LAMPIRAN - LAMPIRAN

Lampiran 1. Kuisioner uji organoleptik

UJI SENSORIS KRUPUK UDANG

Nama : .....

Tanggal pengujian : .....

Petunjuk

Dihadapan Anda terdapat 3 (tiga) macam sampel berilah tanda pada kolom yang tersedia sesuai dengan uji sensoris yang Anda rasakan

Aroma	856	685	568
Tidak tengik			
Sedikit tengik			
Tengik			
Sangat tengik			

Ket : .....

Rasa	856	685	568
Tidak suka			
Sedikit suka			
Suka			
Sangat suka			

Ket : .....

Kerenyahan/tekstur	856	685	568
Sangat tidak renyah			
Tidak renyah			
Cukup renyah			
Sedikit renyah			
Renyah			
Sangat renyah			

Ket : .....

Lampiran 2. Anova bilangan peroksida minyak

Variable LBP

By Variable FREK

tranform data LBP [LBP = ln(BP+1)]

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	6.6234	2.2078	167.5215	.0000
Within Groups	8	.1054	.0132		
Total	11	6.7289			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 0	3	.6902	.1160	.0670	.4020 TO .9785
Grp 1	3	1.5625	.1948	.1125	1.0786 TO 2.0464
Grp 2	3	2.3554	.0195	.0113	2.3069 TO 2.4039
Grp 3	3	2.5819	.0305	.0176	2.5062 TO 2.6577
Total	12	1.7975	.7821	.2258	1.3006 TO 2.2944

GROUP	MINIMUM	MAXIMUM
Grp 0	.6206	.8242
Grp 1	1.4231	1.7851
Grp 2	2.3351	2.3740
Grp 3	2.5596	2.6167
TOTAL	.6206	2.6167

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
7.1491	3	8	.012

----- ONEWAY -----

Variable LBP

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .0812 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4
RANGE	3.26	3.40	3.48

(*) Indicates significant differences which are shown in the lower triangle

GGGG
rrrr
pppp

0123

Mean	FREK	
.6902	Grp 0	
1.5625	Grp 1	*
2.3554	Grp 2	* *
2.5819	Grp 3	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group Grp 0

Mean .6902

Subset 2

Group Grp 1

Mean 1.5625

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Subset 3

Group Grp 2

Mean 2.3554

- - - - - - - - - -

Subset 4

Group Grp 3

Mean 2.5819

Lampiran 3. Anova bilangan asam minyak

Variable LBA

By Variable FREK

TRANSFORMASI DATA [LBA = ln (BA+1)]

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	.5319	.1773	42.3033	.0000
Within Groups	8	.0335	.0042		
Total	11	.5654			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 0	3	.0523	.0906	.0523	-.1728 TO .2775
Grp 1	3	.3339	.0232	.0134	.2764 TO .3914
Grp 2	3	.4485	.0378	.0218	.3546 TO .5423
Grp 3	3	.6326	.0811	.0468	.4310 TO .8342
Total	12	.3668	.2267	.0654	.2228 TO .5109

GROUP	MINIMUM	MAXIMUM
Grp 0	.0000	.1570
Grp 1	.3075	.3507
Grp 2	.4055	.4762
Grp 3	.5653	.7227
TOTAL	.0000	.7227

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
3.1588	3	8	.086

Variable LBA

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .0458 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4
RANGE	3.26	3.40	3.48

(*) Indicates significant differences which are shown in the lower triangle

		G G G G
		r r r r
		p p p p
		0 1 2 3
Mean	FREK	
.0523	Grp 0	
.3339	Grp 1	*
.4485	Grp 2	*
.6326	Grp 3	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 0
Mean	.0523

Subset 2

Group	Grp 1	Grp 2
Mean	.3339	.4485

Subset 3

Group	Grp 3
Mean	.6326

Lampiran 4. Anova kadar air krupuk

LKA
by WAKTU
FREK
UNIQUE sums of squares
All effects entered simultaneously

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	337680.923	5	67536.185	73.855	.000
WAKTU	335922.423	3	111974.141	122.450	.000
FREK	1758.499	2	879.250	.962	.397
2-Way Interactions	11280.087	6	1880.014	2.056	.097
WAKTU FREK	11280.087	6	1880.014	2.056	.097
Explained	348961.009	11	31723.728	34.692	.000
Residual	21946.730	24	914.447		
Total	370907.739	35	10597.364		

Variable LKA

By Variable WAKTU

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	335922.4233	111974.1411	102.4193	.0000
Within Groups	32	34985.3162	1093.2911		
Total	35	370907.7395			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	9	32.0615	21.3268	7.1089	15.6683 TO 48.4547
Grp 2	9	135.4966	24.1320	8.0440	116.9471 TO 154.0460
Grp 3	9	254.7199	44.5897	14.8632	220.4452 TO 288.9945
Grp 4	9	269.8319	36.7115	12.2372	241.6129 TO 298.0508
Total	36	173.0275	102.9435	17.1572	138.1964 TO 207.8585

GROUP	MINIMUM	MAXIMUM
Grp 1	8.1206	76.7656
Grp 2	104.4871	182.2843
Grp 3	212.7762	347.4289
Grp 4	218.1672	318.6120
TOTAL	8.1206	347.4289

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.5160	3	32	.076

Variable LKA

By Variable WAKTU

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= 23.3805 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4
RANGE	2.88	3.03	3.13

(*) Indicates significant differences which are shown in the lower triangle

		GGGG rrrr pppp 1234
Mean	WAKTU	
32.0615	Grp 1	
135.4966	Grp 2	*
254.7199	Grp 3	**
269.8319	Grp 4	**

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group Grp 1

Mean 32.0615

Subset 2

Group Grp 2

Mean 135.4966

Subset 3

Group	Grp 3	Grp 4
Mean	254.7199	269.8319

Variable LKA

By Variable FREK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	1758.4992	879.2496	.0786	.9246
Within Groups	33	369149.2403	11186.3406		
Total	35	370907.7395			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	12	171.9540	102.4996	29.5891	106.8289 TO 237.0791
Grp 2	12	165.0550	93.6422	27.0322	105.5576 TO 224.5524
Grp 3	12	182.0734	119.5157	34.5012	106.1367 TO 258.0100
Total	36	173.0275	102.9435	17.1572	138.1964 TO 207.8585

GROUP	MINIMUM	MAXIMUM
Grp 1	8.1206	295.4083
Grp 2	21.2539	318.6120
Grp 3	8.9989	347.4289
TOTAL	8.1206	347.4289

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.2512	2	33	.299

Variable LKA

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= 74.7875 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.88	3.02

- No two groups are significantly different at the .050 level

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 2	Grp 1	Grp 3
Mean	165.0550	171.9540	182.0734

Variable LKA

By Variable PERLAK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	11	348961.0091	31723.7281	34.6917	.0000
Within Groups	24	21946.7304	914.4471		
Total	35	370907.7395			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	3	20.7106	11.4109	6.5881	-7.6360 TO 49.0572
Grp 2	3	159.1975	28.0194	16.1770	89.5926 TO 228.8024
Grp 3	3	253.2285	29.9103	17.2687	178.9264 TO 327.5306
Grp 4	3	254.6794	35.2768	20.3671	167.0460 TO 342.3129
Grp 5	3	42.5077	29.9536	17.2937	-31.9019 TO 116.9174
Grp 6	3	130.3674	5.0425	2.9113	117.8409 TO 142.8939
Grp 7	3	218.9730	8.9396	5.1613	196.7655 TO 241.1804
Grp 8	3	268.3718	50.2224	28.9959	143.6110 TO 393.1325
Grp 9	3	32.9662	20.8263	12.0240	-18.7697 TO 84.7020
Grp10	3	116.9248	10.9302	6.3105	89.7725 TO 144.0772
Grp11	3	291.9582	54.5737	31.5082	156.3880 TO 427.5284
Grp12	3	286.4444	29.3708	16.9572	213.4825 TO 359.4063
Total	36	173.0275	102.9435	17.1572	138.1964 TO 207.8585

GROUP	MINIMUM	MAXIMUM
Grp 1	8.1206	30.3713
Grp 2	128.0241	182.2843
Grp 3	222.5450	282.3004
Grp 4	233.7449	295.4083
Grp 5	21.2539	76.7656
Grp 6	125.0000	135.0057
Grp 7	212.7762	229.2209
Grp 8	218.1672	318.6120
Grp 9	8.9989	46.6560
Grp10	104.4871	125.0000
Grp11	238.3280	347.4289
Grp12	253.6361	310.2887
TOTAL	8.1206	347.4289

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.5284	11	24	.186

Statistic	df	Significance	
Shapiro-Wilks	.9270	36	.0315
K-S (Lilliefors)	.1225	36	.1904

----- ONEWAY -----

Variable LKA

By Variable PERLAK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= 21.3828 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4	5	6	7	8	9	10	11
RANGE	2.92	3.06	3.17	3.23	3.28	3.32	3.35	3.37	3.39	3.41

Step 12

RANGE 3.42

(*) Indicates significant differences which are shown in the lower triangle

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                GGGGGGGGGGGG
                rrrrrrrrrrrr
                pppppppppppp
                    1       11
                1950627348 21
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Mean	PERLAK	
20.7106	Grp 1	
32.9662	Grp 9	
42.5077	Grp 5	
116.9248	Grp10	***
130.3674	Grp 6	***
159.1975	Grp 2	***
218.9730	Grp 7	******
253.2285	Grp 3	******
254.6794	Grp 4	******
268.3718	Grp 8	******
286.4444	Grp12	*******
291.9582	Grp11	*******

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 1	Grp 9	Grp 5
Mean	20.7106	32.9662	42.5077

Subset 2

Group	Grp10	Grp 6	Grp 2
Mean	116.9248	130.3674	159.1975

Subset 3

Group	Grp 7	Grp 3	Grp 4	Grp 8
Mean	218.9730	253.2285	254.6794	268.3718

Subset 4

Group	Grp 3	Grp 4	Grp 8	Grp12	Grp11
Mean	253.2285	254.6794	268.3718	286.4444	291.9582

Lampiran 5. Anova bilangan peroksida krupuk

LBP
by WAKTU
FREK
UNIQUE sums of squares
All effects entered simultaneously

Analysis of Variance

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	30.686	5	6.137	56.320	.000
WAKTU	21.713	3	7.238	66.420	.000
FREK	8.972	2	4.486	41.169	.000
2-Way Interactions	2.052	6	.342	3.139	.020
WAKTU FREK	2.052	6	.342	3.139	.020
Explained	32.738	11	2.976	27.312	.000
Residual	2.615	24	.109		
Total	35.353	35	1.010		

Variable LBP

By Variable WAKTU

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	21.7135	7.2378	16.9803	.0000
Within Groups	32	13.6400	.4262		
Total	35	35.3534			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	9	2.9537	.5107	.1702	2.5611 TO 3.3463
Grp 2	9	4.4625	.7888	.2629	3.8562 TO 5.0688
Grp 3	9	4.2960	.4076	.1359	3.9826 TO 4.6093
Grp 4	9	5.0839	.8098	.2699	4.4614 TO 5.7064
Total	36	4.1990	1.0050	.1675	3.8590 TO 4.5391

GROUP	MINIMUM	MAXIMUM
Grp 1	2.2450	3.5475
Grp 2	3.1909	5.5354
Grp 3	3.4617	4.6387
Grp 4	4.0561	6.0606
TOTAL	2.2450	6.0606

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.9212	3	32	.049

Variable LBP

By Variable WAKTU

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .4617 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4
RANGE	2.88	3.03	3.13

(*) Indicates significant differences which are shown in the lower triangle

		G G G G
		r r r r
		p p p p
		1 3 2 4
Mean	WAKTU	
2.9537	Grp 1	
4.2960	Grp 3	*
4.4625	Grp 2	*
5.0839	Grp 4	* *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 1
Mean	2.9537

Subset 2

Group	Grp 3	Grp 2
Mean	4.2960	4.4625

Subset 3

Group	Grp 2	Grp 4
Mean	4.4625	5.0839

----- ONEWAY -----

Variable LBP

By Variable FREK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	8.9724	4.4862	5.6118	.0080
Within Groups	33	26.3810	.7994		
Total	35	35.3534			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	12	3.5638	.8120	.2344	3.0479	TO	4.0797
Grp 2	12	4.2498	.8425	.2432	3.7145	TO	4.7851
Grp 3	12	4.7835	1.0145	.2929	4.1389	TO	5.4281
Total	36	4.1990	1.0050	.1675	3.8590	TO	4.5391

GROUP	MINIMUM	MAXIMUM
Grp 1	2.2450	4.3015
Grp 2	3.0688	5.7466
Grp 3	3.2091	6.0606
TOTAL	2.2450	6.0606

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
.3472	2	33	.709

Variable LBP

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .6322 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.88	3.02

(*) Indicates significant differences which are shown in the lower triangle

		G G G
		r r r
		p p p
		1 2 3
Mean	FREK	
3.5638	Grp 1	
4.2498	Grp 2	
4.7835	Grp 3	*

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 1	Grp 2
Mean	3.5638	4.2498

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Subset 2

Group	Grp 2	Grp 3
Mean	4.2498	4.7835

Variable LBP

By Variable PERLAK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	11	32.7382	2.9762	27.3121	.0000
Within Groups	24	2.6153	.1090		
Total	35	35.3534			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	3	2.3056	.0541	.0313	2.1712 TO 2.4401
Grp 2	3	3.7145	.4816	.2780	2.5182 TO 4.9109
Grp 3	3	4.0935	.2121	.1225	3.5666 TO 4.6205
Grp 4	3	4.1415	.1286	.0742	3.8221 TO 4.4609
Grp 5	3	3.2276	.2273	.1312	2.6630 TO 3.7922
Grp 6	3	4.3054	.2672	.1542	3.6417 TO 4.9691
Grp 7	3	4.1940	.6342	.3662	2.6185 TO 5.7695
Grp 8	3	5.2721	.4841	.2795	4.0694 TO 6.4747
Grp 9	3	3.3279	.1904	.1099	2.8549 TO 3.8010
Grp10	3	5.3677	.2829	.1633	4.6649 TO 6.0705
Grp11	3	4.6003	.0382	.0220	4.5055 TO 4.6952
Grp12	3	5.8381	.3659	.2112	4.9293 TO 6.7470
Total	36	4.1990	1.0050	.1675	3.8590 TO 4.5391

GROUP	MINIMUM	MAXIMUM
Grp 1	2.2450	2.3491
Grp 2	3.1909	4.1385
Grp 3	3.8775	4.3015
Grp 4	4.0561	4.2894
Grp 5	3.0688	3.4880
Grp 6	4.1464	4.6139
Grp 7	3.4617	4.5623
Grp 8	4.7789	5.7466
Grp 9	3.2091	3.5475
Grp10	5.0410	5.5354
Grp11	4.5623	4.6387
Grp12	5.4159	6.0606
TOTAL	2.2450	6.0606

Statistic	df	Significance
Shapiro-Wilks	.9675	36 .4603
K-S (Lilliefors)	.0809	36 > .2000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.9190	11	24	.014

----- ONEWAY -----

Variable LBP

By Variable PERLAK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .2334 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4	5	6	7	8	9	10	11
RANGE	2.92	3.06	3.17	3.23	3.28	3.32	3.35	3.37	3.39	3.41
Step	12									
RANGE	3.42									

(*) Indicates significant differences which are shown in the lower triangle

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                          1 11
                159234761802
Mean    PERLAK
2.3056  Grp 1
3.2276  Grp 5   *
3.3279  Grp 9   *
3.7145  Grp 2   *
4.0935  Grp 3   ***
4.1415  Grp 4   ***
4.1940  Grp 7   ***
4.3054  Grp 6   ***
4.6003  Grp11    ****
5.2721  Grp 8   *********
5.3677  Grp10    *********
5.8381  Grp12    *********
```

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 1
Mean	2.3056

Subset 2

Group	Grp 5	Grp 9	Grp 2
Mean	3.2276	3.3279	3.7145

Subset 3

Group	Grp 2	Grp 3	Grp 4	Grp 7	Grp 6
Mean	3.7145	4.0935	4.1415	4.1940	4.3054

Subset 4

Group	Grp 3	Grp 4	Grp 7	Grp 6	Grp11
Mean	4.0935	4.1415	4.1940	4.3054	4.6003

Subset 5

Group	Grp 8	Grp10	Grp12
Mean	5.2721	5.3677	5.8381

Lampiran 6. Anova uji organoleptik aroma

AROMA
by WAKTU
FREK

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	2.872	4	.718	1.104	.357
WAKTU	.017	2	.008	.013	.987
FREK	2.851	2	1.426	2.191	.115
2-Way Interactions	1.887	4	.472	.725	.576
WAKTU FREK	1.887	4	.472	.725	.576
Explained	4.736	8	.592	.910	.510
Residual	109.966	169	.651		
Total	114.702	177	.648		

Variable AROMA

By Variable PERLAK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	8	5.3000	.6625	1.0147	.4268
Within Groups	171	111.6500	.6529		
Total	179	116.9500			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	20	3.4000	.8208	.1835	3.0159 TO 3.7841
Grp 2	20	3.6000	.7539	.1686	3.2471 TO 3.9529
Grp 3	20	3.5500	.6048	.1352	3.2669 TO 3.8331
Grp 4	20	3.2000	.8335	.1864	2.8099 TO 3.5901
Grp 5	20	3.3500	.7452	.1666	3.0013 TO 3.6987
Grp 6	20	3.4500	.8870	.1983	3.0349 TO 3.8651
Grp 7	20	3.4000	.7539	.1686	3.0471 TO 3.7529
Grp 8	20	3.1000	.8522	.1906	2.7011 TO 3.4989
Grp 9	20	3.1000	.9679	.2164	2.6470 TO 3.5530
Total	180	3.3500	.8083	.0602	3.2311 TO 3.4689

GROUP	MINIMUM	MAXIMUM
Grp 1	2.0000	4.0000
Grp 2	2.0000	4.0000
Grp 3	2.0000	4.0000
Grp 4	1.0000	4.0000
Grp 5	1.0000	4.0000
Grp 6	1.0000	4.0000
Grp 7	2.0000	4.0000
Grp 8	1.0000	4.0000
Grp 9	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
.7948	8	171	.608

Variable AROMA

By Variable PERLAK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .5714 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4	5	6	7	8	9
RANGE	2.80	2.94	3.03	3.10	3.16	3.21	3.25	3.29

- No two groups are significantly different at the .050 level

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 8	Grp 9	Grp 4	Grp 5	Grp 1
Mean	3.1000	3.1000	3.2000	3.3500	3.4000

Group	Grp 7	Grp 6	Grp 3	Grp 2
Mean	3.4000	3.4500	3.5500	3.6000

- -

Lampiran 7. Anova uji organoleptik rasa

RASA
by WAKTU
FREK

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	15.462	4	3.865	5.868	.000
WAKTU	3.655	2	1.828	2.774	.065
FREK	11.836	2	5.918	8.984	.000
2-Way Interactions	3.639	4	.910	1.381	.243
WAKTU FREK	3.639	4	.910	1.381	.243
Explained	19.165	8	2.396	3.637	.001
Residual	111.329	169	.659		
Total	130.494	177	.737		

----- ONEWAY -----

Variable RASA
By Variable FREK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	12.0589	6.0294	8.9417	.0002
Within Groups	176	118.6785	.6743		
Total	178	130.7374			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	60	2.8167	.7917	.1022	2.6121 TO 3.0212
Grp 2	59	2.5254	.8780	.1143	2.2966 TO 2.7542
Grp 3	60	2.1833	.7917	.1022	1.9788 TO 2.3879
Total	179	2.5084	.8570	.0641	2.3820 TO 2.6348

GROUP	MINIMUM	MAXIMUM
Grp 1	1.0000	4.0000
Grp 2	1.0000	4.0000
Grp 3	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.4017	2	176	.249

Variable RASA

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .5807 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.80	2.94

(*) Indicates significant differences which are shown in the lower triangle

G G G
r r r
p p p
3 2 1

Mean	FREK	
2.1833	Grp 3	
2.5254	Grp 2	*
2.8167	Grp 1	*

Variable RASA

By Variable WAKTU

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	3.4712	1.7356	2.4000	.0937
Within Groups	176	127.2774	.7232		
Total	178	130.7486			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	60	2.6500	.8198	.1058	2.4382 TO 2.8618
Grp 2	59	2.5424	.7949	.1035	2.3352 TO 2.7495
Grp 3	60	2.3167	.9296	.1200	2.0765 TO 2.5568
Total	179	2.5028	.8571	.0641	2.3764 TO 2.6292

GROUP	MINIMUM	MAXIMUM
Grp 1	1.0000	4.0000
Grp 2	1.0000	4.0000
Grp 3	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.6012	2	176	.205

Variable RASA

By Variable WAKTU

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .6013 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.80	2.94

(*) Indicates significant differences which are shown in the lower triangle

		G	G	G
		r	r	r
		p	p	p
		3	2	1
Mean	WAKTU			
2.3167	Grp 3			
2.5424	Grp 2			
2.6500	Grp 1	*		

Variable RASA

By Variable PERLAK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	8	19.2444	2.4056	3.6810	.0005
Within Groups	171	111.7500	.6535		
Total	179	130.9944			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	20	2.8000	.6156	.1376	2.5119 TO 3.0881
Grp 2	20	2.8000	.9515	.2128	2.3547 TO 3.2453
Grp 3	20	2.8500	.8127	.1817	2.4696 TO 3.2304
Grp 4	20	2.6000	.9403	.2103	2.1599 TO 3.0401
Grp 5	20	2.7000	.6569	.1469	2.3925 TO 3.0075
Grp 6	20	2.2500	.9665	.2161	1.7976 TO 2.7024
Grp 7	20	2.5500	.8870	.1983	2.1349 TO 2.9651
Grp 8	20	2.1500	.5871	.1313	1.8752 TO 2.4248
Grp 9	20	1.8500	.7452	.1666	1.5013 TO 2.1987
Total	180	2.5056	.8555	.0638	2.3797 TO 2.6314

GROUP	MINIMUM	MAXIMUM
Grp 1	2.0000	4.0000
Grp 2	1.0000	4.0000
Grp 3	1.0000	4.0000
Grp 4	1.0000	4.0000
Grp 5	2.0000	4.0000
Grp 6	1.0000	4.0000
Grp 7	1.0000	4.0000

Grp 8	1.0000	3.0000
Grp 9	1.0000	3.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.1503	8	171	.034

Variable RASA

By Variable PERLAK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .5716 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4	5	6	7	8	9
RANGE	2.80	2.94	3.03	3.10	3.16	3.21	3.25	3.29

(*) Indicates significant differences which are shown in the lower triangle

```
                    G G G G G G G G G
                    r r r r r r r r r
                    p p p p p p p p p
                    9 8 6 7 4 5 1 2 3
```

Mean	PERLAK	
1.8500	Grp 9	
2.1500	Grp 8	
2.2500	Grp 6	
2.5500	Grp 7	*
2.6000	Grp 4	*
2.7000	Grp 5	*
2.8000	Grp 1	* *
2.8000	Grp 2	* *
2.8500	Grp 3	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 9	Grp 8	Grp 6
Mean	1.8500	2.1500	2.2500

Subset 2

Group	Grp 8	Grp 6	Grp 7	Grp 4	Grp 5
Mean	2.1500	2.2500	2.5500	2.6000	2.7000

Subset 3

Group	Grp 6	Grp 7	Grp 4	Grp 5	Grp 1
Mean	2.2500	2.5500	2.6000	2.7000	2.8000
Group	Grp 2				
Mean	2.8000				

Subset 4

Group	Grp 7	Grp 4	Grp 5	Grp 1	Grp 2
Mean	2.5500	2.6000	2.7000	2.8000	2.8000
Group	Grp 3				
Mean	2.8500				

Lampiran 8. Anova uji organoleptik tekstur

TEKSTUR
by WAKTU
FREK

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	46.374	4	11.594	10.200	.000
WAKTU	20.785	2	10.392	9.143	.000
FREK	25.716	2	12.858	11.312	.000
2-Way Interactions	7.660	4	1.915	1.685	.156
WAKTU FREK	7.660	4	1.915	1.685	.156
Explained	54.183	8	6.773	5.959	.000
Residual	192.092	169	1.137		
Total	246.275	177	1.391		

- ---- ONEWAY -----

Variable TEKSTUR
By Variable FREK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	24.3150	12.1575	9.5821	.0001
Within Groups	176	223.3051	1.2688		
Total	178	247.6201			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	60	4.6000	1.0284	.1328	4.3343 TO 4.8657
Grp 2	59	4.1695	1.1319	.1474	3.8745 TO 4.4645
Grp 3	60	3.7000	1.2115	.1564	3.3870 TO 4.0130
Total	179	4.1564	1.1795	.0882	3.9825 TO 4.3304

GROUP	MINIMUM	MAXIMUM
Grp 1	3.0000	6.0000
Grp 2	2.0000	6.0000
Grp 3	1.0000	6.0000
TOTAL	1.0000	6.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.3659	2	176	.258

Variable TEKSTUR

By Variable FREK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .7965 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.80	2.94

(*) Indicates significant differences which are shown in the lower triangle

G G G
r r r
p p p
3 2 1

Mean	FREK	
3.7000	Grp 3	
4.1695	Grp 2	*
4.6000	Grp 1	* *

----- ONEWAY -----

Variable TEKSTUR

By Variable WAKTU

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	2	21.2870	10.6435	8.3003	.0004
Within Groups	176	225.6850	1.2823		
Total	178	246.9721			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	60	4.5167	1.0332	.1334	4.2498 TO 4.7836
Grp 2	59	4.2881	1.0513	.1369	4.0142 TO 4.5621
Grp 3	60	3.7000	1.2927	.1669	3.3660 TO 4.0340
Total	179	4.1676	1.1779	.0880	3.9939 TO 4.3413

GROUP	MINIMUM	MAXIMUM
Grp 1	2.0000	6.0000
Grp 2	2.0000	6.0000
Grp 3	1.0000	6.0000
TOTAL	1.0000	6.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.8298	2	176	.062

Variable TEKSTUR

By Variable WAKTU

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .8007 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3
RANGE	2.80	2.94

(*) Indicates significant differences which are shown in the lower triangle

		G G G r r r p p p 3 2 1
Mean	WAKTU	
3.7000	Grp 3	
4.2881	Grp 2	*
4.5167	Grp 1	*

Variable TEKSTUR

By Variable PERLAK

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	8	52.6778	6.5847	5.7551	.0000
Within Groups	171	195.6500	1.1442		
Total	179	248.3278			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	20	4.8500	.8127	.1817	4.4696 TO 5.2304
Grp 2	20	4.7000	1.0311	.2306	4.2174 TO 5.1826
Grp 3	20	4.2500	1.1642	.2603	3.7052 TO 4.7948
Grp 4	20	4.3000	1.1286	.2524	3.7718 TO 4.8282
Grp 5	20	4.3000	.9234	.2065	3.8678 TO 4.7322
Grp 6	20	3.9500	1.3169	.2945	3.3337 TO 4.5663
Grp 7	20	4.4000	1.0954	.2449	3.8873 TO 4.9127
Grp 8	20	3.8000	1.0563	.2362	3.3056 TO 4.2944
Grp 9	20	2.9000	1.0208	.2283	2.4222 TO 3.3778
Total	180	4.1611	1.1778	.0878	3.9879 TO 4.3343

GROUP	MINIMUM	MAXIMUM
Grp 1	3.0000	6.0000
Grp 2	3.0000	6.0000
Grp 3	3.0000	6.0000
Grp 4	2.0000	6.0000
Grp 5	2.0000	6.0000
Grp 6	2.0000	6.0000
Grp 7	2.0000	6.0000

Grp 8	2.0000	6.0000
Grp 9	1.0000	5.0000
TOTAL	1.0000	6.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.6500	8	171	.114

Variable TEKSTUR

By Variable PERLAK

Multiple Range Tests: Duncan test with significance level .05

The difference between two means is significant if

MEAN(J)-MEAN(I) >= .7564 * RANGE * SQRT(1/N(I) + 1/N(J))

with the following value(s) for RANGE:

Step	2	3	4	5	6	7	8	9
RANGE	2.80	2.94	3.03	3.10	3.16	3.21	3.25	3.29

(*) Indicates significant differences which are shown in the lower triangle

```
G G G G G G G G G
r r r r r r r r r
p p p p p p p p p
9 8 6 3 4 5 7 2 1
```

Mean	PERLAK	
2.9000	Grp 9	
3.8000	Grp 8	*
3.9500	Grp 6	*
4.2500	Grp 3	*
4.3000	Grp 4	*
4.3000	Grp 5	*
4.4000	Grp 7	*
4.7000	Grp 2	* *
4.8500	Grp 1	* * *

Homogeneous Subsets (highest and lowest means are not significantly different)

Subset 1

Group	Grp 9
Mean	2.9000

Subset 2

Group	Grp 8	Grp 6	Grp 3	Grp 4	Grp 5
Mean	3.8000	3.9500	4.2500	4.3000	4.3000
Group	Grp 7				
Mean	4.4000				

Subset 3

Group	Grp 6	Grp 3	Grp 4	Grp 5	Grp 7
Mean	3.9500	4.2500	4.3000	4.3000	4.4000
Group	Grp 2				
Mean	4.7000				

Subset 4

Group	Grp 3	Grp 4	Grp 5	Grp 7	Grp 2
Mean	4.2500	4.3000	4.3000	4.4000	4.7000
Group	Grp 1				
Mean	4.8500				
