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LAMPIRAN

Lampiran 1. Prosedur Analisis Kimia, Fisik dan Sensori Kerupuk dengan Penambahan Pasta Tulang Ikan Lele dan Tepung Ampas Tahu

1) Kadar Air (AOAC, 2005)

Analisis kadar air dilakukan dengan menggunakan metode oven. Cawan porselen yang digunakan dikeringkan dalam oven terlebih dahulu pada suhu 100-105°C selama 30 menit atau sampai didapat berat tetap. Setelah itu cawan yang telah dioven didinginkan dalam desikator selama 30 menit lalu ditimbang. Sampel ditimbang sebanyak 2-5 gram (B1) dalam cawan tersebut lalu dikeringkan dalam oven pada suhu 100-105°C sampai tercapai berat tetap (5-6 jam). Sampel didinginkan dalam desikator selama (30 menit) lalu ditimbang (B2). Perhitungan kadar air sebagai berikut :

$$\text{Kadar air (\%)} = \frac{B1 - B2}{\text{berat sampel}} \times 100 \%$$

2) Kadar Abu (AOAC, 2005)

Analisa kadar abu dilakukan dengan menggunakan metode pengabuan kering. Cawan yang akan digunakan dikeringkan terlebih dahulu selama 30 menit sampai didapat berat tetap dalam oven pada suhu 100-105°C. Setelah itu didinginkan dalam desikator selama 30 menit lalu ditimbang (B1). Sampel sebanyak 2-5 gram dimasukkan dalam cawan yang telah diketahui beratnya, kemudian dibakar diatas bunsen atau kompor listrik sampai tidak berasap. Setelah itu dimasukkan dalam tanur pengabuan pada suhu sampai 550°C hingga menjadi putih kelabu selama 5-6 jam. Kemudian cawan didinginkan dalam desikator selama 30 menit lalu ditimbang (B2). Perhitungan kadar abu sebagai berikut :

$$\text{Kadar abu (\%)} = \frac{B2 - B1}{\text{berat sampel}} \times 100 \%$$

3) Kadar Protein (AOAC, 2005)

Analisis kadar protein dilakukan dengan metode *kjeldahl*. Sampel sebanyak 0,2 gram ditimbang lalu dimasukkan ke dalam labu kjedhal. Kemudian ditambahkan 1,9 + 0,1 g K₂SO₄ dan 2,0 + 0,1 mL H₂SO₄ pekat. Sampel kemudian dididihkan (destruksi) selama 1-1,5 jam hingga cairan

menjadi jernih, kemudian didinginkan. Sampel dituangkan ke dalam alat destilasi dan labu destilasi dan labu dibilas dengan aquades minimal 3 kali, kemudian ditambahkan 8-10 mL NaOH-Na₂S₂O₃ dan dilakukan proses destilasi. Kemudian erlenmeyer berisi 5 mL larutan H₃BO₃ dan indikator merah diletakkan dibawah kondensor alat destilasi. Ujung selang kondensor harus terendam dengan larutan agar dapat mewedahi hasil destilasi 15 mL. Kemudian ditirasi dengan HCl 0,02 N sampai berubah warna menjadi merah mudah. Perhitungan kadar protein sebagai berikut :

$$\% N = \frac{(A-B) \times N \text{ HCl} \times 14}{\text{mg sampel}} \times 100$$

$$\% \text{ Kadar protein} = \% N \times \text{faktor konversi}$$

Keterangan :

A = mL titrasi sampel

B = mL titrasi blanko

Faktor konversi = 6,25

4) Kadar Kalsium (Sumantri, 2010)

10 ml sampel dimasukkan ke dalam labu erlenmeyer 250 ml lalu ditambah 50 ml aquades, 10 ml larutan ammonium oksalat (berlebih atau secukupnya hingga ammonium oksalat mampu mengendapkan kalsium semuanya). Larutan dibuat sedikit basa dengan penambahan ammonia encer, kemudian dibuat sedikit asam dengan penambahan beberapa tetes asam asetat sampai warna larutan merah muda (pH 5). Larutan dipanaskan sampai mendidih lalu didiamkan minimum 4 jam. Larutan disaring menggunakan kertas saring dan dibilas beberapa kali dengan aquades sehingga filtrat bebas oksalat. Endapan dipindahkan kedalam labu erlenmeyer lain dengan cara ujung kertas saring dilubangi dengan pengaduk gelas lalu dibilas dan dilarutkan dengan asam sulfat panas. Selagi panas (70-80°C), larutan dititrasikan dengan larutan baku KMnO₄ 0,1 N sampai terbentuk warna larutan merah jambu pertama yang tidak hilang selama 15 detik. Kadar kalsium dihitung berdasar banyaknya volume larutan baku KMnO₄ yang digunakan untuk titrasi. Perhitungan kadar kalsium sebagai berikut :

$$\text{Kadar kalsium (\%)} = \frac{V \text{ KMnO}_4 \times N \text{ KMnO}_4 \times \text{Be Ca}}{\text{mg sampel}} \times 100 \%$$

B. Analisis Fisik

1) Daya Kemekaran (Mawaddah *et al.* 2021)

Daya kemekaran kerupuk dilakukan dengan melakukan pengukuran kerupuk mentah dan kerupuk setelah digoreng, kemudian dilakukan perhitungan rata - rata luas permukaan kerupuk. Perhitungan daya kemekaran kerupuk sebagai berikut :

$$\% \text{ Daya kemekaran} = \frac{LP2-LP1}{LP1} \times 100\%$$

Keterangan :

Rumus LP = 2 x (pl + lt + pt)

LP1 = Luas permukaan kerupuk mentah (sebelum digoreng)

LP2 = Luas permukaan kerupuk matang (setelah digoreng)

C. Analisis Sensori

1) Uji Mutu Sensori

Analisis sensori pada penelitian kerupuk ini berupa uji mutu sensori yang bertujuan untuk mengidentifikasi sifat sensori di dalam suatu produk makanan. Uji mutu sensori ini menggunakan panelis semi terlatih sebanyak 30 orang. Parameter yang diujikan meliputi warna, aroma, rasa dan tekstur dengan menggunakan skala garis horizontal 10 cm (0 cm-10 cm) dan tanda batas di kedua ujungnya. Deskripsi intensitas dari 0 cm ke 10 cm pada parameter warna adalah coklat hingga kuning kecoklatan, aroma I (tulang ikan lele) amis hingga tidak amis dan aroma II (tepung ampas tahu) langu hingga tidak langu, rasa tidak asin hingga asin, dan tekstur dari tidak renyah hingga renyah.

2) Uji Hedonik

Uji hedonik adalah uji untuk mengukur tingkat kesukaan panelis terhadap atribut sensori pada suatu produk. Uji hedonik biasa disebut dengan uji penerimaan panelis terhadap suatu produk. Panelis diminta untuk

memberikan penilaian terhadap produk meliputi atribut sensori yaitu warna, aroma, rasa, tekstur, dan *overall* dengan memberikan garis vertikal pada skala garis horizontal 10 cm (0 cm–10 cm) pada masing-masing atribut sensori. Ujung kiri menunjukkan parameter tidak suka, sedangkan ujung kanan menunjukkan parameter suka. Uji hedonik ini menggunakan panelis semi terlatih sebanyak 30 orang.

Lampiran 2. Scoresheet Uji Mutu Sensori dan Hedonik

UJI SENSORI

Produk : Kerupuk Pasta Tulang Ikan Lele dan Tepung Ampas Tahu

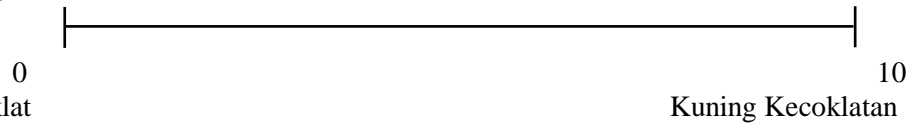
Nama :

Instruksi :

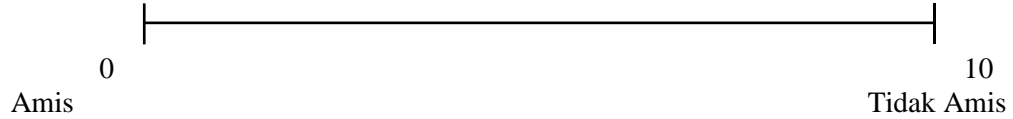
Berikan penilaian anda terhadap karakteristik dari masing-masing sampel dengan memberi tanda garis vertikal atau tanda silang pada garis horizontal tersebut.

KODE SAMPEL :

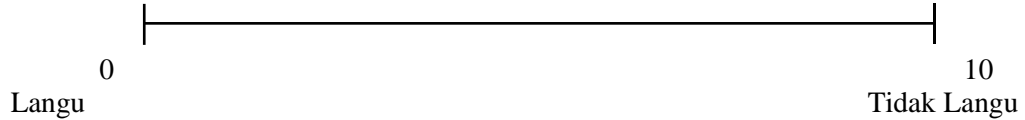
Warna



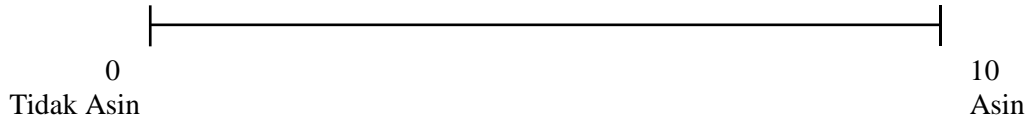
Aroma I



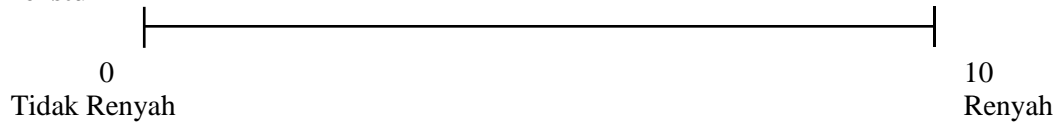
Aroma II



Rasa



Tekstur



Komentar :

UJI HEDONIK

Produk : Kerupuk Pasta Tulang Ikan Lele dan Tepung Ampas Tahu

Nama :

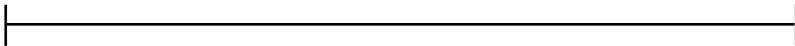
Instruksi :

Berikan penilaian anda terhadap karakteristik dari masing-masing sampel dengan memberi tanda garis vertikal atau tanda silang pada garis horizontal tersebut.

KODE SAMPEL :

Warna

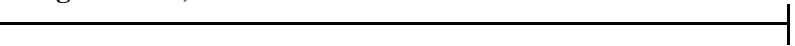
0
Tidak Suka



10
Suka

Aroma I (Tulang ikan lele)

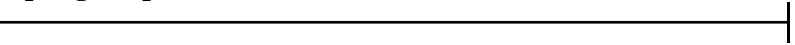
0
Tidak Suka



10
Suka

Aroma II (Tepung Ampas Tahu)

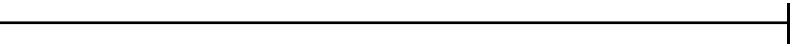
0
Tidak Suka



10
Suka

Rasa (Asin)

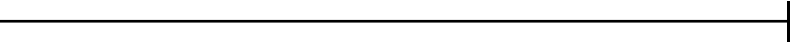
0
Tidak Suka



10
Suka

Tekstur

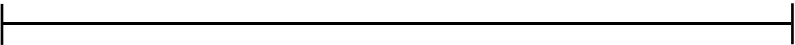
0
Tidak Suka



10
Suka

Overall

0
Tidak Suka



10
Suka

Komentar :

Lampiran 3. Hasil Pengujian dan Hasil Analisis Data Kimia Kadar Air

Kode Sampel	Ulangan 1	Ulangan 2	Rata-rata	SNI 2713.1:2009
A1	6,64502	6,585	6,615008	
A2	5,67358	5,9935	5,833542	Maks 12
A3	5,11449	5,76856	5,441523	
A4	5,37151	5,45336	5,412436	

Descriptive Statistics

Dependent Variable: Kadar_Air

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	6,6150081	,04243789	2
A2 (15% : 15%)	5,8335416	,22621762	2
A3 (20% : 10%)	5,4415232	,46249684	2
A4 (25% : 5 %)	5,4124363	,05788056	2
Total	5,8256273	,55460718	8

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Air

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1,883 ^a	3	,628	9,290	,028
Intercept	271,503	1	271,503	4018,867	,000
Perlakuan	1,883	3	,628	9,290	,028
Error	,270	4	,068		
Total	273,657	8			
Corrected Total	2,153	7			

a. R Squared = ,874 (Adjusted R Squared = ,780)

Kadar_Air

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A4 (25% : 5 %)	2	5,4124363	
A3 (20% : 10%)	2	5,4415232	
A2 (15% : 15%)	2	5,8335416	
A1 (0% : 0%)	2		6,6150081
Sig.		,186	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 4. Hasil Pengujian dan Hasil Analisis Data Kimia Kadar Abu

Kode Sampel	Ulangan 1	Ulangan 2	Rata-rata	SNI 2713.1:2009
A1	2,31257	2,27875	2,295659	
A2	4,81615	5,19448	5,005314	Maks 0,2
A3	5,66802	6,83385	6,250933	
A4	7,50587	7,64773	7,576803	

Descriptive Statistics

Dependent Variable: Kadar_Abu

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	2,2956592	,02391797	2
A2 (15% : 15%)	5,0053138	,26752216	2
A3 (20% : 10%)	6,2509329	,82436866	2
A4 (25% : 5 %)	7,5768032	,10031221	2
Total	5,2821773	2,10988369	8

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Abu

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	30,399 ^a	3	10,133	53,207	,001
Intercept	223,211	1	223,211	1172,041	,000
Perlakuan	30,399	3	10,133	53,207	,001
Error	,762	4	,190		
Total	254,372	8			
Corrected Total	31,161	7			

a. R Squared = ,976 (Adjusted R Squared = ,957)

Kadar_Abu

Duncan^a

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A1 (0% : 0%)	2	2,2956592			
A2 (15% : 15%)	2		5,0053138		
A3 (20% : 10%)	2			6,2509329	
A4 (25% : 5 %)	2				7,5768032
Sig.		1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 5. Hasil Pengujian Kimia dan Hasil Analisis Data Kadar Protein

Kode Sampel	Ulangan 1	Ulangan 2	Rata-rata	SNI 2713.1:2009
A1	1,72597339	1,73280554	1,729389464	
A2	9,91945813	9,53043048	9,724944304	Min 5
A3	7,79762494	8,19837358	7,997999261	
A4	5,62049383	5,19841663	5,409455226	

Descriptive Statistics

Dependent Variable: Kadar_Protein

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	1,7293895	,00483106	2
A2 (15% : 15%)	9,7249443	,27508409	2
A3 (20% : 10%)	7,9979993	,28337208	2
A4 (25% : 5 %)	5,4094552	,29845365	2
Total	6,2154471	3,22450144	8

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Protein

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	72,537 ^a	3	24,179	394,647	,000
Intercept	309,054	1	309,054	5044,365	,000
Perlakuan	72,537	3	24,179	394,647	,000
Error	,245	4	,061		
Total	381,836	8			
Corrected Total	72,782	7			

a. R Squared = ,997 (Adjusted R Squared = ,994)

Kadar_Protein

Duncan^a

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A1 (0% : 0%)	2	1,7293895			
A4 (25% : 5 %)	2		5,4094552		
A3 (20% : 10%)	2			7,9979993	
A2 (15% : 15%)	2				9,7249443
Sig.		1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 6. Hasil Pengujian Kimia dan Hasil Analisis Data Kadar Kalsium

Kode Sampel	Ulangan 1	Ulangan 2	Rata-rata
A1	262,812	253,485	258,1488
A2	1836,07	1574,8	1705,434
A3	2610,97	2900,46	2755,714
A4	3929,27	3674,54	3801,907

Descriptive Statistics

Dependent Variable: Kadar_Kalsium

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	258,1487570	6,59494793	2
A2 (15% : 15%)	1705,4343620	184,74043168	2
A3 (20% : 10%)	2755,7137470	204,70414632	2
A4 (25% : 5 %)	3801,9068830	180,12300884	2
Total	2130,3009373	1406,63055525	8

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Kalsium

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13741746,026 ^a	3	4580582,009	168,837	,000
Intercept	36305456,666	1	36305456,666	1338,196	,000
Perlakuan	13741746,026	3	4580582,009	168,837	,000
Error	108520,606	4	27130,152		
Total	50155723,299	8			
Corrected Total	13850266,633	7			

a. R Squared = ,992 (Adjusted R Squared = ,986)

Kadar_Kalsium

Duncan^a

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A1 (0% : 0%)	2	258,1487570			
A2 (15% : 15%)	2		1705,4343620		
A3 (20% : 10%)	2			2755,7137470	
A4 (25% : 5 %)	2				3801,9068830
Sig.		1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 7. Hasil Pengujian dan Hasil Analisis Data Fisik Daya Kemekaran

Kode Sampel	Luas permukaan Sebelum digoreng	Luas permukaan Ulangan 1 (sesudah digoreng)	Luas permukaan Ulangan 2 (Sesudah digoreng)	Rata-rata
A1	10,36	72,44	71,98	597,0077
A2	10,36	35,9	35,06	242,471
A3	10,36	48,7	48,34	368,3398
A4	10,36	58,78	58,36	465,3475

Descriptive Statistics

Dependent Variable: Daya_Kemekaran

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	597,0077220	3,13966329	2
A2 (15% : 15%)	242,4710425	5,73329822	2
A3 (20% : 10%)	368,3397684	2,45712783	2
A4 (25% : 5 %)	465,3474904	2,86664915	2
Total	418,2915058	138,96582796	8

Tests of Between-Subjects Effects

Dependent Variable: Daya_Kemekaran

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	135123,526 ^a	3	45041,175	3161,708	,000
Intercept	1399742,271	1	1399742,271	98256,231	,000
Perlakuan	135123,526	3	45041,175	3161,708	,000
Error	56,983	4	14,246		

Total	1534922,780	8			
Corrected Total	135180,509	7			

a. R Squared = 1,000 (Adjusted R Squared = ,999)

Daya_Kemekaran

Duncan^a

Perlakuan	N	Subset for alpha = 0.05			
		1	2	3	4
A2 (15% : 15%)	2	242,4710425			
A3 (20% : 10%)	2		368,3397684		
A4 (25% : 5 %)	2			465,3474904	
A1 (0% : 0%)	2				597,0077220
Sig.		1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 8. Hasil Pengujian dan Hasil Analisis Data Sensori Warna (Coklat - Kuning Kecoklatan)

Kode Sampel	Total	Hasil (Rata-rata)
A1	260,8	8,69333333
A2	130	4,33333333
A3	165,9	5,53
A4	170	5,66666667

Descriptive Statistics

Dependent Variable: Warna

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	8,6933	1,40515	30
A2 (15% : 15%)	4,3333	3,09597	30
A3 (20% : 10%)	5,5300	2,69638	30
A4 (25% : 5%)	5,6667	2,38665	30
Total	6,0558	2,93028	120

Tests of Between-Subjects Effects

Dependent Variable: Warna

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	310,541 ^a	3	103,514	16,882	,000
Intercept	4400,774	1	4400,774	717,731	,000
Perlakuan	310,541	3	103,514	16,882	,000
Error	711,255	116	6,132		
Total	5422,570	120			
Corrected Total	1021,796	119			

a. R Squared = ,304 (Adjusted R Squared = ,286)

Warna

Duncan^a

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A2 (15% : 15%)	30	4,3333		
A3 (20% : 10%)	30	5,5300	5,5300	
A4 (25% : 5%)	30		5,6667	
A1 (0% : 0%)	30			8,6933
Sig.		,064	,831	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 9. Hasil Pengujian dan Hasil Analisis Data Sensori Aroma I (Amis- Tidak Amis)

Kode Sampel	Total	Hasil (Rata-rata)
A1	236,4	7,88
A2	207,8	6,92666667
A3	202,5	6,75
A4	211	7,03333333

Descriptive Statistics

Dependent Variable: Aroma_I

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	7,8800	2,23860	30
A2 (15% : 15%)	6,9267	2,60039	30
A3 (20% : 10%)	6,7500	2,30827	30
A4 (25% : 5%)	7,0333	2,27192	30
Total	7,1475	2,36984	120

Tests of Between-Subjects Effects

Dependent Variable: Aroma_I

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	22,691 ^a	3	7,564	1,359	,259
Intercept	6130,411	1	6130,411	1101,450	,000
Perlakuan	22,691	3	7,564	1,359	,259
Error	645,628	116	5,566		
Total	6798,730	120			
Corrected Total	668,319	119			

a. R Squared = ,034 (Adjusted R Squared = ,009)

Aroma_I

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A3 (20% : 10%)	30	6,7500
A2 (15% : 15%)	30	6,9267
A4 (25% : 5%)	30	7,0333
A1 (0% : 0%)	30	7,8800
Sig.		,093

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 10. Hasil Pengujian dan Hasil Analisis Data Sensori Aroma II (Langu-Tidak Langu)

Kode Sampel	Total	Hasil (Rata-rata)
A1	217,5	7,25
A2	205,5	6,85
A3	190,5	6,35
A4	194,5	6,48333333

Descriptive Statistics

Dependent Variable: Aroma_II

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	7,2500	2,33604	30
A2 (15% : 15%)	6,8500	2,50568	30
A3 (20% : 10%)	6,3500	2,70641	30
A4 (25% : 5%)	6,4833	2,40188	30
Total	6,7333	2,48482	120

Tests of Between-Subjects Effects

Dependent Variable: Aroma_II

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	14,700 ^a	3	4,900	,789	,502
Intercept	5440,533	1	5440,533	876,474	,000
Perlakuan	14,700	3	4,900	,789	,502
Error	720,047	116	6,207		
Total	6175,280	120			
Corrected Total	734,747	119			

a. R Squared = ,020 (Adjusted R Squared = -,005)

Aroma_II

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
A3 (20% : 10%)	30	6,3500
A4 (25% : 5%)	30	6,4833
A2 (15% : 15%)	30	6,8500
A1 (0% : 0%)	30	7,2500
Sig.		,208

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 11. Hasil Pengujian dan Hasil Analisis Data Sensori Rasa (Tidak Asin-Asin)

Kode Sampel	Total	Hasil (Rata-rata)
A1	145,3	4,84333333
A2	178,6	5,95333333
A3	193,8	6,46
A4	202,6	6,75333333

Descriptive Statistics

Dependent Variable: Rasa

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	4,8433	2,99858	30
A2 (15% : 15%)	5,9533	2,58667	30
A3 (20% : 10%)	6,4600	2,46459	30
A4 (25% : 5%)	6,7533	2,23062	30
Total	6,0025	2,65496	120

Tests of Between-Subjects Effects

Dependent Variable: Rasa

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	63,574 ^a	3	21,191	3,171	,027
Intercept	4323,601	1	4323,601	646,949	,000
Perlakuan	63,574	3	21,191	3,171	,027
Error	775,235	116	6,683		
Total	5162,410	120			
Corrected Total	838,809	119			

a. R Squared = ,076 (Adjusted R Squared = ,052)

Rasa

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A1 (0% : 0%)	30	4,8433	
A2 (15% : 15%)	30	5,9533	5,9533
A3 (20% : 10%)	30		6,4600
A4 (25% : 5%)	30		6,7533
Sig.		,099	,263

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 12. Hasil Pengujian dan Hasil Analisis Data Sensori Tekstur (Tidak Renyah-Renyah)

Kode Sampel	Total	Hasil (Rata-rata)
A1	160,4	5,34666667
A2	240,4	8,01333333
A3	256,4	8,54666667
A4	263,4	8,78

Descriptive Statistics

Dependent Variable: Tekstur

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	5,3467	2,73291	30
A2 (15% : 15%)	8,0133	1,83204	30
A3 (20% : 10%)	8,5467	1,29661	30
A4 (25% : 5%)	8,7800	,85517	30
Total	7,6717	2,26293	120

Tests of Between-Subjects Effects

Dependent Variable: Tekstur

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	225,492 ^a	3	75,164	22,712	,000
Intercept	7062,536	1	7062,536	2134,075	,000
Perlakuan	225,492	3	75,164	22,712	,000
Error	383,892	116	3,309		
Total	7671,920	120			
Corrected Total	609,384	119			

a. R Squared = ,370 (Adjusted R Squared = ,354)

Tekstur

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A1 (0% : 0%)	30	5,3467	
A2 (15% : 15%)	30		8,0133
A3 (20% : 10%)	30		8,5467
A4 (25% : 5%)	30		8,7800
Sig.		1,000	,126

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 13. Hasil Pengujian dan Hasil Analisis Data Hedonik Warna (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	225,2	7,50666667
A2	209,7	6,99
A3	222,1	7,40333333
A4	240,8	8,02666667

Descriptive Statistics

Dependent Variable: Warna

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	7,5067	2,71038	30
A2 (15% : 15%)	6,9900	2,07154	30
A3 (20% : 10%)	7,4033	2,01126	30
A4 (25% : 5%)	8,0267	1,77024	30
Total	7,4817	2,17325	120

Tests of Between-Subjects Effects

Dependent Variable: Warna

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16,366 ^a	3	5,455	1,160	,328
Intercept	6717,040	1	6717,040	1427,916	,000
Perlakuan	16,366	3	5,455	1,160	,328
Error	545,674	116	4,704		
Total	7279,080	120			
Corrected Total	562,040	119			

a. R Squared = ,029 (Adjusted R Squared = ,004)

Warna

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	6,9900
A3 (20% : 10%)	30	7,4033
A1 (0% : 0%)	30	7,5067
A4 (25% : 5%)	30	8,0267
Sig.		,093

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 14. Hasil Pengujian dan Hasil Analisis Data Hedonik Aroma I (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	227,2	7,57333333
A2	226,7	7,55666667
A3	242,1	8,07
A4	238,3	7,94333333

Descriptive Statistics

Dependent Variable: Aroma_I

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	7,5733	2,17540	30
A2 (15% : 15%)	7,5567	1,77077	30
A3 (20% : 10%)	8,0700	1,46456	30
A4 (25% : 5%)	7,9433	1,57429	30
Total	7,7858	1,75936	120

Tests of Between-Subjects Effects

Dependent Variable: Aroma_I

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	6,097 ^a	3	2,032	,651	,584
Intercept	7274,304	1	7274,304	2329,390	,000
Perlakuan	6,097	3	2,032	,651	,584
Error	362,249	116	3,123		
Total	7642,650	120			
Corrected Total	368,346	119			

a. R Squared = ,017 (Adjusted R Squared = -,009)

Aroma_I

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	7,5567
A1 (0% : 0%)	30	7,5733
A4 (25% : 5%)	30	7,9433
A3 (20% : 10%)	30	8,0700
Sig.		,312

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 15. Hasil Pengujian dan Hasil Analisis Data Hedonik Aroma II (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	231,8	7,726666667
A2	233,7	7,79
A3	234,8	7,826666667
A4	234,7	7,823333333

Descriptive Statistics

Dependent Variable: Aroma_II

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	7,7267	1,75832	30
A2 (15% : 15%)	7,7900	1,75290	30
A3 (20% : 10%)	7,8267	1,54383	30
A4 (25% : 5%)	7,8233	1,64729	30
Total	7,7917	1,65710	120

Tests of Between-Subjects Effects

Dependent Variable: Aroma_II

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	,194 ^a	3	,065	,023	,995
Intercept	7285,208	1	7285,208	2587,695	,000
Perlakuan	,194	3	,065	,023	,995
Error	326,578	116	2,815		
Total	7611,980	120			
Corrected Total	326,772	119			

a. R Squared = ,001 (Adjusted R Squared = -,025)

Aroma_II

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A1 (0% : 0%)	30	7,7267
A2 (15% : 15%)	30	7,7900
A4 (25% : 5%)	30	7,8233
A3 (20% : 10%)	30	7,8267
Sig.		,837

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 16. Hasil Pengujian dan Hasil Analisis Data Hedonik Rasa (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	193	6,43333333
A2	218,4	7,28
A3	248,6	8,28666667
A4	237,6	7,92

Descriptive Statistics

Dependent Variable: Rasa

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	6,4333	2,27556	30
A2 (15% : 15%)	7,2800	2,57125	30
A3 (20% : 10%)	8,2867	1,25141	30
A4 (25% : 5%)	7,9200	1,98987	30
Total	7,4800	2,17227	120

Tests of Between-Subjects Effects

Dependent Variable: Rasa

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	59,395 ^a	3	19,798	4,574	,005
Intercept	6714,048	1	6714,048	1551,029	,000
Perlakuan	59,395	3	19,798	4,574	,005
Error	502,137	116	4,329		
Total	7275,580	120			
Corrected Total	561,532	119			

a. R Squared = ,106 (Adjusted R Squared = ,083)

Rasa

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A1 (0% : 0%)	30	6,4333	
A2 (15% : 15%)	30	7,2800	7,2800
A4 (25% : 5%)	30		7,9200
A3 (20% : 10%)	30		8,2867
Sig.		,118	,079

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 17. Hasil Pengujian dan Hasil Analisis Data Hedonik Tekstur (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	164,7	5,49
A2	228,6	7,62
A3	252,2	8,40666667
A4	270	9

Descriptive Statistics

Dependent Variable: Tekstur

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	5,4900	3,09932	30
A2 (15% : 15%)	7,6200	2,09785	30
A3 (20% : 10%)	8,4067	1,08276	30
A4 (25% : 5%)	9,0000	,80301	30
Total	7,6292	2,37403	120

Tests of Between-Subjects Effects

Dependent Variable: Tekstur

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	211,794 ^a	3	70,598	17,846	,000
Intercept	6984,502	1	6984,502	1765,556	,000
Perlakuan	211,794	3	70,598	17,846	,000
Error	458,894	116	3,956		
Total	7655,190	120			
Corrected Total	670,688	119			

a. R Squared = ,316 (Adjusted R Squared = ,298)

Tekstur

Duncan^a

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A1 (0% : 0%)	30	5,4900		
A2 (15% : 15%)	30		7,6200	
A3 (20% : 10%)	30		8,4067	8,4067
A4 (25% : 5%)	30			9,0000
Sig.		1,000	,128	,250

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 18. Hasil Pengujian dan Hasil Analisis Data Hedonik Overall (Tidak Suka-Suka)

Kode Sampel	Total	Hasil (Rata-rata)
A1	207,3	6,91
A2	237,7	7,92333333
A3	258,2	8,60666667
A4	263,6	8,78666667

Descriptive Statistics

Dependent Variable: Overall

Perlakuan	Mean	Std. Deviation	N
A1 (0% : 0%)	6,9100	2,53504	30
A2 (15% : 15%)	7,9233	1,73636	30
A3 (20% : 10%)	8,6067	,96416	30
A4 (25% : 5%)	8,7867	,90962	30
Total	8,0567	1,80986	120

Tests of Between-Subjects Effects

Dependent Variable: Overall

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	65,041 ^a	3	21,680	7,744	,000
Intercept	7789,185	1	7789,185	2782,246	,000
Perlakuan	65,041	3	21,680	7,744	,000
Error	324,754	116	2,800		
Total	8178,980	120			
Corrected Total	389,795	119			

a. R Squared = ,167 (Adjusted R Squared = ,145)

Overall

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A1 (0% : 0%)	30	6,9100	
A2 (15% : 15%)	30		7,9233
A3 (20% : 10%)	30		8,6067
A4 (25% : 5%)	30		8,7867
Sig.		1,000	,060

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 19. Hasil Analisis Data Kimia Kadar Air Produk Terpilih

Descriptive Statistics

Dependent Variable: Kadar_Air

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	5,8335416	,22621762	2
A3 (20% : 10%)	5,4415232	,46249684	2
A4 (25% : 5 %)	5,4124363	,05788056	2
Total	5,5625004	,31294218	6

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Air

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	,221 ^a	2	,111	1,236	,406
Intercept	185,648	1	185,648	2074,842	,000
Perlakuan	,221	2	,111	1,236	,406
Error	,268	3	,089		
Total	186,138	6			
Corrected Total	,490	5			

a. R Squared = ,452 (Adjusted R Squared = ,086)

Kadar_Air

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A4 (25% : 5 %)	2	5,4124363
A3 (20% : 10%)	2	5,4415232

A2 (15% : 15%)	2	5,8335416
Sig.		,252

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 20. Hasil Analisis Data Kimia Kadar Abu Produk Terpilih

Descriptive Statistics

Dependent Variable: Kadar_Abu

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	5,0053138	,26752216	2
A3 (20% : 10%)	6,2509329	,82436866	2
A4 (25% : 5 %)	7,5768032	,10031221	2
Total	6,2776833	1,21457143	6

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Abu

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6,615 ^a	2	3,307	13,035	,033
Intercept	236,456	1	236,456	931,889	,000
Perlakuan	6,615	2	3,307	13,035	,033
Error	,761	3	,254		
Total	243,832	6			
Corrected Total	7,376	5			

a. R Squared = ,897 (Adjusted R Squared = ,828)

Kadar_Abu

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A2 (15% : 15%)	2	5,0053138	
A3 (20% : 10%)	2	6,2509329	6,2509329
A4 (25% : 5 %)	2		7,5768032
Sig.		,090	,078

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 21. Hasil Analisis Data Kimia Kadar Protein Produk Terpilih

Descriptive Statistics

Dependent Variable: Kadar_Protein

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	9,7249443	,27508409	2
A3 (20% : 10%)	7,9979993	,28337208	2
A4 (25% : 5 %)	5,4094552	,29845365	2
Total	7,7107996	1,95529755	6

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Protein

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	18,871 ^a	2	9,435	115,515	,001
Intercept	356,739	1	356,739	4367,415	,000

Perlakuan	18,871	2	9,435	115,515	,001
Error	,245	3	,082		
Total	375,855	6			
Corrected Total	19,116	5			

a. R Squared = ,987 (Adjusted R Squared = ,979)

Kadar_Protein

Duncan^a

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A4 (25% : 5 %)	2	5,4094552		
A3 (20% : 10%)	2		7,9979993	
A2 (15% : 15%)	2			9,7249443
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 22. Hasil Analisis Data Kimia Kadar Kalsium Produk Terpilih

Descriptive Statistics

Dependent Variable: Kadar_Kalsium

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	1705,4343620	184,74043168	2
A3 (20% : 10%)	2755,7137470	204,70414632	2
A4 (25% : 5 %)	3801,9068830	180,12300884	2
Total	2754,3516640	949,07109429	6

Tests of Between-Subjects Effects

Dependent Variable: Kadar_Kalsium

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4395202,597 ^a	2	2197601,299	60,776	,004
Intercept	45518718,534	1	45518718,534	1258,848	,000
Perlakuan	4395202,597	2	2197601,299	60,776	,004
Error	108477,113	3	36159,038		
Total	50022398,244	6			
Corrected Total	4503679,710	5			

a. R Squared = ,452 (Adjusted R Squared = ,086)

Kadar_Kalsium

Duncan^a

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A2 (15% : 15%)	2	1705,4343620		
A3 (20% : 10%)	2		2755,7137470	
A4 (25% : 5 %)	2			3801,9068830
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 23. Hasil Analisis Data Fisik Daya Kemekaran Produk Terpilih

Descriptive Statistics

Dependent Variable: Daya_Kemekaran

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	242,4710425	5,73329822	2
A3 (20% : 10%)	368,3397684	2,45712783	2
A4 (25% : 5 %)	465,3474904	2,86664915	2
Total	358,7194337	99,99868940	6

Tests of Between-Subjects Effects

Dependent Variable: Daya_Kemekaran

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	49951,564 ^a	2	24975,782	1589,941	,000
Intercept	772077,793	1	772077,793	49149,941	,000
Perlakuan	49951,564	2	24975,782	1589,941	,000
Error	47,126	3	15,709		
Total	822076,482	6			
Corrected Total	49998,689	5			

a. R Squared = ,999 (Adjusted R Squared = ,998)

Daya_Kemekaran

Duncan^a

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
A2 (15% : 15%)	2	242,4710425		
A3 (20% : 10%)	2		368,3397684	

A4 (25% : 5 %)	2			465,3474904
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 2,000.

Lampiran 24. Hasil Analisis Data Sensori Warna Produk Terpilih (Coklat - Kuning Kecoklatan)

Descriptive Statistics

Dependent Variable: Warna			
Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	4,3333	3,09597	30
A3 (20% : 10%)	5,5300	2,69638	30
A4 (25% : 5%)	5,6667	2,38665	30
Total	5,1767	2,77687	90

Tests of Between-Subjects Effects

Dependent Variable: Warna

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	32,285 ^a	2	16,142	2,147	,123
Intercept	2411,809	1	2411,809	320,839	,000
Perlakuan	32,285	2	16,142	2,147	,123
Error	653,996	87	7,517		
Total	3098,090	90			
Corrected Total	686,281	89			

a. R Squared = ,047 (Adjusted R Squared = ,025)

Warna

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	4,3333
A3 (20% : 10%)	30	5,5300
A4 (25% : 5%)	30	5,6667
Sig.		,078

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 25. Hasil Analisis Data Sensori Aroma I Produk Terpilih (Amis – Tidak Amis)

Descriptive Statistics

Dependent Variable: Aroma_I

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	6,9267	2,60039	30
A3 (20% : 10%)	6,7500	2,30827	30
A4 (25% : 5%)	7,0333	2,27192	30
Total	6,9033	2,37385	90

Tests of Between-Subjects Effects

Dependent Variable: Aroma_I

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1,229 ^a	2	,614	,107	,899

Intercept	4289,041	1	4289,041	745,845	,000
Perlakuan	1,229	2	,614	,107	,899
Error	500,300	87	5,751		
Total	4790,570	90			
Corrected Total	501,529	89			

a. R Squared = ,002 (Adjusted R Squared = -,020)

Aroma_I

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A3 (20% : 10%)	30	6,7500
A2 (15% : 15%)	30	6,9267
A4 (25% : 5%)	30	7,0333
Sig.		,670

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 26. Hasil Analisis Data Sensori Aroma II Produk Terpilih (Langu-Tidak Langu)

Descriptive Statistics

Dependent Variable: Aroma_II

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	6,8500	2,50568	30
A3 (20% : 10%)	6,3500	2,70641	30
A4 (25% : 5%)	6,4833	2,40188	30

Total	6,5611	2,52140	90
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Tests of Between-Subjects Effects

Dependent Variable: Aroma_II

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4,022 ^a	2	2,011	,311	,733
Intercept	3874,336	1	3874,336	599,986	,000
Perlakuan	4,022	2	2,011	,311	,733
Error	561,792	87	6,457		
Total	4440,150	90			
Corrected Total	565,814	89			

a. R Squared = ,007 (Adjusted R Squared = -,016)

Aroma_II

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A3 (20% : 10%)	30	6,3500
A4 (25% : 5%)	30	6,4833
A2 (15% : 15%)	30	6,8500
Sig.		,478

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 27. Hasil Analisis Data Sensori Rasa Produk Terpilih (Tidak Asin - Asin)

Descriptive Statistics

Dependent Variable: Rasa

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	5,9533	2,58667	30
A3 (20% : 10%)	6,4600	2,46459	30
A4 (25% : 5%)	6,7533	2,23062	30
Total	6,3889	2,42716	90

Tests of Between-Subjects Effects

Dependent Variable: Rasa

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9,828 ^a	2	4,914	,831	,439
Intercept	3673,611	1	3673,611	621,216	,000
Perlakuan	9,828	2	4,914	,831	,439
Error	514,481	87	5,914		
Total	4197,920	90			
Corrected Total	524,309	89			

a. R Squared = ,019 (Adjusted R Squared = -,004)

Rasa

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	5,9533
A3 (20% : 10%)	30	6,4600

A4 (25% : 5%)	30	6,7533
Sig.		,234

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 28. Hasil Analisis Data Sensori Tekstur Produk Terpilih (Tidak Renyah - Renyah)

Descriptive Statistics

Dependent Variable: Tekstur

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	8,0133	1,83204	30
A3 (20% : 10%)	8,5467	1,29661	30
A4 (25% : 5%)	8,7800	,85517	30
Total	8,4467	1,40850	90

Tests of Between-Subjects Effects

Dependent Variable: Tekstur

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9,267 ^a	2	4,633	2,409	,096
Intercept	6421,156	1	6421,156	3339,208	,000
Perlakuan	9,267	2	4,633	2,409	,096
Error	167,297	87	1,923		
Total	6597,720	90			
Corrected Total	176,564	89			

a. R Squared = ,052 (Adjusted R Squared = ,031)

Tekstur

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A2 (15% : 15%)	30	8,0133	
A3 (20% : 10%)	30	8,5467	8,5467
A4 (25% : 5%)	30		8,7800
Sig.		,140	,516

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 29. Hasil Analisis Data Hedonik Warna Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Warna

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	6,9900	2,07154	30
A3 (20% : 10%)	7,4033	2,01126	30
A4 (25% : 5%)	8,0267	1,77024	30
Total	7,4733	1,98017	90

Tests of Between-Subjects Effects

Dependent Variable: Warna

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16,341 ^a	2	8,170	2,137	,124

Intercept	5026,564	1	5026,564	1314,686	,000
Perlakuan	16,341	2	8,170	2,137	,124
Error	332,635	87	3,823		
Total	5375,540	90			
Corrected Total	348,976	89			

a. R Squared = ,047 (Adjusted R Squared = ,025)

Warna

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	6,9900
A3 (20% : 10%)	30	7,4033
A4 (25% : 5%)	30	8,0267
Sig.		,054

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 30. Hasil Analisis Data Hedonik Aroma I Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Aroma_I

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	7,5567	1,77077	30
A3 (20% : 10%)	8,0700	1,46456	30
A4 (25% : 5%)	7,9433	1,57429	30
Total	7,8567	1,60512	90

Tests of Between-Subjects Effects

Dependent Variable: Aroma_I

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Correctd Model	4,291 ^a	2	2,145	,829	,440
Intercept	5555,449	1	5555,449	2148,008	,000
Perlakuan	4,291	2	2,145	,829	,440
Error	225,010	87	2,586		
Total	5784,750	90			
Corrected Total	229,301	89			

a. R Squared = , e019 (Adjusted R Squared = -,004)

Aroma_I

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	7,5567
A4 (25% : 5%)	30	7,9433
A3 (20% : 10%)	30	8,0700
Sig.		,248

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 31. Hasil Analisis Data Hedonik Aroma II Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Aroma_II

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	7,7900	1,75290	30
A3 (20% : 10%)	7,8267	1,54383	30
A4 (25% : 5%)	7,8233	1,64729	30
Total	7,8133	1,63165	90

Tests of Between-Subjects Effects

Dependent Variable: Aroma_II

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	,025 ^a	2	,012	,005	,995
Intercept	5494,336	1	5494,336	2017,595	,000
Perlakuan	,025	2	,012	,005	,995
Error	236,919	87	2,723		
Total	5731,280	90			
Corrected Total	236,944	89			

a. R Squared = ,000 (Adjusted R Squared = -,023)

Aroma_II

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	7,7900

A4 (25% : 5%)	30	7,8233
A3 (20% : 10%)	30	7,8267
Sig.		,936

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 32. Hasil Analisis Data Hedonik Rasa Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Rasa

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	7,2800	2,57125	30
A3 (20% : 10%)	8,2867	1,25141	30
A4 (25% : 5%)	7,9200	1,98987	30
Total	7,8289	2,03217	90

Tests of Between-Subjects Effects

Dependent Variable: Rasa

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	15,574 ^a	2	7,787	1,925	,152
Intercept	5516,235	1	5516,235	1363,501	,000
Perlakuan	15,574	2	7,787	1,925	,152
Error	351,971	87	4,046		
Total	5883,780	90			
Corrected Total	367,545	89			

a. R Squared = ,042 (Adjusted R Squared = ,020)

Rasa

Duncan^a

Perlakuan	N	Subset for alpha = 0.05
		1
A2 (15% : 15%)	30	7,2800
A4 (25% : 5%)	30	7,9200
A3 (20% : 10%)	30	8,2867
Sig.		,069

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 33. Hasil Analisis Data Hedonik Tekstur Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Tekstur

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	7,6200	2,09785	30
A3 (20% : 10%)	8,4067	1,08276	30
A4 (25% : 5%)	9,0000	,80301	30
Total	8,3422	1,53271	90

Tests of Between-Subjects Effects

Dependent Variable: Tekstur

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
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Corrected Model	28,753 ^a	2	14,376	6,936	,002
Intercept	6263,340	1	6263,340	3021,797	,000
Perlakuan	28,753	2	14,376	6,936	,002
Error	180,327	87	2,073		
Total	6472,420	90			
Corrected Total	209,080	89			

a. R Squared = ,138 (Adjusted R Squared = ,118)

Tekstur

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A2 (15% : 15%)	30	7,6200	
A3 (20% : 10%)	30		8,4067
A4 (25% : 5%)	30		9,0000
Sig.		1,000	,114

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 34. Hasil Analisis Data Hedonik *Overall* Produk Terpilih (Tidak Suka – Suka)

Descriptive Statistics

Dependent Variable: Overall

Perlakuan	Mean	Std. Deviation	N
A2 (15% : 15%)	7,9233	1,73636	30
A3 (20% : 10%)	8,6067	,96416	30
A4 (25% : 5%)	8,7867	,90962	30
Total	8,4389	1,30183	90

Tests of Between-Subjects Effects

Dependent Variable: Overall

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12,447 ^a	2	6,223	3,913	,024
Intercept	6409,336	1	6409,336	4029,369	,000
Perlakuan	12,447	2	6,223	3,913	,024
Error	138,387	87	1,591		
Total	6560,170	90			
Corrected Total	150,834	89			

a. R Squared = ,083 (Adjusted R Squared = ,061)

Overall

Duncan^a

Perlakuan	N	Subset for alpha = 0.05	
		1	2
A2 (15% : 15%)	30	7,9233	
A3 (20% : 10%)	30		8,6067
A4 (25% : 5%)	30		8,7867
Sig.		1,000	,582

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 30,000.

Lampiran 35. Kerupuk dengan Penambahan Pasta Tulang Ikan Lele dan Tepung Ampas Tahu



A1 (0% : 0%)



A2 (15% : 15%)



A3 (20% : 10%)



A4 (25% : 5%)

Lampiran 36. Dokumentasi Uji Kimia, Sensori, dan Fisik Kerupuk dengan Penambahan Pasta Tulang Ikan Lele dan Tepung Ampas Tahu



Pengujian Kadar Air



Pengujian Kadar Abu



Pengujian Kadar Protein



Pengujian Kadar Kalsium



Uji Daya Kemekaran



Uji Sensori dan Hedonik