

# LAMPIRAN

**Lampiran 1. Perhitungan Anava *Cooking Yield* Sosis Sapi Rendah Lemak**

Ulangan	Perlakuan				Jumlah
	0%	1%	2%	3%	
1	86,69	89,39	90,62	91,87	358,57
2	89,37	91,21	92,09	93,22	365,89
3	87,45	91,62	92,28	93,13	364,48
4	90,83	91,39	92,16	93,48	367,86
5	89,49	90,32	91,78	92,05	363,64
6	90,60	91,30	93,38	94,00	369,28
Jumlah	534,43	545,23	552,31	557,75	
Rata-rata	89,07	90,87	92,05	92,96	

$$\begin{aligned}
 FK &= \frac{\gamma^2}{n \times t} \\
 &= \frac{(534,43 + 545,23 + 552,31 + 557,75)^2}{6 \times 4} \\
 &= 199786,4033
 \end{aligned}$$

$$\begin{aligned}
 JKT &= \sum_{ni} \gamma_{ni}^2 - FK \\
 &= (86,69^2 + \dots + 94,00^2) - FK \\
 &= 75,73
 \end{aligned}$$

$$\begin{aligned}
 JKP &= \frac{\sum_i \gamma_i^2}{n} - FK \\
 &= \frac{(534,43^2 + 545,23^2 + 552,31^2 + 557,75^2)}{6} - FK \\
 &= 50,6928
 \end{aligned}$$

$$\begin{aligned}
 JKK &= \frac{\sum_n \gamma_n^2}{t} - FK \\
 &= \frac{(358,57^2 + 365,89^2 + 364,48^2 + 367,86^2 + 363,64^2 + 369,28^2)}{4} - FK \\
 &= 17,6855
 \end{aligned}$$

$$\begin{aligned}
 JKG &= JKT - (JKP + JKK) \\
 &= 75,73 - (50,6928 + 17,6855) \\
 &= 7,35
 \end{aligned}$$

$$KTP = \frac{JKP}{df P} = \frac{50,6928}{3} = 16,8976$$

$$\begin{aligned} \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{7,35}{15} \\ &= 0,4902 \end{aligned}$$

$$F \text{ hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{16,8976}{0,4902} = 34,4734$$

### Tabel Anava

Sumber variasi	JK	df	KT	F	F tabel
Kelompok	17,6855	5		34,4734	3,16
Perlakuan	50,6928	3	2,9934		
Galat	7,3500	15	0,4902		
Total	75,7300	23			

F hitung > F tabel, sehingga ada perbedaan nyata *cooking yield* antar perlakuan

### Uji DMRT (*Duncan Multiple Range Test*)

Perlakuan	Rata-rata	beda riil pada jarak p			notasi
		2	3	4	
0%	89,07				a
1%	90,87	1,80			b
2%	92,05	1,18	2,98		c
3%	92,96	0,91	2,09	3,89	d

$$\begin{aligned} S_y &= (\text{KTG}/n)^{1/2} \\ &= (0,4902/6)^{1/2} \\ &= 0,2858 \end{aligned}$$

	rp (0,05;15)	Sy x rp
2	3,01	0,8603
3	3,16	0,9031
4	3,25	0,9289

**Lampiran 2. Perhitungan Anava Kadar Lemak Sosis Sapi Rendah Lemak**

Ulangan	Perlakuan				Jumlah
	0%	1%	2%	3%	
1	6,36	6,48	6,66	6,49	25,99
2	6,48	6,75	6,55	6,52	26,30
3	6,21	6,03	6,95	6,52	25,71
4	6,52	6,23	6,22	6,07	25,04
5	6,07	6,18	5,99	6,09	24,33
6	6,11	6,24	6,01	6,00	24,36
<b>Jumlah</b>	<b>37,75</b>	<b>37,91</b>	<b>38,38</b>	<b>37,69</b>	<b>151,73</b>
<b>Rata-rata</b>	<b>7,55</b>	<b>7,58</b>	<b>7,68</b>	<b>7,54</b>	

$$FK = \frac{\gamma^2}{n \times t}$$

$$= \frac{(37,75 + 37,91 + 38,38 + 37,69)^2}{6 \times 4}$$

$$= 959,2497$$

$$JKT = \sum_{nt} \gamma_{nt}^2 - FK$$

$$= (6,36^2 + \dots + 6,00^2) - FK$$

$$= 1,62$$

$$JKP = \frac{\sum_t \gamma_t^2}{n} - FK$$

$$= \frac{(37,75^2 + 37,91^2 + 38,38^2 + 37,69^2)}{6} - FK$$

$$= 0,0488$$

$$JKK = \frac{\sum_n \gamma_n^2}{t} - FK$$

$$= \frac{(25,99^2 + 26,3^2 + 25,71^2 + 25,04^2 + 24,33^2 + 24,36^2)}{4} - FK$$

$$= 0,8839$$

$$JKG = JKT - (JKP + JKK)$$

$$= 1,62 - (0,0488 + 0,8839)$$

$$= 0,6872$$

$$KTP = \frac{JKP}{df P}$$

$$= \frac{0,0488}{3}$$

$$= 0,0163$$

$$KTG = \frac{JKG}{df G} = \frac{0,6872}{15} = 0,0459$$

$$F \text{ hitung} = \frac{KTP}{KTG} = \frac{0,0459}{0,0163} = 0,3543$$

**Tabel Anava**

Sumber variasi	JK	df	KT	F	F tabel
Kelompok	0,8839	5		0,3543	3,16
Perlakuan	0,0488	3	0,0163		
Galat	0,6872	15	0,0459		
Total	75,7300	23			

F hitung < F tabel, sehingga tidak ada perbedaan nyata kadar lemak antar perlakuan

### Lampiran 3. Perhitungan Anava Kadar Serat Tidak Larut dan Serat Larut

#### Kadar Serat Tidak Larut

Ulangan	Bahan	Perlakuan				Jumlah Perlakuan
	Bekatul	0%	1%	1%	2%	
1	25,24	1,37	1,91	2,98	3,41	9,67
2	23,25	1,75	2,23	2,72	3,01	9,71
<b>Jumlah</b>	48,49	3,12	4,14	5,70	6,42	19,38
<b>Rata-rata</b>	24,25	1,56	2,07	2,85	3,21	

#### Contoh Perhitungan:

##### Rumus:

$$\text{Kadar serat larut (\%)} = \frac{D1 - I1 - B1}{W_0} \times 100\%$$

Dimana: D1 = berat konstan sampel setelah pengovenan  
 I1 = berat konstan sampel setelah pengabuan  
 B1 = berat konstan blanko  
 W<sub>0</sub> = berat awal sampel

Bahan	W Awal Sampel (W <sub>0</sub> ) (g)	W Konstan Krus (g)	W Konstan Kertas (g)	W Konstan Sampel + Krus + Kertas stlh Pengovenan (g)	W Konstan Sampel + Krus + Kertas stlh Pengabuan (g)	D1 (g)	I1 (g)
Bekatul (1)	1,0133	14,1396	1,0900	15,5141	14,1640	0,2845	0,0244

Bahan	W Konstan Krus (g)	W Konstan Sth Pengabuan (g)	B1 (g)
Blanko	22,0685	22,0728	0,0043

$$\begin{aligned} \text{Kadar serat tidak larut (\%)} &= \frac{D1 - I1 - B1}{W_0} \times 100\% \\ &= \frac{0,2845 - 0,0244 - 0,0043}{1,0133} \times 100\% \\ &= 25,24\% \end{aligned}$$

#### Perhitungan Anava:

$$\begin{aligned} \text{FK} &= \frac{\gamma^2}{n \times t} \\ &= \frac{(3,12 + 4,14 + 5,70 + 6,42)^2}{2 \times 4} = 46,9481 \end{aligned}$$

$$\begin{aligned}
 JKT &= \sum_{nt} \gamma_{nt}^2 - FK \\
 &= (1,37^2 + \dots + 3,01^2) - FK \\
 &= 3,5794 \\
 JKP &= \frac{\sum_t \gamma_t^2}{n} - FK \\
 &= \frac{(3,12^2 + 4,14^2 + 5,70^2 + 6,42^2)}{2} - FK \\
 &= 3,3422 \\
 JKK &= \frac{\sum_n \gamma_n^2}{t} - FK \\
 &= \frac{(9,67^2 + 9,71^2)}{4} - FK \\
 &= 0,0002 \\
 JKG &= JKT - (JKP + JKK) \\
 &= 3,5794 - (3,3422 + 0,0002) \\
 &= 0,2370 \\
 KTP &= \frac{JKP}{df P} \\
 &= \frac{3,3422}{3} \\
 &= 1,1141 \\
 KTG &= \frac{JKG}{df G} = \frac{0,2370}{3} = 0,0790 \\
 F \text{ hitung} &= \frac{KTP}{KTG} = \frac{1,1141}{0,0790} = 14,1019
 \end{aligned}$$

Tabel Anava

Sumber variasi	JK	df	KT	F	F tabel
Kelompok	0,0002	1		14,1019	4,5
Perlakuan	3,3422	3	1,1141		
Galat	0,2370	3	0,0790		
Total	3,5794	7			

F hitung > F tabel, sehingga ada perbedaan nyata kadar serat tidak larut antar perlakuan

### Uji DMRT (*Duncan Multiple Range Test*)

Perlakuan	Rata-rata	beda riil pada jarak p			notasi
		2	3	4	
0%	1,56				a
1%	2,07	0,51			ab
2%	2,85	0,78	1,29		bc
3%	3,21	0,36	1,14	1,65	c

$$\begin{aligned}
 S_y &= (KTG/n)^{1/2} \\
 &= (0,0790/2)^{1/2} \\
 &= 0,1987
 \end{aligned}$$

	rp (0.05;3)	Sy x rp
2	4,50	0,8942
3	4,50	0,8942
4	4,50	0,8942

### Kadar Serat Larut

Ulangan	Bahan	Perlakuan				Jumlah Perlakuan
	Bekatul	0%	1%	2%	3%	
1	1,15	0,11	0,11	0,14	0,18	0,54
2	1,20	0,09	0,11	0,13	0,18	0,51
<b>Jumlah</b>	2,35	0,20	0,22	0,27	0,36	1,05
<b>Rata-rata</b>	1,18	0,10	0,11	0,14	0,18	

### Contoh Perhitungan:

#### Rumus:

$$\text{Kadar serat larut (\%)} = \frac{D2 - I2 - B2}{W_0} \times 100\%$$

Dimana: D2 = berat konstan sampel setelah pengovenan  
 I2 = berat konstan sampel setelah pengabuan  
 B2 = berat konstan blanko  
 W<sub>0</sub> = berat awal sampel

Bahan	W Awal Sampel (W <sub>0</sub> ) (g)	W Konstan Krus (g)	W Konstan Kertas (g)	W Konstan Sampel + Krus + Kertas stlh Pengovenan (g)	W Konstan Sampel + Krus + Kertas stlh Pengabuan (g)	D2 (g)	I2 (g)
Bekatul (1)	1,0133	24,4507	1,1480	25,6207	24,4562	0,0220	0,0055

Bahan	W Konstan Krus (g)	W Konstan Sth Pengabuan (g)	B2 (g)
Blanko	11,8004	11,8053	0,0049

$$\begin{aligned}
 \text{Kadar serat larut (\%)} &= \frac{D1 - I1 - B1}{W_0} \times 100\% \\
 &= \frac{0,0220 - 0,0055 - 0,0049}{1,0133} \times 100\% = 1,15\%
 \end{aligned}$$

**Perhitungan Anava:**

$$\begin{aligned} \text{FK} &= \frac{\gamma^2}{n \times t} \\ &= \frac{(0,20 + 0,22 + 0,27 + 0,36)^2}{2 \times 4} \end{aligned}$$

$$= 0,1378$$

$$\begin{aligned} \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\ &= (0,11^2 + \dots + 0,18^2) - \text{FK} \\ &= 0,0078 \end{aligned}$$

$$\begin{aligned} \text{JKP} &= \frac{\sum_t \gamma_t^2}{n} - \text{FK} \\ &= \frac{(0,20^2 + 0,22^2 + 0,27^2 + 0,36^2)}{2} - \text{FK} \end{aligned}$$

$$= 0,0076$$

$$\begin{aligned} \text{JKK} &= \frac{\sum_n \gamma_n^2}{t} - \text{FK} \\ &= \frac{(0,54^2 + 0,51^2)}{4} - \text{FK} \end{aligned}$$

$$= 0,0001$$

$$\begin{aligned} \text{JKG} &= \text{JKT} - (\text{JKP} + \text{JKK}) \\ &= 0,0078 - (0,0076 + 0,0001) \\ &= 0,0001 \end{aligned}$$

$$\begin{aligned} \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\ &= \frac{0,0076}{3} \end{aligned}$$

$$= 0,0025$$

$$\text{KTG} = \frac{\text{JKG}}{\text{df G}} = \frac{0,0001}{3} = 0,0003$$

$$\text{F hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{0,0025}{0,0003} = 8,3333$$

**Tabel Anava**

Sumber variasi	JK	df	KT	F	F tabel
Kelompok	0,0001	1		8,3333	4,5
Perlakuan	0,0076	3	0,0025		
Galat	0,0001	3	0,0001		
Total	0,0078	7			

F hitung > F tabel, sehingga ada perbedaan nyata kadar serat larut antar perlakuan

**Uji DMRT (*Duncan Multiple Range Test*)**

Perlakuan	Rata-rata	beda riil pada jarak p			notasi
		2	3	4	
0%	0,10				a
1%	0,11	0,01			a
2%	0,14	0,03	0,04		ab
3%	0,18	0,04	0,07	0,08	b

$$\begin{aligned}
 S_y &= (KTG/n)^{1/2} \\
 &= (0,0003/2)^{1/2} \\
 &= 0,0122
 \end{aligned}$$

	rp (0.05;3)	Sy x rp
2	4,50	0,0549
3	4,50	0,0549
4	4,50	0,0549

**Lampiran 4. Perhitungan Anava Hasil Uji Organoleptik Warna Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-1**

Panelis	0%	1%	2%	3%	Jumlah
1	6	7	8	7	28
2	4	4	2	3	13
3	7	6	4	4	21
4	4	2	7	6	19
5	4	6	5	7	22
6	6	3	5	4	18
7	7	6	3	7	23
8	3	6	1	2	12
9	5	7	4	6	22
10	7	1	5	7	20
11	7	5	6	8	26
12	3	3	3	3	12
13	7	4	6	8	25
14	4	5	7	8	24
15	7	5	6	7	25
16	5	4	3	4	16
17	7	8	2	5	22
18	7	7	5	4	23
19	4	5	5	6	20
20	5	7	8	4	24
21	6	7	6	5	24
22	6	7	5	5	23
23	7	2	3	7	19
24	6	8	4	8	26
25	7	5	6	8	26
26	5	4	6	7	22
27	8	9	6	7	30
28	7	4	4	7	22
29	8	7	8	9	32
30	7	7	7	7	28
31	9	5	2	7	23
32	7	6	6	8	27
33	6	7	6	8	27
34	7	5	7	8	27
35	6	6	6	5	23
36	7	6	5	8	26
37	7	7	6	8	28
38	7	7	7	7	28
39	8	6	9	7	30
40	7	5	5	6	23
41	7	5	4	6	22
42	5	8	4	8	25
43	7	5	4	7	23
44	7	4	3	7	21

45	8	3	4	6	21
46	5	7	7	5	24
47	6	7	6	8	27
48	4	5	6	6	21
49	9	2	5	6	22
50	3	5	9	5	22
51	6	6	6	6	24
52	2	7	9	4	22
53	6	5	7	8	26
54	9	8	7	6	30
55	7	2	5	3	17
56	8	6	6	6	26
57	4	4	4	4	16
58	8	7	5	6	26
59	5	3	5	5	18
60	9	6	7	7	29
61	3	8	8	8	27
62	4	4	8	7	23
63	6	8	1	3	18
64	7	5	8	7	27
65	4	5	6	6	21
66	9	2	5	6	22
67	3	5	9	5	22
68	6	6	6	6	24
69	2	7	9	4	22
70	6	5	7	8	26
71	9	8	7	6	30
72	7	2	5	3	17
73	8	6	6	6	26
74	4	4	4	4	16
75	8	7	5	6	26
76	5	3	5	5	18
77	9	6	7	7	29
78	3	8	8	8	27
79	4	4	8	7	23
80	6	8	1	3	18
Jumlah	485	437	445	486	1853
Rata-rata	6,0625	5,4625	5,5625	6,0750	

n = banyaknya ulangan = 80

t = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{n \times t} \\
 &= \frac{(1853)^2}{80 \times 4} = 10730,0282
 \end{aligned}$$

$$\begin{aligned}
 \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\
 &= (6^2 + 7^2 + 8^2 + \dots + 3^2) - \text{FK} \\
 &= 11779 - 10730,0282 = 1048,9720
 \end{aligned}$$

$$\begin{aligned}
 \text{JKP} &= \frac{\sum \gamma_t^2}{n} - \text{FK} \\
 &= \frac{(485^2 + 437^2 + 445^2 + 486^2)}{80} - \text{FK} \\
 &= 10755,1875 - 10730,0282 = 25,1593
 \end{aligned}$$

$$\begin{aligned}
 \text{JKG} &= \text{JKT} - \text{JKP} \\
 &= 1048,9720 - 25,1593 \\
 &= 1023,8130
 \end{aligned}$$

$$\begin{aligned}
 \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\
 &= \frac{25,1593}{3} \\
 &= 8,38651
 \end{aligned}$$

$$\begin{aligned}
 \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{1023,8130}{316} \\
 &= 3,2399
 \end{aligned}$$

$$F_{\text{hitung}} = \frac{\text{KTP}}{\text{KTG}} = \frac{8,3865}{3,2399} = 2,5885$$

### Tabel Anava

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	25,1593	3	8,3865	2,5885	2,6332
Galat	1023,8130	316	3,2399		
Total	1048,9720	319			

F tabel > F hitung, sehingga tidak ada perbedaan nyata warna antar perlakuan

**Lampiran 5. Perhitungan Anava Hasil Uji Organoleptik Warna Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-7**

Panelis	0%	1%	2%	3%	Jumlah
1	7	6	5	4	22
2	5	3	3	4	15
3	5	4	5	6	20
4	5	5	5	5	20
5	3	5	6	7	21
6	4	2	3	5	14
7	9	8	8	9	34
8	7	4	5	6	22
9	5	5	6	7	23
10	7	8	7	7	29
11	6	3	4	8	21
12	7	6	5	7	25
13	6	5	6	8	25
14	6	5	6	8	25
15	7	1	8	6	22
16	7	4	7	6	24
17	6	6	8	7	27
18	8	6	7	7	28
19	7	8	9	5	29
20	6	7	6	8	27
21	4	4	3	7	18
22	6	6	6	6	24
23	1	8	2	3	14
24	7	6	5	6	24
25	5	2	6	7	20
26	6	2	4	1	13
27	5	6	4	6	21
28	4	4	4	4	16
29	8	4	6	6	24
30	3	4	5	5	17
31	6	6	8	5	25
32	5	3	4	4	16
33	3	2	6	5	16
34	7	6	4	8	25
35	5	2	7	4	18
36	5	9	8	6	28
37	4	3	5	4	16
38	4	3	5	4	16
39	5	6	6	5	22
40	4	6	5	4	19
41	7	8	7	7	29
42	7	7	6	6	26
43	7	7	5	5	24
44	6	8	6	5	25

45	7	8	4	4	23
46	4	5	5	6	20
47	8	4	3	6	21
48	2	2	2	1	7
49	3	3	4	4	14
50	7	6	5	6	24
51	5	1	6	1	13
52	8	7	5	5	25
53	5	5	2	1	13
54	6	2	4	5	17
55	4	7	6	3	20
56	4	3	6	7	20
57	6	5	2	4	17
58	6	5	2	4	17
59	6	8	7	6	27
60	9	7	6	7	29
61	4	5	3	6	18
62	5	7	4	6	22
63	6	7	6	6	25
64	3	7	6	7	23
65	6	7	4	3	20
66	8	4	3	6	21
67	2	4	2	3	11
68	6	3	4	5	18
69	7	6	5	6	24
70	5	5	4	4	18
71	8	7	5	5	25
72	7	7	6	7	27
73	5	6	4	5	20
74	5	5	6	4	20
75	5	6	6	7	24
76	3	4	5	4	16
77	6	4	5	5	20
78	4	5	3	6	18
79	5	7	4	6	22
80	6	7	6	6	25
Jumlah	443	414	406	430	1693
Rata-rata	5,5375	5,1750	5,0750	5,3750	

$n$  = banyaknya ulangan = 80

$t$  = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{n \times t} \\
 &= \frac{(1693)^2}{80 \times 4} \\
 &= 8957,0281
 \end{aligned}$$

$$\begin{aligned}
 JKT &= \sum_{nt} \gamma_{nt}^2 - FK \\
 &= (7^2 + 6^2 + 5^2 + \dots + 6^2) - FK \\
 &= 9903 - 8957,0281 = 945,9719
 \end{aligned}$$

$$\begin{aligned}
 JKP &= \frac{\sum_t \gamma_t^2}{n} - FK \\
 &= \frac{(443^2 + 414^2 + 406^2 + 430^2)}{80} - FK \\
 &= 10,2344
 \end{aligned}$$

$$\begin{aligned}
 JKG &= JKT - JKP \\
 &= 945,9719 - 10,2344 \\
 &= 935,7375
 \end{aligned}$$

$$\begin{aligned}
 KTP &= \frac{JKP}{df P} \\
 &= \frac{10,2344}{3} \\
 &= 3,4115
 \end{aligned}$$

$$\begin{aligned}
 KTG &= \frac{JKG}{df G} = \frac{935,7375}{316} \\
 &= 2,9612
 \end{aligned}$$

$$F \text{ hitung} = \frac{KTP}{KTG} = \frac{3,4115}{2,9612} = 1,1521$$

**Tabel Anava**

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	10,2344	3	3,4115	1,1521	2,6332
Galat	935,7375	316	2,9612		
Total	945,9719	319			

F tabel > Fhitung, sehingga tidak ada perbedaan nyata warna antar perlakuan

**Lampiran 6. Perhitungan Anava Hasil Uji Organoleptik Aroma Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-1**

Panelis	0%	1%	2%	3%	Jumlah
1	4	4	4	4	16
2	5	5	5	6	21
3	1	3	1	3	8
4	4	7	6	5	22
5	7	5	8	6	26
6	6	5	5	4	20
7	3	7	3	6	19
8	8	6	5	4	23
9	6	4	7	5	22
10	2	5	4	3	14
11	7	6	8	7	28
12	6	6	6	6	24
13	5	5	4	5	19
14	8	5	3	7	23
15	7	7	7	6	27
16	5	4	5	5	19
17	5	4	6	1	16
18	7	7	6	5	25
19	5	4	5	6	20
20	5	6	5	6	22
21	5	6	6	5	22
22	5	6	7	8	26
23	3	3	6	3	15
24	6	7	9	5	27
25	7	7	6	7	27
26	5	7	6	2	20
27	8	9	6	7	30
28	7	7	7	7	28
29	7	7	7	7	28
30	4	4	5	5	18
31	6	7	5	2	20
32	7	7	8	7	29
33	6	7	5	5	23
34	6	5	6	5	22
35	6	6	6	6	24
36	8	7	7	7	29
37	8	8	8	8	32
38	6	5	5	5	21
39	7	9	6	8	30
40	5	6	5	5	21
41	6	5	6	2	19
42	4	6	7	5	22
43	7	7	7	7	28
44	2	5	8	2	17

45	3	5	7	4	19
46	6	6	5	5	22
47	6	7	5	4	22
48	5	5	4	5	19
49	9	2	1	3	15
50	7	7	7	7	28
51	7	4	7	4	22
52	3	9	4	8	24
53	6	6	6	6	24
54	7	7	7	6	27
55	1	4	6	7	18
56	5	5	5	5	20
57	3	3	3	3	12
58	6	6	6	6	24
59	8	8	7	6	29
60	6	6	6	6	24
61	5	1	7	6	19
62	7	7	7	6	27
63	1	2	8	4	15
64	6	7	6	7	26
65	7	7	7	7	28
66	7	7	7	7	28
67	4	4	5	5	18
68	6	7	5	2	20
69	7	7	8	7	29
70	6	7	5	5	23
71	6	5	6	5	22
72	6	6	6	6	24
73	8	7	7	7	29
74	8	8	8	8	32
75	6	5	5	5	21
76	7	9	6	8	30
77	5	6	5	5	21
78	6	5	6	2	19
79	4	6	7	5	22
80	7	7	7	7	28
Jumlah	454	468	471	429	1822
Rata-rata	5,6750	5,8500	5,8875	5,3625	

n = banyaknya ulangan = 80

t = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{nxt} \\
 &= \frac{(1822)^2}{80 \times 4} \\
 &= 10374,0125
 \end{aligned}$$

$$\begin{aligned}
 \text{JKT} &= \sum_{ni} \gamma_{ni}^2 - \text{FK} \\
 &= (7^2 + 8^2 + 6^2 + \dots + 6^2) - \text{FK} \\
 &= 11238 - 10374,0125 = 863,9875
 \end{aligned}$$

$$\begin{aligned}
 \text{JKP} &= \frac{\sum \gamma_t^2}{n} - \text{FK} \\
 &= \frac{(454^2 + 468^2 + 471^2 + 429^2)}{80} - \text{FK} \\
 &= 10387,7750 - 10374,0125 = 13,7625
 \end{aligned}$$

$$\begin{aligned}
 \text{JKG} &= \text{JKT} - \text{JKP} \\
 &= 863,9875 - 13,7625 \\
 &= 850,2250
 \end{aligned}$$

$$\begin{aligned}
 \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\
 &= \frac{13,7625}{3} \\
 &= 4,5875
 \end{aligned}$$

$$\begin{aligned}
 \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{850,2250}{316} \\
 &= 2,6906
 \end{aligned}$$

$$\text{F hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{4,5875}{2,6906} = 1,7050$$

#### Tabel Anava

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	13,7625	3	4,5875	1,7050	2,6332
Galat	850,2250	316	2,6906		
Total	863,9875	319			

F tabel > F hitung, sehingga tidak ada perbedaan nyata aroma antar perlakuan

**Lampiran 7. Perhitungan Anava Hasil Uji Organoleptik Aroma Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-7**

Panelis	0%	1%	2%	3%	Jumlah
1	7	5	6	6	24
2	1	2	1	3	7
3	4	5	5	4	18
4	7	7	7	7	28
5	5	4	7	6	22
6	2	2	1	2	7
7	8	5	7	3	23
8	5	5	4	3	17
9	5	7	6	6	24
10	6	6	6	6	24
11	3	2	2	2	9
12	5	7	7	7	26
13	7	7	7	6	27
14	5	7	4	6	22
15	4	4	4	5	17
16	2	7	8	3	20
17	7	5	6	6	24
18	5	4	4	3	16
19	6	6	6	6	24
20	2	2	2	1	7
21	8	5	7	3	23
22	6	7	7	7	27
23	5	5	5	6	21
24	5	5	5	5	20
25	6	6	6	8	26
26	7	6	7	8	28
27	3	3	3	5	14
28	6	7	5	4	22
29	3	3	4	4	14
30	6	6	6	6	24
31	3	3	3	3	12
32	3	8	5	4	20
33	5	5	5	5	20
34	4	4	4	4	16
35	6	3	5	4	18
36	9	6	7	9	31
37	6	4	5	3	18
38	6	5	6	7	24
39	8	8	8	8	32
40	6	2	4	8	20
41	6	6	6	6	24
42	7	8	5	7	27
43	6	7	6	7	26

44	7	6	1	4	18
45	5	5	6	6	22
46	7	5	8	7	27
47	7	7	6	7	27
48	4	9	6	4	23
49	8	7	7	6	28
50	7	7	7	7	28
51	8	5	6	4	23
52	3	7	6	4	20
53	5	6	5	6	22
54	7	8	8	9	32
55	3	5	8	2	18
56	5	5	5	5	20
57	3	3	3	3	12
58	6	6	6	6	24
59	9	7	8	6	30
60	7	7	6	6	26
61	7	8	4	4	23
62	8	7	6	8	29
63	7	6	9	5	27
64	7	7	7	6	27
65	5	5	6	7	23
66	5	8	6	4	23
67	6	2	5	6	19
68	3	6	8	6	23
69	5	8	8	6	27
70	7	5	5	6	23
71	5	5	3	4	17
72	4	3	6	8	21
73	8	6	8	5	27
74	7	7	6	6	26
75	8	7	8	7	30
76	3	7	6	7	23
77	5	6	4	7	22
78	5	7	6	7	25
79	5	5	9	8	27
80	6	7	7	6	26
Jumlah	443	448	453	437	1781
Rata-rata	5,5375	5,6	5,6625	5,4625	

n = banyaknya ulangan = 80

t = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{nxt} \\
 &= \frac{(1781)^2}{80 \times 4} \\
 &= 9912,3781
 \end{aligned}$$

$$\begin{aligned} \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\ &= (7^2 + 6^2 + 5^2 + \dots + 6^2) - \text{FK} \\ &= 10905 - 9912,3781 = 992,6219 \end{aligned}$$

$$\begin{aligned} \text{JKP} &= \frac{\sum \gamma_i^2}{n} - \text{FK} \\ &= \frac{(443^2 + 448^2 + 453^2 + 437^2)}{80} - \text{FK} \\ &= 9914,1375 - 9912,3781 = 1,7594 \end{aligned}$$

$$\begin{aligned} \text{JKG} &= \text{JKT} - \text{JKP} \\ &= 992,6219 - 1,7594 \\ &= 990,8625 \end{aligned}$$

$$\begin{aligned} \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\ &= \frac{1,7594}{3} \\ &= 0,5865 \end{aligned}$$

$$\begin{aligned} \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{990,8625}{316} \\ &= 3,1356 \end{aligned}$$

$$F \text{ hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{0,5865}{3,1356} = 0,1870$$

**Tabel Anava**

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	1,7594	3	0,5865	0,1870	2,6332
Galat	990,8625	316	3,1356		
<b>Total</b>	<b>992,6219</b>	<b>319</b>			

F tabel > F hitung, sehingga tidak ada perbedaan nyata aroma antar perlakuan

**Lampiran 8. Perhitungan Anava Hasil Uji Organoleptik Tekstur Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-1**

Panelis	0%	1%	2%	3%	Jumlah
1	4	8	6	4	22
2	1	1	3	3	8
3	6	7	7	8	28
4	7	6	8	6	27
5	2	1	6	3	12
6	4	3	4	4	15
7	1	3	8	7	19
8	8	5	6	7	26
9	2	7	4	4	17
10	6	6	8	9	29
11	2	3	4	3	12
12	1	4	8	7	20
13	3	5	8	6	22
14	5	5	7	6	23
15	5	6	7	6	24
16	1	7	4	2	14
17	7	6	8	7	28
18	4	4	5	6	19
19	6	5	6	7	24
20	5	5	6	4	20
21	5	4	6	5	20
22	5	5	7	6	23
23	9	7	7	8	31
24	6	5	7	8	26
25	7	8	6	5	26
26	7	8	7	6	28
27	7	6	6	6	25
28	5	4	4	6	19
29	7	5	6	7	25
30	5	4	9	3	21
31	6	6	7	6	25
32	5	6	7	8	26
33	2	7	6	4	19
34	6	6	5	7	24
35	6	6	7	8	27
36	4	6	5	6	21
37	6	7	6	7	26
38	9	6	7	8	30
39	5	8	8	4	25
40	6	7	8	6	27
41	8	8	6	9	31
42	7	7	7	7	28
43	5	6	7	2	20
44	3	4	7	6	20

45	7	7	5	6	25
46	4	8	7	7	26
47	5	5	4	5	19
48	8	4	6	7	25
49	7	7	7	7	28
50	5	4	5	3	17
51	6	9	4	8	27
52	7	7	7	5	26
53	6	8	7	9	30
54	6	6	4	3	19
55	4	5	7	4	20
56	4	3	4	5	16
57	6	5	4	5	20
58	6	7	7	6	26
59	5	6	5	7	23
60	5	1	5	8	19
61	7	8	7	7	29
62	3	7	5	9	24
63	7	6	7	7	27
64	3	4	7	6	20
65	7	7	5	6	25
66	4	8	7	7	26
67	5	5	4	5	19
68	8	4	6	7	25
69	7	7	7	7	28
70	5	4	5	3	17
71	6	9	4	8	27
72	8	8	6	9	31
73	6	5	4	5	20
74	6	7	7	6	26
75	5	6	5	7	23
76	5	1	5	8	19
77	7	8	7	7	29
78	3	7	5	9	24
79	7	6	7	7	27
80	6	8	7	9	30
<b>Jumlah</b>	427	460	486	491	1864
<b>Rata-rata</b>	5,3375	5,7500	6,0750	6,1375	

n = banyaknya ulangan = 80

t = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{nxt} \\
 &= \frac{(1864)^2}{80 \times 4} \\
 &= 10857,8000
 \end{aligned}$$

$$\begin{aligned} \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\ &= (4^2 + 8^2 + 6^2 + \dots + 9^2) - \text{FK} \\ &= 11836 - 10857,8000 = 978,2000 \end{aligned}$$

$$\begin{aligned} \text{JKP} &= \frac{\sum_t \gamma_t^2}{n} - \text{FK} \\ &= \frac{(427^2 + 460^2 + 486^2 + 491^2)}{80} - \text{FK} \\ &= 10890,0750 - 10857,8000 = 32,2750 \end{aligned}$$

$$\begin{aligned} \text{JKG} &= \text{JKT} - \text{JKP} \\ &= 978,2000 - 32,2750 \\ &= 945,9250 \end{aligned}$$

$$\begin{aligned} \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\ &= \frac{32,2750}{3} \\ &= 10,7583 \end{aligned}$$

$$\begin{aligned} \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{945,9250}{316} \\ &= 2,9934 \end{aligned}$$

$$F \text{ hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{10,7583}{2,9934} = 3,5940$$

### Tabel Anava

Sumber variasi	JK	df	KT	F	F tabel
Perlakuan	32,2750	3	10,7583	3,5940	2,6332
Galat	945,9250	316	2,9934		
Total	978,2000	319			

F tabel < F hitung, sehingga ada perbedaan nyata tekstur antar perlakuan

### Uji DMRT (*Duncan Multiple Range Test*)

Perlakuan	Rata-rata	beda riil pada jarak p			notasi
		2	3	4	
0%	5,34				a
1%	5,75	0,41			ab
2%	6,08	0,33	0,74		b
3%	6,14	0,06	0,39	0,8	b

$$\begin{aligned} S_y &= (KTG/n)^{1/2} \\ &= (2,9934/80)^{1/2} \\ &= 0,1934 \end{aligned}$$

	$r_p$ (0,05;316)	$S_y \times r_p$
2	2,77	0,5357
3	2,92	0,5647
4	3,02	0,5841

**Lampiran 9. Perhitungan Anava Hasil Uji Organoleptik Tekstur Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-7**

Panelis	0%	1%	2%	3%	Jumlah
1	7	8	6	8	29
2	8	6	7	9	30
3	6	7	5	6	24
4	5	7	3	8	23
5	6	5	6	7	24
6	8	4	6	5	23
7	7	6	7	6	26
8	6	4	5	5	20
9	8	8	7	8	31
10	3	8	5	2	18
11	8	9	6	7	30
12	6	5	7	6	24
13	6	5	7	5	23
14	3	4	8	6	21
15	4	5	6	3	18
16	5	6	4	6	21
17	4	5	4	3	16
18	5	4	6	7	22
19	2	4	4	2	12
20	7	8	6	9	30
21	6	7	7	7	27
22	6	6	4	6	22
23	6	4	5	7	22
24	7	7	8	6	28
25	5	5	7	8	25
26	7	7	5	8	27
27	3	5	7	4	19
28	5	3	5	3	16
29	5	7	7	7	26
30	8	5	8	7	28
31	2	3	4	5	14
32	3	2	3	7	15
33	6	9	9	8	32
34	1	8	6	4	19
35	5	8	6	6	25
36	7	6	6	7	26
37	5	4	6	7	22
38	6	6	6	6	24
39	8	8	8	7	31
40	4	7	8	4	23
41	6	7	7	7	27
42	7	6	6	8	27
43	5	5	6	8	24
44	8	8	5	7	28

45	5	3	6	8	22
46	1	1	2	1	5
47	4	4	5	4	17
48	7	8	8	6	29
49	4	1	3	5	13
50	4	5	6	7	22
51	7	2	1	3	13
52	5	7	6	8	26
53	4	6	5	4	19
54	5	5	6	4	20
55	7	8	7	8	30
56	9	6	7	7	29
57	4	6	5	7	22
58	6	6	5	5	22
59	7	7	6	7	27
60	4	4	8	5	21
61	5	3	6	7	21
62	1	2	2	2	7
63	8	6	6	7	27
64	7	8	8	8	31
65	5	5	6	6	22
66	4	5	6	7	22
67	5	6	5	3	19
68	5	7	6	6	24
69	8	5	7	5	25
70	2	3	4	5	14
71	5	6	4	7	22
72	6	9	7	7	29
73	6	8	6	4	24
74	6	6	5	7	24
75	6	6	5	5	22
76	7	7	6	7	27
77	4	4	7	5	20
78	5	6	5	6	22
79	6	9	5	7	27
80	7	8	5	6	26
Jumlah	436	459	461	478	1834
Rata-rata	5,45	5,7375	5,7625	5,975	

$n = \text{banyaknya ulangan} = 80$

$t = \text{banyaknya perlakuan} = 4$

$$\begin{aligned}
 FK &= \frac{\gamma^2}{n \times t} \\
 &= \frac{(1834)^2}{80 \times 4} \\
 &= 10511,1125
 \end{aligned}$$

$$\begin{aligned} \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\ &= (7^2 + 8^2 + 6^2 + \dots + 6^2) - \text{FK} \\ &= 11498 - 10511,1125 = 986,8875 \end{aligned}$$

$$\begin{aligned} \text{JKP} &= \frac{\sum \gamma_t^2}{n} - \text{FK} \\ &= \frac{(436^2 + 459^2 + 461^2 + 478^2)}{80} - \text{FK} \\ &= 10522,2750 - 10511,1125 = 11,1625 \end{aligned}$$

$$\begin{aligned} \text{JKG} &= \text{JKT} - \text{JKP} \\ &= 986,8875 - 11,1625 \\ &= 975,7250 \end{aligned}$$

$$\begin{aligned} \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\ &= \frac{11,1625}{3} \\ &= 3,7208 \end{aligned}$$

$$\begin{aligned} \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{975,7250}{316} \\ &= 3,0877 \end{aligned}$$

$$F \text{ hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{3,7208}{3,0877} = 1,2050$$

### Tabel Anava

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	11,1625	3	3,7208	1,2050	2,6332
Galat	975,7250	316	3,0877		
Total	986,8875	319			

F tabel > F hitung, sehingga tidak ada perbedaan nyata tekstur antar perlakuan

**Lampiran 10. Perhitungan Anava Hasil Uji Organoleptik Rasa Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-1**

Panelis	0%	1%	2%	3%	Jumlah
1	4	4	4	4	16
2	7	6	6	7	26
3	2	1	4	1	8
4	7	7	7	7	28
5	7	5	6	8	26
6	6	1	1	3	11
7	5	5	7	6	23
8	6	5	4	3	18
9	5	7	8	7	27
10	4	7	5	4	20
11	7	6	6	9	28
12	6	5	4	4	19
13	8	4	2	5	19
14	8	7	3	6	24
15	6	5	5	6	22
16	4	4	2	6	16
17	5	8	2	5	20
18	8	6	6	8	28
19	5	4	5	6	20
20	6	5	4	6	21
21	6	5	5	4	20
22	5	6	4	5	20
23	9	5	7	7	28
24	9	7	8	9	33
25	8	7	6	8	29
26	7	6	7	6	26
27	9	8	7	6	30
28	4	7	7	4	22
29	6	6	6	5	23
30	6	7	6	7	26
31	9	4	5	3	21
32	5	3	7	6	21
33	7	6	7	9	29
34	7	7	8	6	28
35	5	6	6	6	23
36	8	8	8	8	32
37	5	5	4	5	19
38	6	5	6	6	23
39	8	9	6	7	30
40	6	7	3	4	20
41	7	6	6	7	26
42	8	9	8	9	34
43	7	7	4	4	22
44	8	4	4	7	23

45	7	4	3	6	20
46	4	5	7	7	23
47	8	7	6	7	28
48	5	4	5	6	20
49	5	2	4	7	18
50	6	5	6	3	20
51	7	6	7	7	27
52	7	9	5	4	25
53	6	7	7	6	26
54	7	9	7	8	31
55	3	7	3	2	15
56	7	7	4	7	25
57	4	4	4	4	16
58	6	6	6	5	23
59	6	6	7	6	25
60	5	5	4	3	17
61	5	1	5	4	15
62	7	8	7	7	29
63	6	4	1	2	13
64	8	8	7	8	31
65	5	4	5	6	20
66	6	5	4	6	21
67	6	5	5	4	20
68	4	6	6	5	21
69	6	5	7	7	25
70	6	7	8	9	30
71	8	7	6	8	29
72	6	6	8	6	26
73	6	8	7	6	27
74	4	7	7	4	22
75	6	6	6	5	23
76	5	6	7	7	25
77	7	4	7	3	21
78	5	3	7	6	21
79	5	5	7	6	23
80	7	7	8	6	28
Jumlah	492	457	446	462	1857
Rata-rata	6,1500	5,7125	5,5750	5,7750	

$n$  = banyaknya ulangan = 80

$t$  = banyaknya perlakuan = 4

$$\begin{aligned}
 FK &= \frac{\gamma^2}{n \times t} \\
 &= \frac{(1857)^2}{80 \times 4} \\
 &= 10776,4031
 \end{aligned}$$

$$\begin{aligned}
 \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\
 &= (4^2 + 4^2 + 4^2 + \dots + 6^2) - \text{FK} \\
 &= 11697 - 10776,4031 = 920,5969
 \end{aligned}$$

$$\begin{aligned}
 \text{JKP} &= \frac{\sum \gamma_i^2}{n} - \text{FK} \\
 &= \frac{(492^2 + 457^2 + 446^2 + 462^2)}{80} - \text{FK} \\
 &= 10790,9125 - 10776,4031 = 14,5094
 \end{aligned}$$

$$\begin{aligned}
 \text{JKG} &= \text{JKT} - \text{JKP} \\
 &= 920,5969 - 14,5094 \\
 &= 906,0875
 \end{aligned}$$

$$\begin{aligned}
 \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\
 &= \frac{14,5094}{3} \\
 &= 4,8364
 \end{aligned}$$

$$\begin{aligned}
 \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{906,0875}{316} \\
 &= 1,6867
 \end{aligned}$$

$$\text{F hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{4,8364}{1,6867} = 1,6867$$

### Tabel Anava

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	14,5094	3	4,8364	1,6867	2,6332
Galat	906,0875	316	2,8674		
Total	920,5969	319			

F tabel > F hitung, sehingga tidak ada perbedaan nyata rasa antar perlakuan

**Lampiran 11. Perhitungan Anava Hasil Uji Organoleptik Rasa Sosis Sapi Rendah Lemak pada Penyimpanan Hari ke-7**

Panelis	0%	1%	2%	3%	Jumlah
1	7	7	8	6	28
2	6	4	8	4	22
3	6	6	7	8	27
4	6	4	3	8	21
5	7	7	6	6	26
6	8	1	3	5	17
7	5	5	6	6	22
8	8	1	3	6	18
9	6	6	6	6	24
10	5	3	4	7	19
11	7	7	8	8	30
12	6	4	7	5	22
13	4	5	4	8	21
14	6	4	5	5	20
15	7	8	7	5	27
16	7	7	7	7	28
17	6	7	9	8	30
18	4	4	2	2	12
19	7	7	7	6	27
20	7	7	5	6	25
21	6	6	5	5	22
22	6	6	6	6	24
23	7	7	7	7	28
24	4	4	5	3	16
25	8	5	6	3	22
26	8	4	5	5	22
27	5	7	7	7	26
28	5	5	6	5	21
29	7	7	4	4	22
30	7	7	6	7	27
31	8	7	7	7	29
32	6	7	5	4	22
33	3	6	5	4	18
34	5	6	7	8	26
35	6	5	4	3	18
36	7	7	5	6	25
37	4	2	3	5	14
38	3	4	3	3	13
39	6	6	6	6	24
40	2	1	1	1	5
41	8	5	6	3	22
42	6	8	8	4	26
43	6	2	5	7	20
44	5	7	6	5	23

45	6	7	7	8	28
46	8	8	7	7	30
47	5	5	3	6	19
48	7	4	5	6	22
49	5	3	6	7	21
50	7	1	3	6	17
51	7	4	4	8	23
52	6	5	8	7	26
53	7	6	5	4	22
54	8	7	6	6	27
55	9	7	6	7	29
56	4	8	5	6	23
57	4	4	7	7	22
58	4	4	4	4	16
59	5	5	5	6	21
60	9	8	5	8	30
61	6	5	6	4	21
62	7	8	6	3	24
63	8	7	7	8	30
64	5	1	1	2	9
65	7	6	6	7	26
66	6	7	5	6	24
67	6	7	5	6	24
68	7	6	6	6	25
69	5	6	6	6	23
70	4	5	6	7	22
71	7	5	6	7	25
72	7	4	7	5	23
73	4	3	5	6	18
74	5	6	8	5	24
75	6	7	7	7	27
76	7	4	7	8	26
77	7	6	7	8	28
78	3	6	6	5	20
79	4	5	6	5	20
80	6	7	7	6	26
Jumlah	481	432	449	460	1822
Rata-rata	6,0125	5,4	5,6125	5,75	

$n = \text{banyaknya ulangan} = 80$

$t = \text{banyaknya perlakuan} = 4$

$$\begin{aligned}
 FK &= \frac{\chi^2}{n \times t} \\
 &= \frac{(1822)^2}{80 \times 4} \\
 &= 10374,0125
 \end{aligned}$$

$$\begin{aligned}
 \text{JKT} &= \sum_{nt} \gamma_{nt}^2 - \text{FK} \\
 &= (7^2 + 8^2 + 6^2 + \dots + 6^2) - \text{FK} \\
 &= 11256 - 10374,0125 = 881,9875
 \end{aligned}$$

$$\begin{aligned}
 \text{JKP} &= \frac{\sum_t \gamma_t^2}{n} - \text{FK} \\
 &= \frac{(481^2 + 432^2 + 449^2 + 460^2)}{80} - \text{FK} \\
 &= 10389,8250 - 10374,0125 = 15,8125
 \end{aligned}$$

$$\begin{aligned}
 \text{JKG} &= \text{JKT} - \text{JKP} \\
 &= 881,9875 - 15,8125 \\
 &= 866,1750
 \end{aligned}$$

$$\begin{aligned}
 \text{KTP} &= \frac{\text{JKP}}{\text{df P}} \\
 &= \frac{15,8125}{3} \\
 &= 5,2708
 \end{aligned}$$

$$\begin{aligned}
 \text{KTG} &= \frac{\text{JKG}}{\text{df G}} = \frac{866,1750}{316} \\
 &= 2,7411
 \end{aligned}$$

$$\text{F hitung} = \frac{\text{KTP}}{\text{KTG}} = \frac{5,2708}{2,7411} = 1,9229$$

#### Tabel Anava

Sumber Variasi	JK	df	KT	F	F tabel
Perlakuan	15,8125	3	5,2708	1,9229	2,6332
Galat	866,1750	316	2,7411		
Total	881,9875	319			

F tabel > F hitung, sehingga tidak ada perbedaan nyata rasa antar perlakuan

**Lampiran 12. Absorbansi Sosis Sapi Rendah Lemak Selama Penyimpanan 35 Hari****Absorbansi Sosis Sapi Rendah Lemak Selama Penyimpanan 35 Hari**

Hari ke-	Perlakuan			
	0%	1%	2%	3%
1	0,0253	0,0300	0,0303	0,0415
7	0,0335	0,0420	0,0447	0,0582
14	0,0528	0,0490	0,0484	0,0585
21	0,0577	0,0500	0,0529	0,0586
28	0,0633	0,0517	0,0550	0,0606
35	0,0655	0,0530	0,0570	0,0611

### Lampiran 13. Kuisisioner Uji Organoleptik Sosis Sapi Rendah Lemak

Nama/NRP :  
 Hari/tanggal :  
 Produk : Sosis sapi rendah lemak  
 Metode : Uji kesukaan  
 Analisa terhadap : Warna

Dihadapan saudara telah tersedia 4 sampel sosis. Saudara diminta untuk memberikan penilaian yang menunjukkan tingkat kesukaan saudara terhadap warna masing-masing sosis. Penilaian hendaknya disesuaikan menurut kode masing-masing sampel sosis dengan memberikan nilai pada kolom yang telah tersedia.

Keterangan :

Angka 1 = amat sangat tidak suka

Angka 2 = sangat tidak suka

Angka 3 = tidak suka

Angka 4 = agak tidak suka

Angka 5 = netral

Angka 6 = agak suka

Angka 7 = suka

Angka 8 = sangat suka

Angka 9 = amat sangat suka

Kode	Nilai
315	
275	
291	
137	

Komentar: \_\_\_\_\_  
 \_\_\_\_\_

Nama/NRP :  
 Hari/tanggal :  
 Produk : Sosis sapi rendah lemak  
 Metode : Uji kesukaan  
 Analisa terhadap : Aroma

Dihadapan saudara telah tersedia 4 sampel sosis. Saudara diminta untuk memberikan penilaian yang menunjukkan tingkat kesukaan saudara terhadap aroma masing-masing sosis. Penilaian hendaknya disesuaikan menurut kode masing-masing sampel sosis dengan memberikan nilai pada kolom yang telah tersedia.

Keterangan :

Angka 1 = amat sangat tidak suka

Angka 2 = sangat tidak suka

Angka 3 = tidak suka

Angka 4 = agak tidak suka

Angka 5 = netral

Angka 6 = agak suka

Angka 7 = suka

Angka 8 = sangat suka

Angka 9 = amat sangat suka

Kode	Nilai
417	
352	
109	
572	

Komentar:

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Nama/NRP :  
 Hari/tanggal :  
 Produk : Sosis sapi rendah lemak  
 Metode : Uji kesukaan  
 Analisa terhadap : Tekstur (*mouth feel*)

Dihadapan saudara telah tersedia 4 sampel sosis. Saudara diminta untuk memberikan penilaian yang menunjukkan tingkat kesukaan saudara terhadap tekstur masing-masing sosis. Tekstur yang diamati adalah tingkat kekenyalan sosis di dalam mulut saat dikunyah. Penilaian hendaknya disesuaikan menurut kode masing-masing sampel sosis dengan memberikan nilai pada kolom yang telah tersedia.

Keterangan :

Angka 1 = amat sangat tidak suka

Angka 2 = sangat tidak suka

Angka 3 = tidak suka

Angka 4 = agak tidak suka

Angka 5 = netral

Angka 6 = agak suka

Angka 7 = suka

Angka 8 = sangat suka

Angka 9 = amat sangat suka

Kode	Nilai
139	
217	
439	
347	

Komentar:

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Nama/NRP :  
 Hari/tanggal :  
 Produk : Sosis sapi rendah lemak  
 Metode : Uji kesukaan  
 Analisa terhadap : Rasa

Dihadapan saudara telah tersedia 4 sampel sosis. Saudara diminta untuk memberikan penilaian yang menunjukkan tingkat kesukaan saudara terhadap rasa masing-masing sosis. Penilaian hendaknya disesuaikan menurut kode masing-masing sampel sosis dengan memberikan nilai pada kolom yang telah tersedia.

Keterangan :

Angka 1 = amat sangat tidak suka

Angka 2 = sangat tidak suka

Angka 3 = tidak suka

Angka 4 = agak tidak suka

Angka 5 = netral

Angka 6 = agak suka

Angka 7 = suka

Angka 8 = sangat suka

Angka 9 = amat sangat suka

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Kode	Nilai
615	
590	
463	
781	

Komentar:

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