B3	40	38.45	1538.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	718.000
Wilcoxon W	1538.000
Z	-.865
Asymp. Sig. (2-tailed)	.387

Mann-Whitney Test A1B2-A2B1**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B2	40	37.40	1496.00
	A2B1	40	43.60	1744.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	676.000
Wilcoxon W	1496.000
Z	-1.309
Asymp. Sig. (2-tailed)	.190

Mann-Whitney Test A1B2-A2B2**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B2	40	43.55	1742.00
	A2B2	40	37.45	1498.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	678.000
Wilcoxon W	1498.000
Z	-1.262

Asymp. Sig. (2-tailed)	.207
------------------------	------

Mann-Whitney Test A1B2-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B2	40	41.75	1670.00
	A2B3	40	39.25	1570.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	750.000
Wilcoxon W	1570.000
Z	-.523
Asymp. Sig. (2-tailed)	.601

Mann-Whitney Test A1B3-A2B1

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B3	40	35.10	1404.00
	A2B1	40	45.90	1836.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	584.000
Wilcoxon W	1404.000
Z	-2.291
Asymp. Sig. (2-tailed)	.022

Mann-Whitney Test A1B3-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B3	40	41.90	1676.00
	A2B2	40	39.10	1564.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	744.000
Wilcoxon W	1564.000
Z	-.587
Asymp. Sig. (2-tailed)	.557

Mann-Whitney Test A1B3-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A1B3	40	39.75	1590.00
	A2B3	40	41.25	1650.00
	Total	80		

Test Statistics^a

	Warna
Mann-Whitney U	770.000
Wilcoxon W	1590.000
Z	-.317
Asymp. Sig. (2-tailed)	.751

Mann-Whitney Test A2B1-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A2B1	40	46.70	1868.00
	A2B2	40	34.30	1372.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	552.000
Wilcoxon W	1372.000
Z	-2.572
Asymp. Sig. (2-tailed)	.010

Mann-Whitney Test A2B1-A2B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A2B1	40	45.00	1800.00
	A2B3	40	36.00	1440.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	620.000
Wilcoxon W	1440.000
Z	-1.895
Asymp. Sig. (2-tailed)	.058

Mann-Whitney Test A2B2-A2B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Warna	A2B2	40	38.50	1540.00
	A2B3	40	42.50	1700.00
	Total	80		

Test Statistics^a

Warna	
Mann-Whitney U	720.000
Wilcoxon W	1540.000
Z	-.831
Asymp. Sig. (2-tailed)	.406

Lampiran Data Analisis Hedonik Rasa Kecap Kerang Darah

NPar Tests

	N	Descriptive Statistics			
	N	Mean	Std. Deviation	Minimum	Maximum
Rasa	280	3.23	.965	1	5
Perlakuan	280	4.00	2.004	1	7

Kruskal-Wallis Test

Ranks			
	Perlakuan	N	Mean Rank
Rasa	Kontrol	40	233.20
	A1B1	40	112.15
	A1B2	40	132.75
	A1B3	40	138.10
	A2B1	40	105.46
	A2B2	40	112.68
	A2B3	40	149.16
	Total	280	

Test Statistics^{a,b}

Rasa	
Kruskal-Wallis H	77.191
df	6
Asymp. Sig.	.000

Mann-Whitney Test Kontrol-A1B1

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	57.20	2288.00
	A1B1	40	23.80	952.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	132.000
Wilcoxon W	952.000
Z	-6.784
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test Kontrol-A1B2**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	55.30	2212.00
	A1B2	40	25.70	1028.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	208.000
Wilcoxon W	1028.000
Z	-6.047
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test Kontrol-A1B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	55.70	2228.00
	A1B3	40	25.30	1012.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	192.000
Wilcoxon W	1012.000
Z	-6.316
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test Kontrol-A2B1

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	57.20	2288.00
	A2B1	40	23.80	952.00
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	132.000
Wilcoxon W	952.000
Z	-6.784
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test Kontrol-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	57.50	2300.00
	A2B2	40	23.50	940.00
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	120.000
Wilcoxon W	940.000
Z	-6.890
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test Kontrol-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	Kontrol	40	52.80	2112.00
	A2B3	40	28.20	1128.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	308.000
Wilcoxon W	1128.000
Z	-5.094
Asymp. Sig. (2-tailed)	.000

Mann-Whitney Test A1B1-A1B2**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B1	40	37.38	1495.00
	A1B2	40	43.63	1745.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	675.000
Wilcoxon W	1495.000
Z	-1.268
Asymp. Sig. (2-tailed)	.205

Mann-Whitney Test A1B1-A1B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B1	40	36.30	1452.00
	A1B3	40	44.70	1788.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	632.000
Wilcoxon W	1452.000
Z	-1.715
Asymp. Sig. (2-tailed)	.086

Mann-Whitney Test A1B1-A2B1

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B1	40	41.74	1669.50
	A2B1	40	39.26	1570.50
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	750.500
Wilcoxon W	1570.500
Z	-.503
Asymp. Sig. (2-tailed)	.615

Mann-Whitney Test A1B1-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B1	40	40.28	1611.00
	A2B2	40	40.73	1629.00
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	791.000
Wilcoxon W	1611.000
Z	-.092
Asymp. Sig. (2-tailed)	.927

Mann-Whitney Test A1B1-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B1	40	35.16	1406.50
	A2B3	40	45.84	1833.50
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	586.500
Wilcoxon W	1406.500
Z	-2.156
Asymp. Sig. (2-tailed)	.031

Mann-Whitney Test A1B2-A1B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B2	40	39.60	1584.00
	A1B3	40	41.40	1656.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	764.000
Wilcoxon W	1584.000
Z	-.369
Asymp. Sig. (2-tailed)	.712

Mann-Whitney Test A1B2-A2B1**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B2	40	44.64	1785.50
	A2B1	40	36.36	1454.50
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	634.500
Wilcoxon W	1454.500
Z	-1.670
Asymp. Sig. (2-tailed)	.095

Mann-Whitney Test A1B2-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B2	40	43.58	1743.00
	A2B2	40	37.42	1497.00
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	677.000
Wilcoxon W	1497.000
Z	-1.254
Asymp. Sig. (2-tailed)	.210

Mann-Whitney Test A1B2-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B2	40	38.11	1524.50
	A2B3	40	42.89	1715.50
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	704.500
Wilcoxon W	1524.500
Z	-.966
Asymp. Sig. (2-tailed)	.334

Mann-Whitney Test A1B3-A2B1

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B3	40	45.70	1828.00
	A2B1	40	35.30	1412.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	592.000
Wilcoxon W	1412.000
Z	-2.114
Asymp. Sig. (2-tailed)	.035

Mann-Whitney Test A1B3-A2B2**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B3	40	44.70	1788.00
	A2B2	40	36.30	1452.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	632.000
Wilcoxon W	1452.000
Z	-1.722
Asymp. Sig. (2-tailed)	.085

Mann-Whitney Test A1B3-A2B3**Ranks**

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A1B3	40	38.80	1552.00
	A2B3	40	42.20	1688.00
	Total	80		

Test Statistics^a

Rasa	
Mann-Whitney U	732.000
Wilcoxon W	1552.000
Z	-.694
Asymp. Sig. (2-tailed)	.488

Mann-Whitney Test A2B1-A2B2

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A2B1	40	38.98	1559.00
	A2B2	40	42.03	1681.00
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	739.000
Wilcoxon W	1559.000
Z	-.622
Asymp. Sig. (2-tailed)	.534

Mann-Whitney Test A2B1-A2B3

Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A2B1	40	34.26	1370.50
	A2B3	40	46.74	1869.50
	Total	80		

Test Statistics^a

	Rasa
Mann-Whitney U	550.500
Wilcoxon W	1370.500
Z	-2.515
Asymp. Sig. (2-tailed)	.012

Mann-Whitney Test A2B2-A2B3

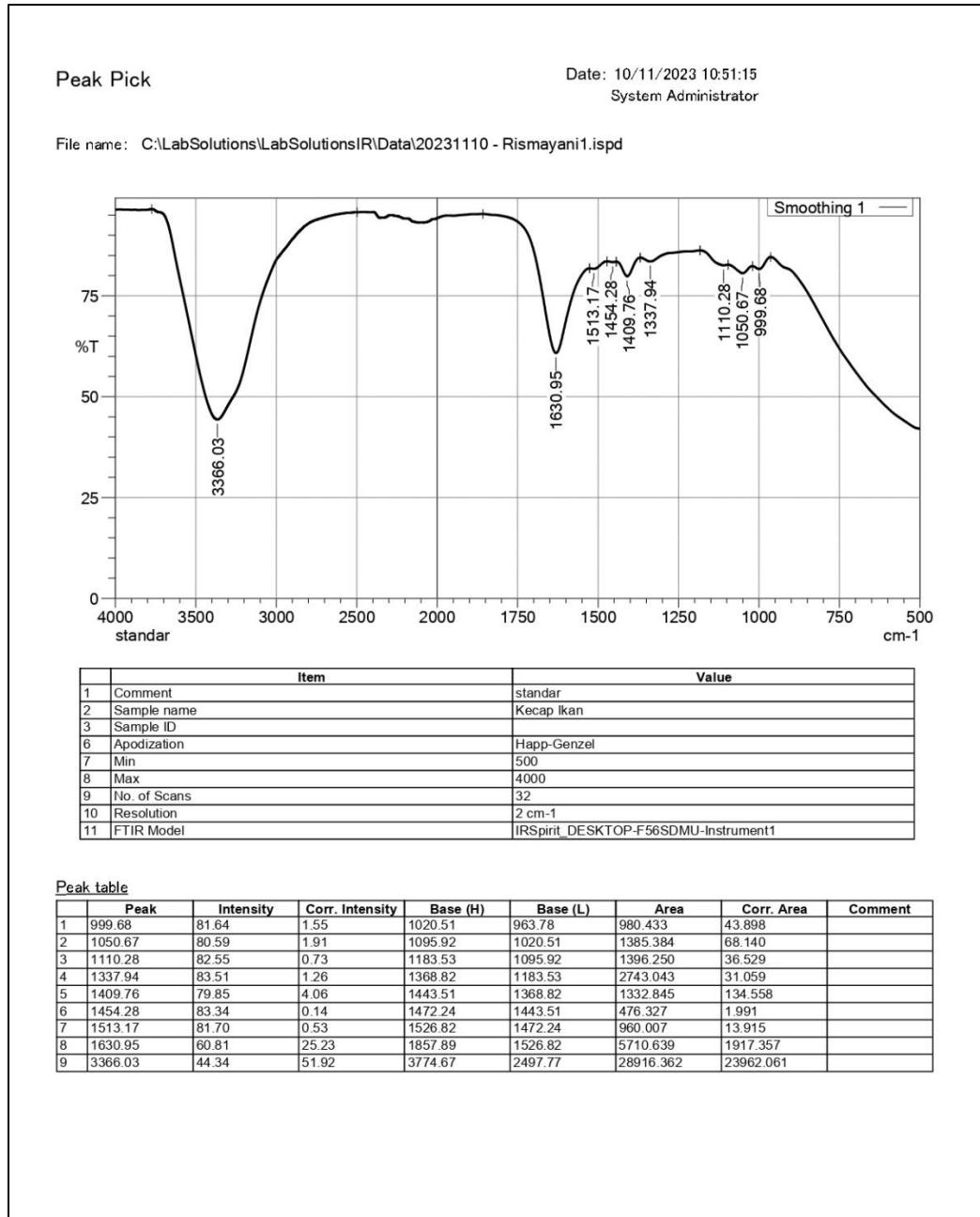
Ranks

	Perlakuan	N	Mean Rank	Sum of Ranks
Rasa	A2B2	40	35.20	1408.00
	A2B3	40	45.80	1832.00
	Total	80		

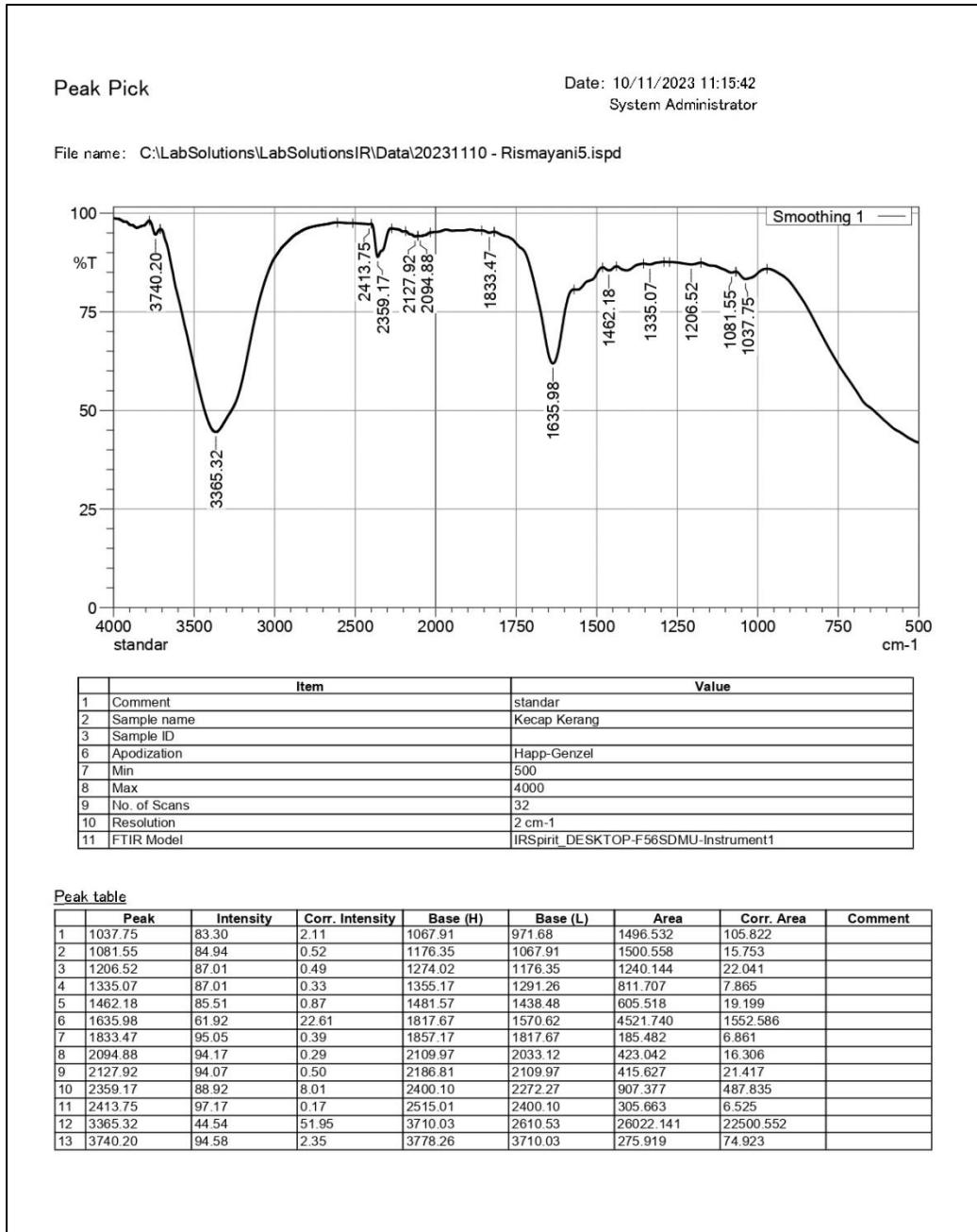
Test Statistics^a

	Rasa
Mann-Whitney U	588.000
Wilcoxon W	1408.000
Z	-2.147
Asymp. Sig. (2-tailed)	.032

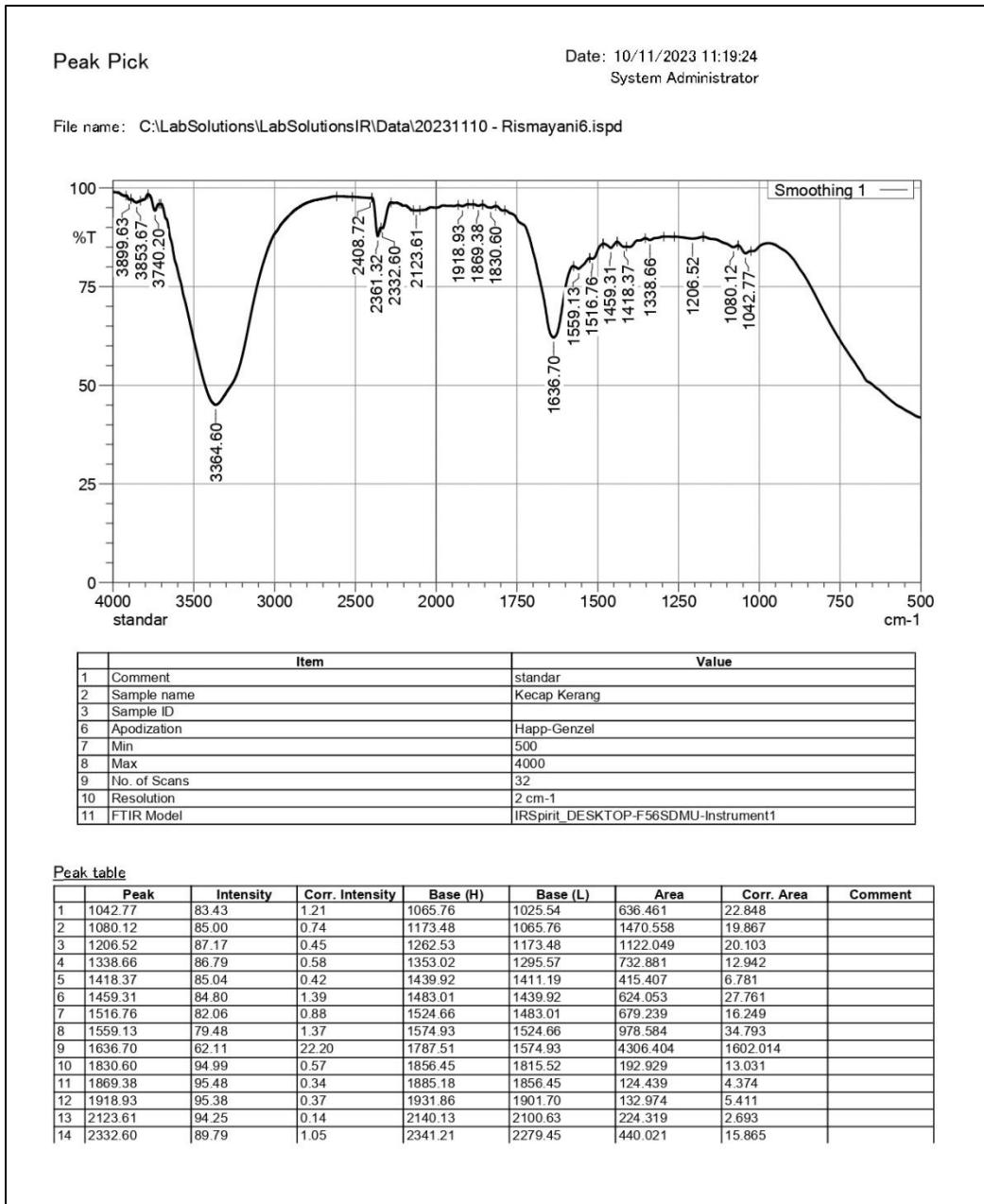
Lampiran Data FTIR Kecap Ikan



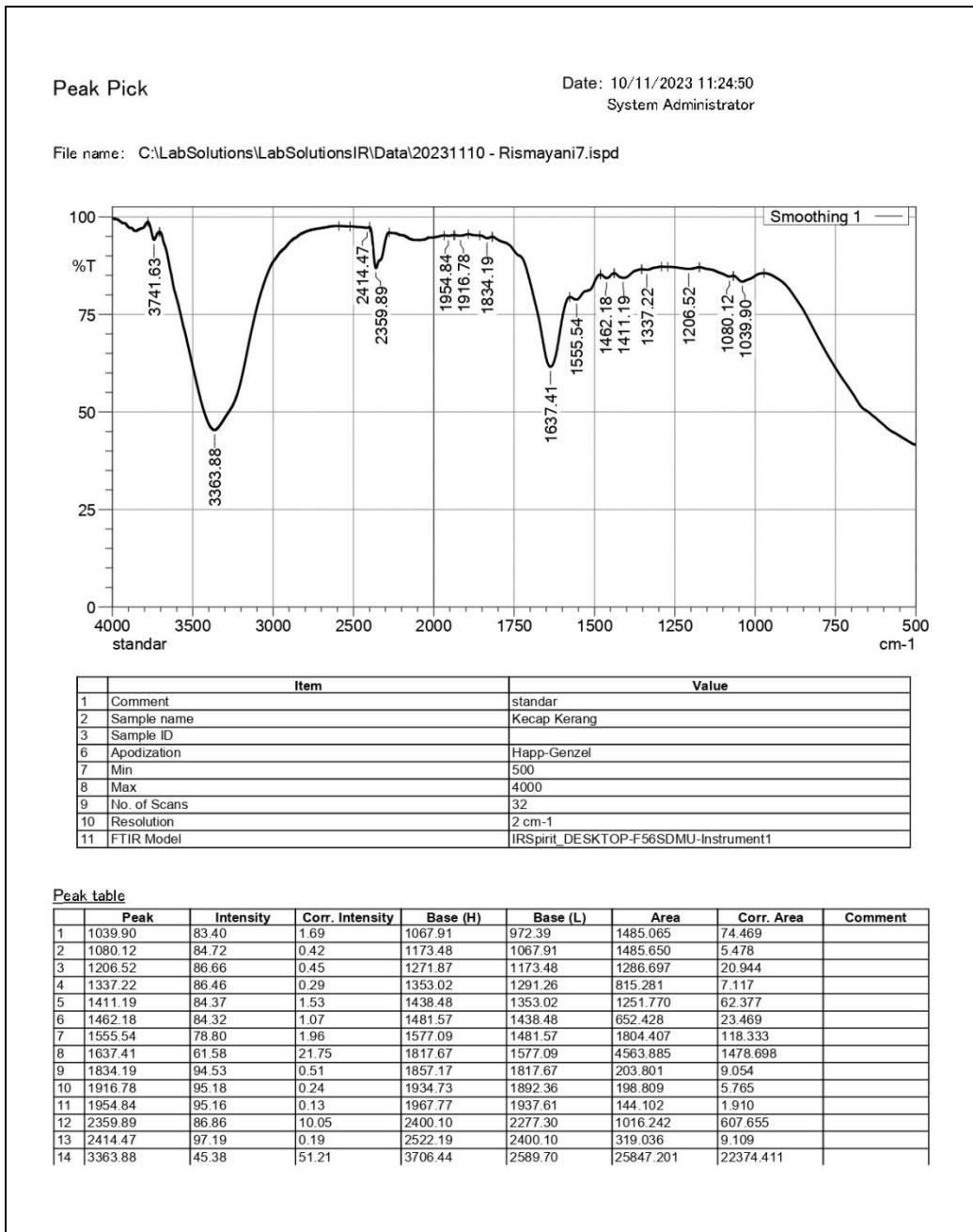
Lampiran Data FTIR Kecap Kerang Darah A1B1



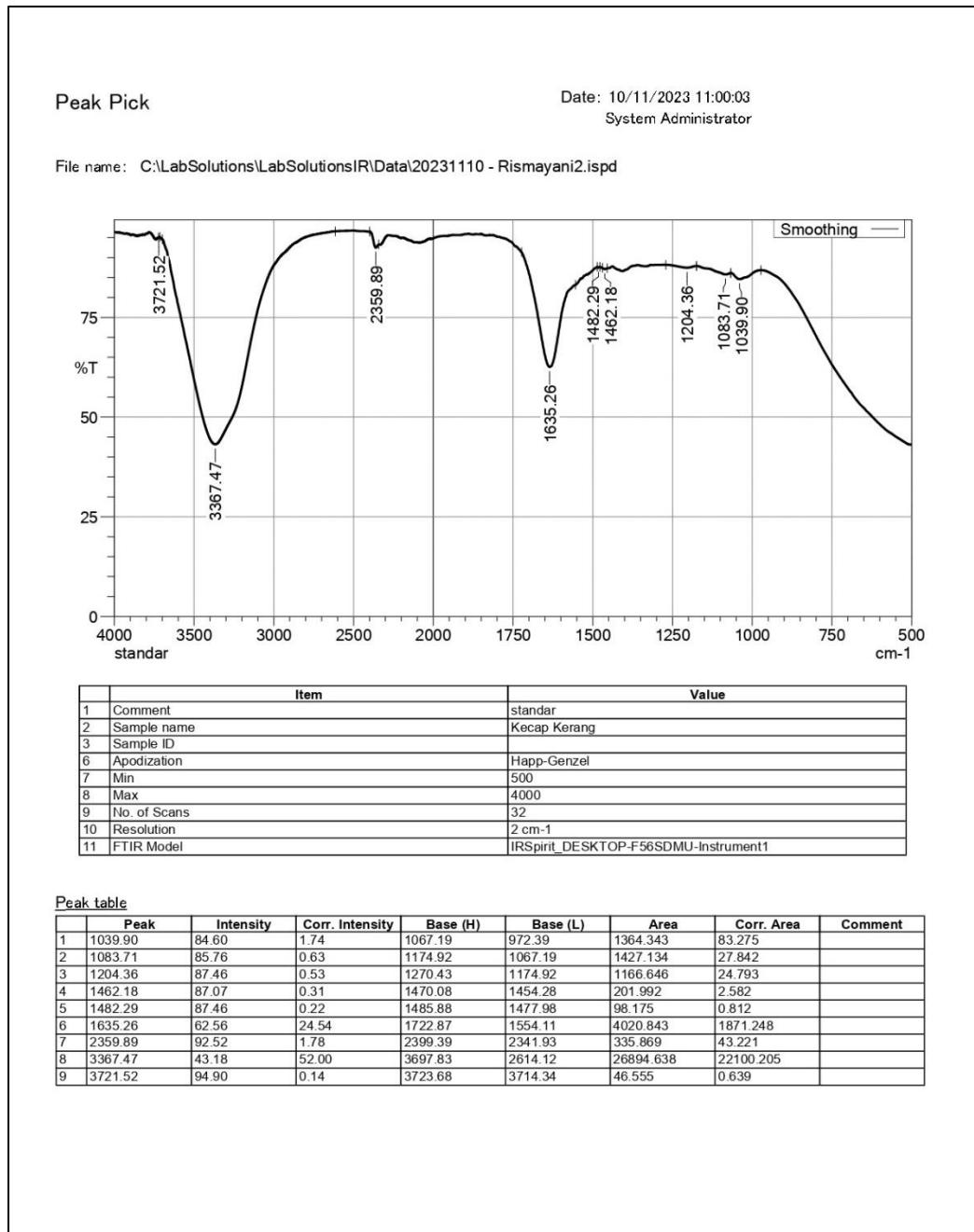
Lampiran Data FTIR Kecap Kerang Darah A1B2



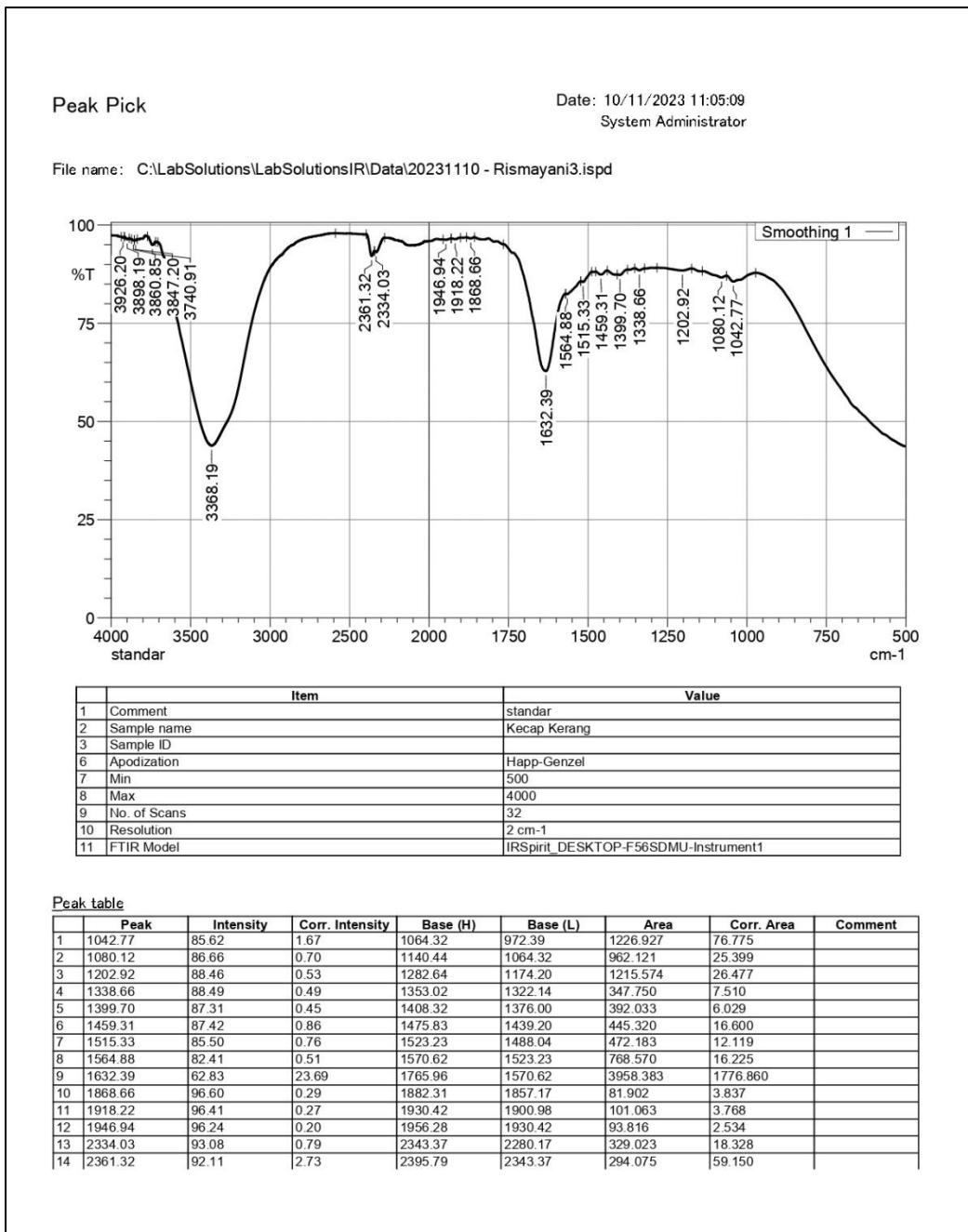
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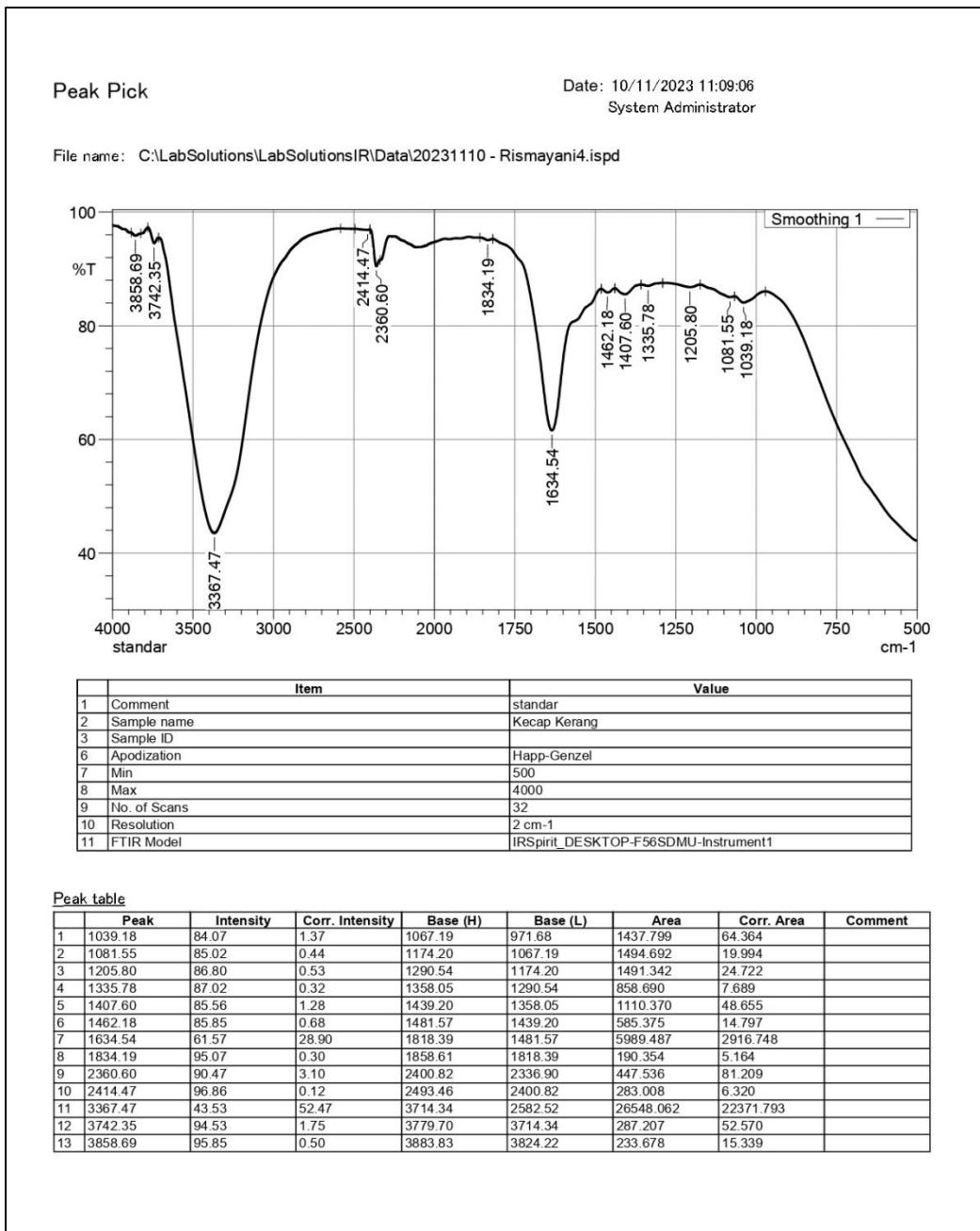
Lampiran Data FTIR Kecap Kerang Darah A2B1



Lampiran Data FTIR Kecap Kerang Darah A2B2



Lampiran Data FTIR Kecap Kerang Darah A2B3



Lampiran Rendemen Kecap Kerang Darah

1. Rendemen Daging Kerang Darah

Bahan baku yang dipakai adalah kerang darah (*Tegillarca granosa*) sebanyak 20 Kg. Hasil daging kerang darah yang didapat yaitu sebanyak 3 Kg. Rendemen daging kerang darah adalah:

$$\text{Rendemen daging kerang darah} = \frac{\text{Berat daging kerang darah}}{\text{Berat total kerang darah}} \times 100\%$$

$$\text{Rendemen daging kerang darah} = \frac{3 \text{ Kg}}{20 \text{ Kg}} \times 100 = 15\%$$

2. Penambahan Garam

Daging kerang darah masing-masing dibagi menjadi 6 sampel, sehingga 1 sampel mendapatkan daging kerang darah sebanyak 500 g. Daging kerang darah kemudian dihaluskan dan ditambah dengan garam dengan konsentrasi perlakuan 20% dan 25% dari berat bahan baku.

$$\text{Garam 20\%} = \frac{20}{100} \times \text{berat bahan baku per sampel} = 100 \text{ g}$$

$$\text{Garam 25\%} = \frac{25}{100} \times \text{berat bahan baku per sampel} = 125 \text{ g}$$

Sampel dengan penambahan garam konsentrasi 20% memiliki berat total 600 g. Sampel dengan penambahan garam konsentrasi 25% memiliki berat total 625 g.

3. Rendemen Kecap Kerang Darah

a. Sampel A1B1

Berat sampel yang didapat = 233 g

$$\text{Rendemen} = \frac{233 \text{ g}}{600 \text{ g}} \times 100\% = 38,83 \%$$

b. Sampel A2B1

Berat sampel yang didapat = 235 g

$$\text{Rendemen} = \frac{235 \text{ g}}{625 \text{ g}} \times 100\% = 37,6 \%$$

c. Sampel A1B2

Berat sampel yang didapat = 238 g

$$\text{Rendemen} = \frac{238 \text{ g}}{600 \text{ g}} \times 100\% = 39,67 \%$$

d. Sampel A2B2

Berat sampel yang didapat = 249 g

$$\text{Rendemen} = \frac{249 \text{ g}}{625 \text{ g}} \times 100\% = 39,8 \%$$

e. Sampel A1B3

Berat sampel yang didapat = 248 g

$$\text{Rendemen} = \frac{248 \text{ g}}{600 \text{ g}} \times 100\% = 41,33 \%$$

f. Sampel A2B3

Berat sampel yang didapat = 255 g

$$\text{Rendemen} = \frac{255 \text{ g}}{625 \text{ g}} \times 100\% = 40,8 \%$$

CURRICULUM VITAE

A. Data Pribadi

1. Nama : Rismayani Miftaul Ilmi
2. Tempat, tanggal lahir : Ujung Pandang, 30 Agustus 1999
3. Alamat : Jl. Kadrie Oening Komp. Bersama Permai Blok. C No. 73, Samarinda
4. Kewarganegaraan : Warga Negara Indonesia

B. Riwayat Pendidikan

1. Tamat SD tahun 2011 di SDIT Cordova Samarinda
2. Tamat SMP tahun 2014 di SMPIT Cordova Samarinda
3. Tamat SLTA tahun 2017 di SMA Negeri 3 Samarinda
4. Sarjana (S1) tahun 2022 di Universitas Mulawarman Samarinda

C. Karya Ilmiah yang Telah Dipublikasikan

1. Kusumaningrum, I., Oktawati, N.O., & Ilmi, R.M. (2022). *Pengolahan Hasil Perikanan Sambal Cumi dalam Kemasan Botol*. Samarinda: Mulawarman University Press.
2. Ilmi, R.M., Thamrin, N.M., & Hasizah, A. (2024). Flavour Characteristic and Amino Acid Contents of Fish Sauce Produced from Various Raw Materials: Mini Review. *BIO Web of Conferences*, 96, 01007. <https://doi.org/10.1051/bioconf/20249601007>
3. Thamrin, N.M., Ilmi, R.M., & Hasizah, A. (2024). Potential and Trends Processing of Shrimp Industry by-Product in Food: A Review. *BIO Web of Conferences*, 96, 01008. <https://doi.org/10.1051/bioconf/20249601008>