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LAMPIRAN

Lampiran 1. Formulir Isian (*Scoresheet*) Uji Mutu Sensori

Uji Mutu Sensori

Nama : ..... Tanggal: .....

Produk : Donat

Kode Donat :……

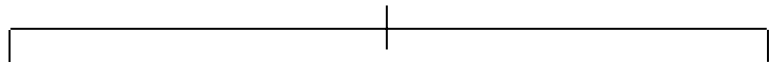
Intruksi :

Dihadapan anda terdapat sampel donat. Nilailah intensitas karakteristik berdasarkan parameter aroma, tekstur, warna dan rasa masing-masing sampel dengan memberikan tanda garis vertikal atau tanda silang pada garis horisontal

.

Kode Sampel :

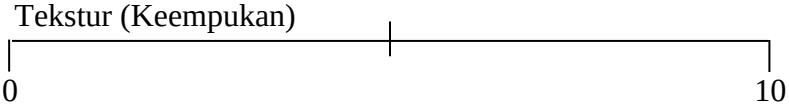
- Aroma



0 10

Tidak tercium aroma labu kuning Tercium aroma labu kuning

- Tekstur (Keempukan)



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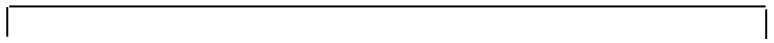
Tidak empuk Sangat empuk

- *Warna crumb*



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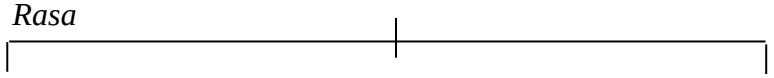
Putih Kuning Terang

- *Rasa*



0 10

Tidak Manis Manis

Lampiran 2. Formulir Isian (*Scoresheet*) Uji Hedonik

Uji Mutu Hedonik

Nama : ..... Tanggal: .....

Produk : Donat

Kode Donat :……

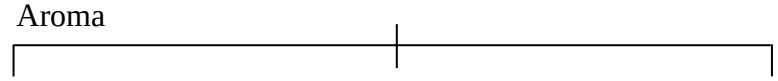
Intruksi :

Dihadapan anda terdapat sampel donat. Nilailah intensitas karakteristik berdasarkan parameter aroma, tekstur, warna dan rasa masing-masing sampel dengan memberikan tanda garis vertikal atau tanda silang pada garis horisontal

.

Kode Sampel :

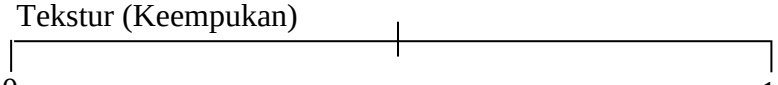
- Aroma



0 10

Sangat tidak suka Sangat suka

- Tekstur (Keempukan)



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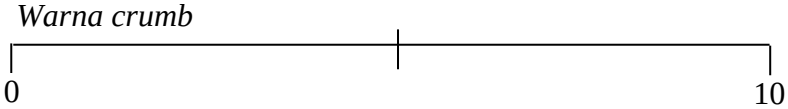
Sangat tidak suka Sangat suka

- *Warna crumb*



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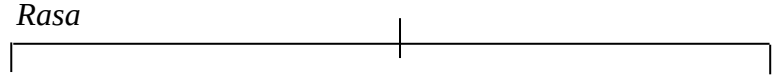
Sangat tidak suka Sangat suka

- *Rasa*



0 10

Sangat tidak suka Sangat suka

Lampiran 3. Hasil Uji Kadar Air

Uji Kadar Air

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10,661[a]	3	3.554	4.426	0.092
Intercept	4117.781	1	4117.781	5128.316	0.000
Formula	10.661	3	3.554	4.426	0.092
Error	3.212	4	0.803		
Total	4131.654	8			
Corrected Total	13.873	7			

a. R Squared = ,768 (Adjusted R Squared = ,595)

1. Grand Mean

Dependent Variable:

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
22.688	0.317	21.808	23.567

2. Formula

Dependent Variable:

Formula	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
A1_520	24.520	0.634	22.761	26.279
A2_351	22.830	0.634	21.071	24.589
A3_742	21.730	0.634	19.971	23.489
A4_683	21.670	0.634	19.911	23.429

Kadar_Air

Duncan[a,b]

Formula	N	Subset	
		1	2
A4_683	2	21.6700	
A3_742	2	21.7300	

A2_351	2	22.8300	22.8300
A1_520	2		24.5200
Sig.		0.271	0.132

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = ,803.

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

b. Alpha = ,05.

Lampiran 4. Hasil Uji Daya Kembang

NO	UKURAN	A1B1	A1B2	A2B1	A2B2	A3B1	A3B2	A4B1	A4B2
1	VOLUME DAYA KEMBANG	58,59	31,08	20,56	18,17	14,21	48,85	30,10	43,99
2	BERAT DONAT AWAL	25	25	25	25	25	25	25	25
3	BERAT DONAT AKHIR	26	26	26	26	26	26	26	26
4	DIAMETER DONAT AWAL	51	51	45	49	48	53	50	51
5	DIAMETER DONAT AKHIR	55	52	47	51	50	56	53	53
6	TINGGI DONAT AWAL	22	23	19	22	19	18	19	18
7	TINGGI DONAT AKHIR	30	29	21	24	20	24	22	24

Uji Daya Kembang

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df
Corrected Model	688,706[a]	3
Intercept	8814,600	1
Formula	688,706	3
Error	1077,687	4
Total	10580,994	8
Corrected Total	1766,393	7

a. R Squared = ,390 (Adjusted R Squared = -,068)

Daya_Kembang

Duncan[a,b]

Formula	N	Subset 1
A2_351	2	19,37
A3_742	2	31,53
A4_683	2	37,05
A1_520	2	44,84
Sig.		0,201

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 269,422.

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

b. Alpha = ,05.

Lampiran 5. Hasil Uji Daya Serap Minyak

NO	PERLAKUAN	A1B1	A1B2	A2B1	A2B2	A3B1	A3B2	A4B1	A4B2
1	BERAT WAJAN	440	440	440	440	440	440	440	440
2	BERAT MINYAK GORENG AWAL	1765	1659	1757	1620	1784	1683	1709	1625
3	BERAT MINYAK GORENG AKHIR	1570	1622	1703	1542	1729	1585	1339	1378
4	MASSA SAMPEL	400	400	400	400	400	400	400	400

Uji Daya Serap Minyak

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square
Corrected Model	302,063[a]	3	100,688
Intercept	1800,000	1	1800,000
Formula	302,063	3	100,688
Error	97,188	4	24,297
Total	2199,250	8	
Corrected Total	399,250	7	

a. R Squared = ,757 (Adjusted R Squared = ,574)

Daya_Serap_Minyak

Duncan[a,b]

Formula	N	Subset

		1	2
A3_742	2	9,25	
A4_683	2	9,63	
A2_351	2	16,88	16,88
A1_520	2		24,25
Sig.		0,203	0,209

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 24,297.

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

b. Alpha = ,05.

Lampiran 6. Hasil Uji Mutu Sensori

No	Formula	Ulangan Responden	Ulangan Adonan	Aroma	Tekstur	Warna	Rasa
1	A1_520	1	B1	2	2.3	6.7	3.3
2	A1_520	2	B1	7	10	10	10
3	A1_520	3	B1	6.3	6.3	6.3	6.3
4	A1_520	4	B1	2.2	6	6	5
5	A1_520	5	B1	6.4	7.7	2.2	5.6
6	A1_520	6	B1	7.4	7.3	6.9	5
7	A1_520	7	B1	4.7	2.5	3.5	0
8	A1_520	8	B1	4	3.3	6.4	1.5
9	A1_520	9	B1	7	7	7	7
10	A1_520	10	B1	2	3	6.5	2.2
11	A1_520	11	B1	2.4	5	5	6.4
12	A1_520	12	B1	0	2.4	6.4	0
13	A1_520	13	B1	0	7	1	5
14	A1_520	14	B1	0	7	2	6
15	A1_520	15	B1	8.1	4	2.2	4.2
16	A1_520	16	B1	6	4	2.1	4

17	A1_520	17	B2	1	3.4	1.3	3.2
18	A1_520	18	B2	0	7	1	4
19	A1_520	19	B2	4.4	5	1	4
20	A1_520	20	B2	5.9	2	0	0
21	A1_520	21	B2	1	4	4.5	4.5
22	A1_520	22	B2	0	7	7	5
23	A1_520	23	B2	6	7.5	7.5	3
24	A1_520	24	B2	1.5	2	2	2
25	A1_520	25	B2	2.5	5.4	3.3	3.4
26	A1_520	26	B2	0	7.2	1	3.5
27	A1_520	27	B2	0	5.5	1	4
28	A1_520	28	B2	0	1	2	0
29	A1_520	29	B2	1	7.4	1	4
30	A1_520	30	B2	2.5	2.5	1	2.5
31	A1_520	31	B2	1	1	1	1
32	A1_520	32	B2	1	1	1	1
33	A2_351	1	B1	2.8	3.6	5	2.3
34	A2_351	2	B1	6.1	5	4	2
35	A2_351	3	B1	6.5	4	6.3	6.3
36	A2_351	4	B1	2.2	5	5	5
37	A2_351	5	B1	5.5	4	6	5
38	A2_351	6	B1	7.3	4.4	5.7	3.7
39	A2_351	7	B1	5.5	5.4	6.2	2
40	A2_351	8	B1	4	5	5	3.5
41	A2_351	9	B1	6.5	6.9	7	7.2
42	A2_351	10	B1	2.2	3	6.5	2.4
43	A2_351	11	B1	5	4.5	6	6
44	A2_351	12	B1	0	4	6.3	4
45	A2_351	13	B1	4.5	4.5	7	5.3
46	A2_351	14	B1	8	2	8	3
47	A2_351	15	B1	8.1	6.2	8.1	2.2

48	A2_351	16	B1	8	6.4	8.3	3.3
49	A2_351	17	B2	1	1	3.5	3.5
50	A2_351	18	B2	5.2	3.5	6.4	3.3
51	A2_351	19	B2	4.7	1	4.5	3.8
52	A2_351	20	B2	6.2	0	6	0
53	A2_351	21	B2	6.9	1	7.6	4.5
54	A2_351	22	B2	4	4	5	4
55	A2_351	23	B2	2	3.3	6.4	2.5
56	A2_351	24	B2	3.6	1	6.6	2.8
57	A2_351	25	B2	4	3.5	5.2	4
58	A2_351	26	B2	0	0	1	4.1
59	A2_351	27	B2	1	0	5	3
60	A2_351	28	B2	0	0	6.5	0
61	A2_351	29	B2	5.7	1	4.6	3.4
62	A2_351	30	B2	1	9	1	7.5
63	A2_351	31	B2	1.5	1	9	1
64	A2_351	32	B2	9	1	9	1
65	A3_742	1	B1	1.5	1.9	6.5	1.5
66	A3_742	2	B1	10	7.2	10	4
67	A3_742	3	B1	10	10	10	10
68	A3_742	4	B1	2.2	5.5	5.5	5.5
69	A3_742	5	B1	7.3	4.4	2.5	1
70	A3_742	6	B1	7	5.6	6.9	4.7
71	A3_742	7	B1	5.5	3	6.5	4
72	A3_742	8	B1	2	4	5	2
73	A3_742	9	B1	5.5	5.8	7	5,.8
74	A3_742	10	B1	2	3	6.5	2.3
75	A3_742	11	B1	5	4.6	5.9	5
76	A3_742	12	B1	2	6	6.2	2.1
77	A3_742	13	B1	4	5.2	6	6
78	A3_742	14	B1	5	6	8	4

79	A3_742	15	B1	1.4	6.3	8.2	5.6
80	A3_742	16	B1	2.1	4	8.3	6
81	A3_742	17	B2	7.5	1	5.3	4.5
82	A3_742	18	B2	6	4.5	7.4	6.9
83	A3_742	19	B2	6.2	2.8	4.3	4.3
84	A3_742	20	B2	4	3.4	4.7	6.2
85	A3_742	21	B2	6.7	1	8	4.3
86	A3_742	22	B2	5	4	7	7
87	A3_742	23	B2	4	4.7	5.9	4.8
88	A3_742	24	B2	1	1.2	5	3.6
89	A3_742	25	B2	2.5	3	6.4	6.4
90	A3_742	26	B2	3.9	1.1	8	3.2
91	A3_742	27	B2	3.6	1.3	3.1	3.7
92	A3_742	28	B2	1	0	6.9	1.5
93	A3_742	29	B2	6.8	6	6.7	2.7
94	A3_742	30	B2	7.6	2.8	8.2	8.6
95	A3_742	31	B2	8.2	1	9	1
96	A3_742	32	B2	8.6	5	9.5	5
97	A4_683	1	B1	2.7	2.7	6.1	3.2
98	A4_683	2	B1	10	10	10	6.9
99	A4_683	3	B1	10	10	10	10
100	A4_683	4	B1	1.1	5.9	5	6.1
101	A4_683	5	B1	6.4	1	3.5	5.5
102	A4_683	6	B1	7.3	4.2	5	4.2
103	A4_683	7	B1	5.2	3.4	6.5	5
104	A4_683	8	B1	4	5.5	5.7	4.3
105	A4_683	9	B1	7.2	7.2	7.2	7.5
106	A4_683	10	B1	5.5	3.3	4.6	3.2
107	A4_683	11	B1	6.5	4.6	5.6	6.2
108	A4_683	12	B1	0	2.5	4	2.2
109	A4_683	13	B1	4	8.2	8	9

110	A4_683	14	B1	7	6	9	6
111	A4_683	15	B1	1	4	7.5	1.6
112	A4_683	16	B1	1.7	4	7	2
113	A4_683	17	B2	5.2	2.1	4.5	4.7
114	A4_683	18	B2	6.1	5	6.5	5.2
115	A4_683	19	B2	6.5	7.5	6	4.6
116	A4_683	20	B2	10	2.6	6.4	3.5
117	A4_683	21	B2	5.6	3.1	7.2	5
118	A4_683	22	B2	6	7	8	7
119	A4_683	23	B2	3.4	4.9	6.5	5.6
120	A4_683	24	B2	4.5	3	6.5	3.7
121	A4_683	25	B2	3.5	4	5.8	4.5
122	A4_683	26	B2	1.5	1	7.1	1.2
123	A4_683	27	B2	10	2	6.5	4.5
124	A4_683	28	B2	2	4	5	2.1
125	A4_683	29	B2	5.6	5.2	5.7	3.7
126	A4_683	30	B2	8	3.2	7.7	8.1
127	A4_683	31	B2	8.5	1	9.4	1
128	A4_683	32	B2	8.4	4.5	9	1

Formula	**Ulangan**	**Aroma**	**Tekstur**	**Warna**	**Rasa**	**Aroma**	**Tekstur**	**Warna**	**Rasa**
		Total	**Total**	**Total**	**Total**	**Average**	**Average**	**Average**	**Average**
A1_520	B1	65.5	84.8	80.2	71.5	4.09	5.30	5.01	4.47
A1_520	B2	27.8	68.9	35.6	45.1	1.74	4.31	2.23	2.82
A2_351	B1	82.2	73.9	100.4	63.2	5.14	4.62	6.28	3.95
A2_351	B2	55.8	30.3	87.3	48.4	3.49	1.89	5.46	3.03
A3_742	B1	72.5	82.5	109	63.7	4.53	5.16	6.81	4.25
A3_742	B2	82.6	42.8	105.4	73.7	5.16	2.68	6.59	4.61
A4_683	B1	79.6	82.5	104.7	82.9	4.98	5.16	6.54	5.18
A4_683	B2	94.8	60.1	107.8	65.4	5.93	3.76	6.74	4.09

Uji Mutu Sensori Aroma

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

Dependent Variable:

F	df1	df2	Sig.
0,106	3	124	0,956

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	112,378[a]	3	37,459	5,089	0,002
Intercept	2457,005	1	2457,005	333,768	0,000
Formula	112,378	3	37,459	5,089	0,002
Error	912,817	124	7,361		
Total	3482,200	128			
Corrected Total	1025,195	127			

a. R Squared = ,110 (Adjusted R Squared = ,088)

Aroma

Duncan[a,b]

Formula	N	Subset 1	Subset 2
A1_520	32	2,9156	
A2_351	32		4,3125
A3_742	32		4,8469

A4_683	32		5,4500
Sig.		1,000	0,116

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 7,361.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Mutu Sensori Tekstur

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

Dependent Variable:

F	df1	df2	Sig.
0,411	3	124	0,746

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	43,743[a]	3	14,581	2,696	0,049
Intercept	2159,888	1	2159,888	399,353	0,000
Formula	43,743	3	14,581	2,696	0,049
Error	670,649	124	5,408		
Total	2874,280	128			
Corrected Total	714,392	127			

a. R Squared = ,061 (Adjusted R Squared = ,039)

Tekstur

Duncan[a,b]

Formula	N	Subset 1	Subset 2
A2_351	32	3,2563	
A3_742	32	3,9156	3,9156
A4_683	32	4,4563	4,4563
A1_520	32		4,8031
Sig.		0,052	0,153

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 5,408.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05

Uji Mutu Sensori Warna

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

Dependent Variable:

F	df1	df2	Sig.
7,558	3	124	0,000

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.

Corrected Model	199,797[a]	3	66,599	15,716	0,000
Intercept	4167,845	1	4167,845	983,510	0,000
Formula	199,797	3	66,599	15,716	0,000
Error	525,478	124	4,238		
Total	4893,120	128			
Corrected Total	725,275	127			

a. R Squared = ,275 (Adjusted R Squared = ,258)

Warna

Duncan[a,b]

		Subset	
Formula	N	1	2
A1_520	32	3,6188	
A2_351	32		5,8656
A4_683	32		6,6406
A3_742	32		6,7000
Sig.		1,000	0,129

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4,238.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Mutu Sensori Rasa

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

Dependent Variable:

F	df1	df2	Sig.
0,664	3	123	0,575

Tests the null hypothesis that the error variance of the

dependent variable is equal across groups.

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	30,862[a]	3	10,287	2,235	0,087
Intercept	2082,180	1	2082,180	452,445	0,000
Formula	30,862	3	10,287	2,235	0,087
Error	566,054	123	4,602		
Total	2676,390	127			
Corrected Total	596,916	126			

a. R Squared = ,052 (Adjusted R Squared = ,029)

Rasa

Duncan[a,b,c]

Formula	N	Subset 1
A2_351	32	3,4875
A1_520	32	3,6438
A3_742	31	4,4323
A4_683	32	4,6344
Sig.		0,053

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4,602.

a. Uses Harmonic Mean Sample Size = 31,744.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

Uji Normalitas

One-Sample Kolmogorov-Smirnov Test

		Residual for Aroma	Residual for Tekstur	Residual for Warna	Residual for Rasa
N		128	128	128	127
Normal Parameters[a,b]	Mean	0,0000	0,0000	0,0000	0,0000
	Std. Deviation	2,68096	2,29798	2,03411	2,11955
Most Extreme Differences	Absolute	0,091	0,087	0,051	0,072
	Positive	0,091	0,087	0,049	0,072
	Negative	-0,052	-0,044	-0,051	-0,055
Test Statistic		0,091	0,087	0,051	0,072
Asymp. Sig. (2-tailed)		,012[c]	,019[c]	,200[c,d]	,185[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

e. This is a lower bound of the true significance.

Lampiran 7. Hasil Uji Hedonik

No	Formula	Ulangan Responden	Ulangan Adonan	Aroma	Tekstur	Warna	Rasa
1	A1_520	1	B1	2	2.7	5.7	2.7
2	A1_520	2	B1	10	6.5	10	10
3	A1_520	3	B1	6	6	5.9	5.9
4	A1_520	4	B1	1.2	5.3	5.5	5.5
5	A1_520	5	B1	6.5	10	6	10
6	A1_520	6	B1	6.8	6.5	5	5.2
7	A1_520	7	B1	4.7	3.4	5.3	3.2
8	A1_520	8	B1	3.3	3.1	10	2.2
9	A1_520	9	B1	6.7	6.7	6.7	6.9
10	A1_520	10	B1	3.5	3.7	4.5	3.5
11	A1_520	11	B1	4.8	4.7	4.4	6
12	A1_520	12	B1	2.1	2.3	4	2.2
13	A1_520	13	B1	8	6	8	6
14	A1_520	14	B1	6	6	8	6
15	A1_520	15	B1	2.5	4	4	4
16	A1_520	16	B1	2.1	4	4	4
17	A1_520	17	B2	4.3	3.5	5.1	5.2
18	A1_520	18	B2	4	4.7	6.1	3.2
19	A1_520	19	B2	4.6	4.8	4	4
20	A1_520	20	B2	0	0	10	0
21	A1_520	21	B2	5.9	7	6.7	7
22	A1_520	22	B2	7	6	7	7
23	A1_520	23	B2	4.9	10	10	4.1
24	A1_520	24	B2	4	2.7	2.3	1
25	A1_520	25	B2	3.7	4.5	3.5	4.7
26	A1_520	26	B2	1	1.3	10	1.9
27	A1_520	27	B2	4.6	5	4.8	4.1
28	A1_520	28	B2	4	1.5	4	4

29	A1_520	29	B2	6.5	6	5.6	6.6
30	A1_520	30	B2	8	3	7	8
31	A1_520	31	B2	9	5	9	5
32	A1_520	32	B2	1	1	1	1
33	A2_351	1	B1	2	1.7	1.9	1
34	A2_351	2	B1	10	6.5	10	10
35	A2_351	3	B1	5.6	5.7	5.8	5.8
36	A2_351	4	B1	2.6	4.8	4.9	5
37	A2_351	5	B1	5.5	4	4.4	2
38	A2_351	6	B1	6.4	4.3	4.9	5.1
39	A2_351	7	B1	5.4	3.1	6.1	4.1
40	A2_351	8	B1	3.5	3.5	5.4	2.9
41	A2_351	9	B1	5.8	6.2	6.5	7
42	A2_351	10	B1	2.1	3	4.6	3
43	A2_351	11	B1	4.8	4.5	5.9	5.3
44	A2_351	12	B1	2.1	4	5.8	4.1
45	A2_351	13	B1	4.8	4	5.1	3.9
46	A2_351	14	B1	3	3	3	4
47	A2_351	15	B1	4	4	4	4
48	A2_351	16	B1	4	4	4	6.6
49	A2_351	17	B2	1	0.8	1	1
50	A2_351	18	B2	5.6	2.8	3	3.2
51	A2_351	19	B2	4	1.1	4.1	4
52	A2_351	20	B2	0	0	5.2	0
53	A2_351	21	B2	4.1	0.7	6.9	5.2
54	A2_351	22	B2	6	3	4	4
55	A2_351	23	B2	2.4	4	6.8	3
56	A2_351	24	B2	4.1	3.5	0.7	4.2
57	A2_351	25	B2	4.5	2.5	4	4.6
58	A2_351	26	B2	4	0	0	1.9
59	A2_351	27	B2	4	4	4	4

60	A2_351	28	B2	4	1	4	0.8
61	A2_351	29	B2	5.7	0.7	5.7	6.2
62	A2_351	30	B2	7	4	8	7.4
63	A2_351	31	B2	5	8.7	5	5
64	A2_351	32	B2	9	1	9	1
65	A3_742	1	B1	2	2.4	5.9	2.8
66	A3_742	2	B1	10	10	10	10
67	A3_742	3	B1	6.7	6.7	6.7	6.7
68	A3_742	4	B1	2	5.4	5.3	5.6
69	A3_742	5	B1	3.6	3	3.5	4.2
70	A3_742	6	B1	4.2	4.2	4.6	3.9
71	A3_742	7	B1	4.7	4.8	5.5	5.4
72	A3_742	8	B1	4.7	5.5	5.2	3.8
73	A3_742	9	B1	6.4	6.6	6.6	6.8
74	A3_742	10	B1	2.3	3.3	6	3.1
75	A3_742	11	B1	6	5	4.6	5.3
76	A3_742	12	B1	2	5.8	4	4.1
77	A3_742	13	B1	7.2	7	5.1	7
78	A3_742	14	B1	6	7	4	5
79	A3_742	15	B1	6.1	6.1	2.7	5.5
80	A3_742	16	B1	6.3	6.6	6.7	2.4
81	A3_742	17	B2	3	1.3	3.4	4.1
82	A3_742	18	B2	6.4	4.3	7.3	6.1
83	A3_742	19	B2	5.3	3.2	4	4
84	A3_742	20	B2	6.5	4.1	7.3	5.7
85	A3_742	21	B2	5.4	1.6	6.9	4.4
86	A3_742	22	B2	4	3	7	7
87	A3_742	23	B2	4.7	4.9	6.1	5
88	A3_742	24	B2	4	4.6	4.5	4
89	A3_742	25	B2	2.4	3.5	3.5	4.9
90	A3_742	26	B2	4.5	3.6	3.4	4

91	A3_742	27	B2	2.5	2.5	2.7	4.1
92	A3_742	28	B2	4.1	1.3	2.5	6.1
93	A3_742	29	B2	5.4	5.7	6.7	6.6
94	A3_742	30	B2	7.6	2.9	8.6	8.5
95	A3_742	31	B2	9	1	5	5
96	A3_742	32	B2	9	1	9	1
97	A4_683	1	B1	3.2	3.2	6.3	3.1
98	A4_683	2	B1	10	10	10	10
99	A4_683	3	B1	10	10	10	10
100	A4_683	4	B1	1.3	5.3	5	5.7
101	A4_683	5	B1	4.3	0.1	2.1	7.2
102	A4_683	6	B1	3.6	3.3	4.6	5.3
103	A4_683	7	B1	5.2	3.5	5.3	5.1
104	A4_683	8	B1	4.7	6.4	6.1	6.5
105	A4_683	9	B1	6.8	6.7	6.8	7
106	A4_683	10	B1	4.6	4.4	4.5	4.5
107	A4_683	11	B1	7	4.9	6.4	7.4
108	A4_683	12	B1	2.2	4.1	5.7	4.2
109	A4_683	13	B1	7.5	8	5	8
110	A4_683	14	B1	8	6	2	6
111	A4_683	15	B1	2.1	2.3	2.4	2.4
112	A4_683	16	B1	2.3	2.3	2.6	2.7
113	A4_683	17	B2	3.3	3.4	3.4	3.5
114	A4_683	18	B2	4.6	4.6	5.6	7.1
115	A4_683	19	B2	5.3	5.4	4	5
116	A4_683	20	B2	4	2	6.9	1.5
117	A4_683	21	B2	6.1	2.1	5.9	6
118	A4_683	22	B2	5.8	5.8	6.1	6
119	A4_683	23	B2	4	5.8	7	6
120	A4_683	24	B2	3.3	2.8	4.5	3.2
121	A4_683	25	B2	4	5	4.6	3.8

122	A4_683	26	B2	1	1.3	10	1.3
123	A4_683	27	B2	1.3	1.3	2.1	2.7
124	A4_683	28	B2	4	4	4	6.2
125	A4_683	29	B2	6.1	6	6.5	6.3
126	A4_683	30	B2	8	3.3	7.8	8
127	A4_683	31	B2	5	5	9	5
128	A4_683	32	B2	9	1	9	1

Formula	Ulangan	Aroma Total	Tekstur Total	Warna Total	Rasa Total	Aroma Average	Tekstur Average	Warna Average	Rasa Average
A1_520	B1	76.2	80.9	97	83.3	4.76	5.06	6.06	5.21
A1_520	B2	72.5	66	96.1	66.8	4.53	4.13	6.01	4.18
A2_351	B1	71.6	66.3	82.3	73.8	4.48	4.14	5.14	4.61
A2_351	B2	70.4	37.8	71.4	55.5	4.40	2.36	4.46	3.47
A3_742	B1	80.2	89.4	86.4	81.6	5.01	5.59	5.40	5.10
A3_742	B2	83.8	48.5	87.9	80.5	5.24	3.03	5.49	5.03
A4_683	B1	82.8	80.5	84.8	95.1	5.18	5.03	5.30	5.94
A4_683	B2	74.8	58.8	96.4	72.6	4.68	3.68	6.03	4.54

Uji Hedonik

Uji Hedonik Aroma

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

Dependent Variable:

F	df1	df2	Sig.
0,646	3	124	0,587

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	8,801[a]	3	2,934	0,565	0,639
Intercept	2928,994	1	2928,994	564,516	0,000
Formula	8,801	3	2,934	0,565	0,639
Error	643,375	124	5,189		
Total	3581,170	128			
Corrected Total	652,176	127			

a. R Squared = ,013 (Adjusted R Squared = -,010)

Aroma_Hedonik

Duncan[a,b]

Formula	N	Subset 1
A2_351	32	4,4375
A1_520	32	4,6469
A4_683	32	4,9250
A3_742	32	5,1250
Sig.		0,278

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 5,189.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Hedonik Tekstur

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

Dependent Variable:

F	df1	df2	Sig.
0,343	3	124	0,794

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	34,016[a]	3	11,339	2,354	0,075
Intercept	2179,650	1	2179,650	452,608	0,000
Formula	34,016	3	11,339	2,354	0,075
Error	597,154	124	4,816		
Total	2810,820	128			
Corrected Total	631,170	127			

a. R Squared = ,054 (Adjusted R Squared = ,031)

Tekstur_Hedonik

Duncan[a,b]

Formula	N	Subset 1	Subset 2
A2_351	32	3,2531	
A3_742	32	4,3094	4,3094
A4_683	32	4,3531	4,3531
A1_520	32		4,5906
Sig.		0,059	0,633

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4,816.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Hedonik Warna

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

Dependent Variable:

F	df1	df2	Sig.
0,492	3	124	0,688

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25,591[a]	3	8,530	1,774	0,156
Intercept	3853,323	1	3853,323	801,541	0,000
Formula	25,591	3	8,530	1,774	0,156
Error	596,117	124	4,807		
Total	4475,030	128			
Corrected Total	621,707	127			

a. R Squared = ,041 (Adjusted R Squared = ,018)

Warna_Hedonik

Duncan[a,b]

Formula	N	Subset 1	Subset 2
A2_351	32	4,8031	
A3_742	32	5,4469	5,4469
A4_683	32	5,6625	5,6625
A1_520	32		6,0344

Sig.		0,142	0,317

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4,807.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Hedonik Rasa

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

Dependent Variable:

F	df1	df2	Sig.
1,141	3	124	0,335

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

a. Design: Intercept + Formula

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	27,095[a]	3	9,032	1,919	0,130
Intercept	2899,411	1	2899,411	616,057	0,000
Formula	27,095	3	9,032	1,919	0,130
Error	583,594	124	4,706		
Total	3510,100	128			
Corrected Total	610,689	127			

a. R Squared = ,044 (Adjusted R Squared = ,021)

Rasa_Hedonik

Duncan[a,b]

Formula	N	Subset

		1	2
A2_351	32	4,0406	
A1_520	32	4,6906	4,6906
A3_742	32	5,0656	5,0656
A4_683	32		5,2406
Sig.		0,076	0,344

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 4,706.

a. Uses Harmonic Mean Sample Size = 32,000.

b. Alpha = ,05.

Uji Normalitas Hedonik

One-Sample Kolmogorov-Smirnov Test

		Residual for Aroma	Residual for Tekstur	Residual for Warna	Residual for Rasa
N		128	128	128	128
Normal Parameters[a,b]	Mean	0,0000	0,0000	0,0000	0,0000
	Std. Deviation	2,25076	2,16841	2,16653	2,14365
Most Extreme Differences	Absolute	0,065	0,053	0,058	0,052
	Positive	0,065	0,053	0,058	0,052
	Negative	-0,036	-0,041	-0,052	-0,047
Test Statistic		0,065	0,053	0,058	0,052
Asymp. Sig. (2-tailed)		,200[c,d]	,200[c,d]	,200[c,d]	,200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Lampiran 8. Prosedur Analisis

1. Uji organoleptik

Uji organoleptik adalah cara mengukur, menilai atau menguji mutu komoditas dengan menggunakan kepekaan alat indra manusia, yaitu mata, hidung, mulut, dan ujung jari tangan. Uji organoleptik juga disebut pengukuran subjektif karena didasarkan pada respon subjektif manusia sebagai alat ukur (Soekarto, 1990). Untuk melaksanakan penilaian organoleptik diperlukan panel. Dalam penilaian suatu mutu atau analis sifat-sifat sensori suatu komoditi, panel bertindak sebagai instrumen atau alat. Panel ini terdiri dari orang atau kelompok yang bertugas menilai sifat atau mutu komoditi berdasarkan kesan subjektif. Orang yang menjadi anggota panel disebut panelis (Rahayu, 1998).

a. Uji Mutu Sensori dan Uji Hedonik

yang digunakan pada penelitian yaitu mutu sensori dan uji hedonik. Pengujian ini dilakukan untuk mengetahui mutu sensori dan tingkat kesukaan dari karakteristik produk dengan menggunakan 30 orang panelis yang merupakan panelis semi terlatih. Adapun parameter yang digunakan meliputi parameter aroma, tekstur, warna dan rasa.

- Aroma

Pada uji aroma digunakan skala garis dengan panjang 10 cm (0-10) dengan tanda batas dikedua ujungnya dari ujung kiri dan kanan. Masing-masing tanda batas diberi label dengan deskripsi intensitas. Tanda batas kiri diberi deskripsi intensitas tidak tercium aroma labu dan batas kanan diberi deskripsi tercium aroma labu.

- Tekstur

Pada uji tekstur digunakan skala garis dengan panjang 10 cm (0-10) dengan tanda batas dikedua ujungnya dari ujung kiri dan kanan. Masing-masing tanda batas diberi label dengan deskripsi intensitas. Tanda batas kiri diberi deskripsi intensitas tidak empuk dan batas kanan diberi deskripsi sangat empuk .

- Warna

Pada uji warna digunakan skala garis dengan panjang 10 cm (0-10) dengan tanda batas dikedua ujungnya dari ujung kiri dan kanan. Masing-

masing tanda batas diberi label dengan deskripsi intensitas. Tanda batas kiri diberi deskripsi intensitas putih dan batas kanan diberi deskripsi kuning terang.

- Rasa

Pada uji rasa digunakan skala garis dengan panjang 10 cm (0-10) dengan tanda batas dikedua ujungnya dari ujung kiri dan kanan. Masing-masing tanda batas diberi label dengan deskripsi intensitas. Tanda batas kiri diberi deskripsi intensitas tidak manis dan batas kanan diberi deskripsi manis.

2. Uji Kimia

a. Kadar Air Metode Thermogravimetri (AOAC, 2005)

Penentuan kadar air dengan metode oven yaitu botol timbang yang akan digunakan dioven terlebih dahulu selama 30 menit pada suhu 100-105^{0}C, kemudian didinginkan dalam eksikator untuk menurunkan suhu dan menstabilkan kelembaban (RH) kemudian ditimbang sebagai A gram. Sampel 2 gram dimasukkan ke dalam botol timbang sebagai B gram. Bahan dioven pada suhu 100-105^{0}C selama 6 jam lalu didinginkan dalam eksikator selama 30 menit dan ditimbang sebagai C gram. Tahap ini diulangi hingga dicapai bobot yang konstan.

Kadar dihitung dengan rumus :

$$(\%)\text{Kadar air} = \frac{B-C}{B-A} \text{ x } 100\%$$

Keterangan :

A = bobot botol timbang kosong (gram)

B = bobot botol dan sampel (gram)

C = bobot botol dan sampel setelah dioven (gram)

b. Kadar Abu Metode Thermogravimetri AOAC (1995)

Kadar abu dianalisis menggunakan metode Association of Official Analytical Chemist yang disingkat AOAC (1995). Sampel ditimbang sebanyak satu sampai lima gram, lalu dimasukkan ke dalam cawan porselen yang sudah diketahui bobot tetapnya. Sampel diarangkan di atas Bunsen dengan nyala api kecil hingga berasap, selanjutnya dimasukkan ke dalam tanur pada suhu 500 sampai 600°C sampai menjadi abu yang

berwarna putih. Cawan yang berisi abu didinginkan dalam desikator dan dilakukan penimbangan hingga diperoleh bobot tetap. Kadar abu dapat dihitung dengan rumus :

$$\text{Kadar abu (\%)} = \frac{Berat\ abu\ (g)}{Berat\ sampel\ (g)} \text{ x } 100\%$$

c. Kadar Lemak AOAC (1995)

Kadar lemak dianalisis menggunakan metode AOAC (1995). Labu lemak yang ukurannya sesuai dengan alat ektraksi Soxhlet dikeringkan dalam oven. Kemudian didinginkan dalam desikator dan ditimbang hingga bobot tetap. Sebanyak lima gram sampel dibungkus dengan kertas saring, kemudian ditutup dengan kapas wool yang bebas lemak. Kertas saring yang berisi sampel tersebut dimasukkan dalam alat ektraksi soxhlet, kemudian dipasang alat kondensor ditasnya dan labu lemak di bawahnya. Pelarut lemak (kloroform : etanol, 1:2) dituangkan ke dalam labu lemak secukupnya sesuai dengan ukuran yang digunakan. Selanjutnya dilakukan refluks minimum lima jam sampai pelarut yang turun kembali ke labu lemak berwarna jernih. Pelarut yang ada di dalam labu lemak didestilasi dan ditampung. Kemudian labu lemak yang berisi hasil ekstraksi dipanaskan dalam oven pada suhu 105°C. Selanjutnya didinginkan dalam desikator dan dilakukan penimbangan hingga diperoleh bobot tetap.

$$\text{Kadar Lemak (\%)} = \frac{Berat\ lemak\ (g)}{Berat\ sampel\ (g)} \text{ x } 100\%$$

d. Kadar Protein (AOAC, 2003)

Kandungan protein ditentukan dengan analisa kandungan nitrogen. Jumlah total protein ditentukan dengan mengalikan jumlah nitrogen dengan faktor koreksi sebesar 6,25. Uji kandungan protein dilakukan dengan cara menguji kadar Nitrogen dalam sampel. Kemudian hasilnya dikonversi dengan mengalikan kadar nitrogen yang didapat dengan 6,25. Hasil konversi yang didapat itu merupakan kandungan protein dalam sampel. Untuk menguji kadar nitrogen, sampel sebanyak 6 gram dimasukkan dalam labu Kjeidahl, Kemudian ditambahkan air sebanyak

150 mL kedalamnya. 100 mL HCl 1 N dan beberapa tetes indikator mix dimasukkan ke dalam erlenmeyer yang kemudian dihubungkan dengan labu Kjeidahl.

Dipanaskan pada suhu 100 ^{o}C. Setelah mendidih, tambahkan 23 mL larutan NaOH 30% ke dalam labu Kjeidahl. Pemanasan dihentikan apabila tidak ada yang menetes lagi pada erlenmeyer (tak ada aliran ke erlenmeyer). Hasil larutan yang di erlenmeyer dititrasi dengan HCl hingga warnanya berubah menjadi kehijauan. Persen protein dihitung dengan menggunakan rumus:

$$\%N = \frac{1{,}4008 \times V1 \times N1}{W} \times 100\%$$

$$\%\text{Crude protein} = 6{,}25 \times \%N \times F$$

e. Kadar Karbohidrat (Winarno, 1997)

Kadar karbohidrat tercerna dianalisis menggunakan metode Winarno (1997). Kadar karbohidrat dihitung secara dengan perbedaan :

Persentase Kadar Karbohidrat = 100% - % (air + lemak + protein + abu + serat)

Lampiran 9. Foto Produk Donat