

## 7. LAMPIRAN

### Lampiran 1. Worksheet Uji Rating & Ranking Hedonik

Tanggal uji : 26 September 2011

Jenis sampel : Mantau

#### Identifikasi sampel :

	Kode
Mantau dengan konsentrasi tepung suweg 0 %	A
Mantau dengan konsentrasi tepung suweg 10 %	B
Mantau dengan konsentrasi tepung suweg 20 %	C
Mantau dengan konsentrasi tepung suweg 30 %	D
Mantau dengan konsentrasi tepung suweg 40 %	E

#### Kode kombinasi urutan penyajian :

ABCDE = 1	BACDE = 11	CABDE = 21	DABCE = 31	EABCD = 41
ABDCE = 2	BADCE = 12	CADEB = 22	DACEB = 32	EACBD = 42
ACBDE = 3	BAECD = 13	CAEBD = 23	DAEBC = 33	EADBC = 43
ACDBE = 4	BCAED = 14	CBDAE = 24	DBACE = 34	EBACD = 44
ACEBD = 5	BCDEA = 15	CBEAD = 25	DBCEA = 35	EBCDA = 45
ADEBC = 6	BDACE = 16	CDEAB = 26	DCABE = 36	ECABD = 46
ADCBE = 7	BDEAC = 17	CDEBA = 27	DCBAE = 37	ECBAD = 47
AEBCD = 8	BDECA = 18	CEABD = 28	DCEAB = 38	ECDBA = 48
AEBCD = 9	BEACD = 19	CEBAD = 29	DEBAC = 39	EDBAC = 49
AECBD = 10	BEDAC = 20	CEBDA = 30	DECBA = 40	EDBCA = 50

#### Penyajian :

Booth	Panelis	Kode Sampel	Urutan Penyajian
I	1	742, 421, 226, 286, 552	<sup>1</sup>
II	2	618, 471, 218, 397, 745	<sup>2</sup>
III	3	461, 477, 478, 535, 957	<sup>3</sup>
IV	4	674, 132, 228, 442, 225	<sup>4</sup>
V	5	444, 171, 151, 859, 878	<sup>5</sup>
I	6	392, 311, 659, 772, 935	<sup>6</sup>
II	7	447, 834, 117, 658, 161	<sup>7</sup>
III	8	754, 654, 176, 883, 855	<sup>8</sup>
IV	9	195, 637, 751, 586, 948	<sup>9</sup>
V	10	964, 593, 137, 574, 288	<sup>10</sup>
I	11	994, 582, 961, 746, 336	<sup>11</sup>
II	12	983, 782, 611, 988, 833	<sup>12</sup>
III	13	265, 969, 584, 564, 683	<sup>13</sup>
IV	14	897, 167, 157, 856, 524	<sup>14</sup>
V	15	662, 598, 145, 926, 362	<sup>15</sup>
I	16	777, 415, 931, 313, 317	<sup>16</sup>
II	17	195, 137, 959, 536, 985	<sup>17</sup>
III	18	228, 755, 915, 955, 946	<sup>18</sup>
IV	19	233, 647, 653, 425, 674	<sup>19</sup>
V	20	719, 543, 549, 826, 669	<sup>20</sup>

I	21	429, 576, 773, 756, 392 <sup>21</sup>
II	22	591, 214, 851, 669, 394 <sup>22</sup>
III	23	349, 299, 192, 179, 261 <sup>23</sup>
IV	24	332, 294, 896, 299, 782 <sup>24</sup>
V	25	397, 791, 659, 921, 569 <sup>25</sup>
I	26	438, 413, 565, 118, 889 <sup>26</sup>
II	27	253, 452, 577, 859, 125 <sup>27</sup>
III	28	141, 241, 746, 444, 841 <sup>28</sup>
IV	29	313, 446, 225, 362, 248 <sup>29</sup>
V	30	743, 835, 826, 364, 776 <sup>30</sup>
I	31	988, 923, 224, 615, 283 <sup>31</sup>
II	32	462, 328, 512, 228, 466 <sup>32</sup>
III	33	278, 874, 373, 499, 437 <sup>33</sup>
IV	34	383, 349, 468, 122, 771 <sup>34</sup>
V	35	723, 335, 511, 889, 896 <sup>35</sup>
I	36	937, 313, 594, 158, 687 <sup>36</sup>
II	37	889, 918, 768, 857, 694 <sup>37</sup>
III	38	975, 973, 235, 811, 761 <sup>38</sup>
IV	39	637, 382, 741, 767, 894 <sup>39</sup>
V	40	128, 972, 161, 911, 427 <sup>40</sup>
I	41	461, 991, 792, 256, 194 <sup>41</sup>
II	42	752, 667, 227, 813, 488 <sup>42</sup>
III	43	198, 979, 388, 921, 926 <sup>43</sup>
IV	44	349, 644, 846, 879, 242 <sup>44</sup>
V	45	395, 174, 453, 276, 732 <sup>45</sup>
I	46	866, 583, 826, 562, 817 <sup>46</sup>
II	47	556, 786, 358, 755, 996 <sup>47</sup>
III	48	448, 524, 951, 982, 455 <sup>48</sup>
IV	49	451, 434, 695, 693, 788 <sup>49</sup>
V	50	951, 231, 259, 667, 318 <sup>50</sup>

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**Rekap Kode Sampel :**

Sampel A	742, 618, 461, 674, 444, 392, 447, 754, 195, 964, 582, 782, 969, 157, 362, 931, 536, 946, 653, 826, 576, 214, 299, 299, 921, 118, 125, 746, 362, 776, 923, 328, 874, 468, 896, 594, 857, 811, 767, 427, 991, 667, 979, 846, 732, 826, 755, 455, 693, 318
Sampel B	421, 471, 478, 442, 859, 772, 658, 176, 751, 574, 994, 983, 265, 897, 662, 777, 195, 228, 233, 719, 773, 394, 179, 294, 791, 889, 859, 444, 225, 826, 224, 466, 499, 349, 335, 158, 768, 761, 741, 911, 792, 813, 921, 644, 174, 562, 358, 982, 695, 259
Sampel C	226, 397, 477, 132, 171, 935, 117, 883, 948, 137, 961, 988, 564, 167, 598, 313, 985, 955, 425, 669, 429, 591, 349, 332, 397, 438, 253, 141, 313, 743, 615, 512, 437, 122, 511, 313, 918, 973, 894, 161, 256, 227, 926, 879, 453, 583, 786, 524, 788, 667
Sampel D	286, 218, 535, 228, 878, 311, 834, 855, 586, 288, 746, 611, 683, 524, 145, 415, 137, 755, 674, 549, 756, 851, 261, 896, 569, 413, 452, 841, 248, 364, 988, 462, 278, 383, 723, 937, 889, 975, 637, 128, 194, 488, 388, 242, 276, 817, 996, 951, 434, 231

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Sampel E	552, 745, 957, 225, 151, 659, 161, 654, 637, 593, 336, 833, 584, 856, 926, 317, 959, 915, 647, 543, 392, 669, 192, 782, 659, 565, 577, 241, 446, 835, 283, 228, 373, 771, 889, 687, 694, 235, 382, 972, 461, 752, 198, 349, 395, 866, 556, 448, 451, 951
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**Lampiran 2. Scoresheet Uji Ranking & Rating Hedonik**  
**UJI RANKING HEDONIK**

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Rasa

**Instruksi :**

Berkumur – kumurlah dahulu sebelum menguji sampel.

Di hadapan Anda terdapat 5 (lima) sampel mantau. Silakan cicipi sampel secara berurutan dari yang paling kiri hingga paling kanan. Setelah mencicipi 1 sampel dan merasakannya, minumlah air putih dan berikan jeda sebelum Anda mencicipi sampel selanjutnya. Anda dapat mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

<b>Kode Sampel</b>	<b>Ranking (Jangan Ada Yang Dobel)</b>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Terima Kasih

**UJI RANKING HEDONIK**

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Tekstur

**Instruksi :**

Berkumur – kumurlah dahulu sebelum menguji sampel.

Di hadapan Anda terdapat 5 (lima) sampel mantau. Silakan cicipi dan rasakan tekstur sampel secara berurutan dari yang paling kiri hingga paling kanan. Setelah mencicipi 1 sampel dan merasakan teksturnya, minumlah air putih dan berikan jeda sebelum Anda mencicipi sampel selanjutnya. Anda dapat mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

<b>Kode Sampel</b>	<b>Ranking (Jangan Ada Yang Dobel)</b>
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_____	_____
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_____	_____
_____	_____

Terima Kasih

### UJI RANKING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Warna

**Instruksi:**

Di hadapan Anda terdapat 5 (lima) sampel mantau. Bandingkan dan amatilah warna sampel secara berurutan dari kiri ke kanan. Anda boleh mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

**Kode Sampel**

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**Ranking (Jangan Ada Yang Dobel)**

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Terima Kasih

### UJI RANKING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : *Overall*

**Instruksi :**

Di hadapan Anda terdapat 5 (lima) sampel mantau. Setelah Anda melakukan uji sensori semua atribut, lihatlah penampilan keseluruhan dari semua atribut yang terdapat pada sampel secara berurutan mulai dari yang paling kiri hingga paling kanan. Berilah penilaian mengenai *overall* sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

**Kode Sampel**

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**Ranking (Jangan Ada Yang Dobel)**

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Terima Kasih

### UJI RATING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Rasa

**Instruksi :**

Berkumur – kumurlah dahulu sebelum menguji sampel.

Di hadapan Anda terdapat 5 (lima) sampel mantau. Silakan cicipi sampel secara berurutan dari yang paling kiri hingga paling kanan. Setelah mencicipi 1 sampel dan merasakannya, minumlah air putih dan berikan jeda sebelum Anda mencicipi sampel selanjutnya. Anda dapat mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

<b>Kode Sampel</b>	<b>Rating (Boleh Ada Yang Dobel)</b>
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_____	_____
_____	_____
_____	_____
_____	_____

Terima Kasih

### UJI RATING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Tekstur

**Instruksi :**

Berkumur – kumurlah dahulu sebelum menguji sampel.

Di hadapan Anda terdapat 5 (lima) sampel mantau. Silakan cicipi dan rasakan tekstur sampel secara berurutan dari yang paling kiri hingga paling kanan. Setelah mencicipi 1 sampel dan merasakan teksturnya, minumlah air putih dan berikan jeda sebelum Anda mencicipi sampel selanjutnya. Anda dapat mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

<b>Kode Sampel</b>	<b>Rating (Boleh Ada Yang Dobel)</b>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Terima Kasih

### UJI RATING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : Warna

**Instruksi:**

Di hadapan Anda terdapat 5 (lima) sampel mantau. Bandingkan dan amatilah warna sampel secara berurutan dari kiri ke kanan. Anda boleh mengulang sesering yang Anda perlukan. Beri penilaian sesuai dengan tingkat kesukaan Anda. Urutkan sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

**Kode Sampel**

\_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_

**Rating (Boleh Ada Yang Dobel)**

\_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_

Terima Kasih

### UJI RATING HEDONIK

Nama : \_\_\_\_\_ Tanggal : \_\_\_\_\_  
 Produk : Mantau  
 Atribut : *Overall*

**Instruksi :**

Di hadapan Anda terdapat 5 (lima) sampel mantau. Setelah Anda melakukan uji sensori semua atribut, lihatlah penampilan keseluruhan dari semua atribut yang terdapat pada sampel secara berurutan mulai dari yang paling kiri hingga paling kanan. Berilah penilaian mengenai *overall* sampel mulai dari yang paling Anda tidak sukai (=1) hingga sampel yang paling Anda sukai (=5).

**Kode Sampel**

\_\_\_\_\_  
 \_\_\_\_\_  
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**Rating (Boleh Ada Yang Dobel)**

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Terima Kasih

### Lampiran 3. ANALISA DATA UJI PROKSIMAT & OKSALAT UMBI SUWEG

Tabel Proksimat Umbi Suweg Kontrol dan Perlakuan Perendaman Air Hangat & Larutan Garam

Komposisi	UK	UR	UG
Kadar Air (%)	82,095 ± 2,673 <sup>ab</sup>	83,380 ± 1,758 <sup>b</sup>	80,824 ± 1,486 <sup>a</sup>
Kadar Abu (%)	2,139 ± 0,536 <sup>b</sup>	1,531 ± 0,268 <sup>a</sup>	2,375 ± 0,230 <sup>b</sup>
Kadar Protein (%)	1,564 ± 0,306 <sup>a</sup>	1,401 ± 0,271 <sup>a</sup>	1,394 ± 0,212 <sup>a</sup>
Kadar Lemak (%)	0,432 ± 0,176 <sup>b</sup>	0,224 ± 0,041 <sup>a</sup>	0,346 ± 0,057 <sup>b</sup>
Kadar Karbohidrat (%)	13,766 ± 1,901 <sup>ab</sup>	13,464 ± 1,352 <sup>b</sup>	15,062 ± 1,522 <sup>a</sup>

#### KADAR AIR

Descriptives				Statistic	Std. Error		
kadar_air	kontrol	Mean		82,09500	,845214		
		95% Confidence Interval for Mean	Lower Bound	80,18299			
			Upper Bound	84,00701			
		5% Trimmed Mean		82,05811			
		Median		81,95900			
		Variance		7,144			
		Std. Deviation		2,672801			
		Minimum		79,204			
		Maximum		85,650			
		Range		6,446			
		Interquartile Range		5,494			
		Skewness		,133	,687		
		Kurtosis		-2,141	1,334		
		rebus		Mean		83,37980	,555767
				95% Confidence Interval for Mean	Lower Bound	82,12257	
	Upper Bound			84,63703			
5% Trimmed Mean				83,37811			
Median				83,34000			
Variance				3,089			
Std. Deviation				1,757491			
Minimum				80,620			
Maximum				86,170			
Range				5,550			
Interquartile Range				2,685			
Skewness				-,133	,687		
Kurtosis				-,675	1,334		
garam				Mean		80,82360	,469779
				95% Confidence Interval for Mean	Lower Bound	79,76089	
			Upper Bound	81,88631			
		5% Trimmed Mean		80,88956			
		Median		80,98400			
		Variance		2,207			
		Std. Deviation		1,485572			
		Minimum		77,820			
		Maximum		82,640			
		Range		4,820			
		Interquartile Range		2,220			
		Skewness		-,840	,687		
		Kurtosis		,465	1,334		

#### Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kadar_air kontrol	,231	10	,139	,834	10	,037
rebus	,111	10	,200*	,975	10	,932
garam	,184	10	,200*	,945	10	,606

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

kadar\_air

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32,671	2	16,336	3,940	,032
Within Groups	111,956	27	4,147		
Total	144,627	29			

## kadar\_air

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
garam	10	80,82360	
kontrol	10	82,09500	82,09500
rebus	10		83,37980
Sig.		,174	,170

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR ABU

## Descriptives

perlakuan	Statistic	Std. Error
kadar_Abu kontrol	Mean	2,13910
	95% Confidence Interval for Mean	1,75594
	Lower Bound	2,52226
	Upper Bound	
	5% Trimmed Mean	2,11961
	Median	2,24850
	Variance	,287
	Std. Deviation	,535620
	Minimum	1,400
	Maximum	3,229
	Range	1,829
	Interquartile Range	,712
	Skewness	,581
	Kurtosis	,672
rebus	Mean	1,53140
	95% Confidence Interval for Mean	1,33964
	Lower Bound	1,72316
	Upper Bound	
	5% Trimmed Mean	1,53306
	Median	1,52950
	Variance	,072
	Std. Deviation	,268060
	Minimum	1,200
	Maximum	1,833
	Range	,633
	Interquartile Range	,538
	Skewness	-,021
	Kurtosis	-2,241
garam	Mean	2,37520
	95% Confidence Interval for Mean	2,16108
	Lower Bound	2,58932
	Upper Bound	
	5% Trimmed Mean	2,37922
	Median	2,40300
	Variance	,090
	Std. Deviation	,299325
	Minimum	1,899
	Maximum	2,779
	Range	,880
	Interquartile Range	,517
	Skewness	-,199
	Kurtosis	-1,454

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kadar_Abu kontrol	,171	10	,200*	,938	10	,536
rebus	,239	10	,112	,828	10	,031
garam	,208	10	,200*	,934	10	,493

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

kadar\_Abu

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,790	2	1,895	12,681	,000
Within Groups	4,035	27	,149		
Total	7,825	29			

## kadar\_Abu

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
rebus	10	1,53140	
kontrol	10		2,13910
garam	10		2,37520
Sig.		1,000	,183

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR PROTEIN

## Descriptives

perlakuan	Statistic	Std. Error	
protein kontrol	Mean	1,56410	
	95% Confidence Interval for Mean	1,34543	
	Lower Bound	1,78277	
	Upper Bound		
	5% Trimmed Mean	1,57106	
	Median	1,58550	
	Variance	,093	
	Std. Deviation	,305678	
	Minimum	1,098	
	Maximum	1,905	
	Range	,807	
	Interquartile Range	,577	
	Skewness	-,225	,687
	Kurtosis	-1,851	1,334
rebus	Mean	1,40070	
	95% Confidence Interval for Mean	1,20702	
	Lower Bound	1,59438	
	Upper Bound		
	5% Trimmed Mean	1,40817	
	Median	1,45650	
	Variance	,073	
	Std. Deviation	,270741	
	Minimum	,942	
	Maximum	1,725	
	Range	,783	
	Interquartile Range	,445	
	Skewness	-,480	,687
	Kurtosis	-1,162	1,334
garam	Mean	1,39390	
	95% Confidence Interval for Mean	1,24200	
	Lower Bound	1,54580	
	Upper Bound		
	5% Trimmed Mean	1,39017	
	Median	1,38900	
	Variance	,045	
	Std. Deviation	,212340	
	Minimum	1,150	
	Maximum	1,705	
	Range	,555	
	Interquartile Range	,428	
	Skewness	,122	,687
	Kurtosis	-1,786	1,334

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
protein kontrol	,220	10	,188	,870	10	,100
rebus	,186	10	,200*	,923	10	,386
garam	,187	10	,200*	,894	10	,186

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

protein

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,186	2	,093	1,315	,285
Within Groups	1,906	27	,071		
Total	2,092	29			

protein

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05
		1
garam	10	1,39390
rebus	10	1,40070
kontrol	10	1,56410
Sig.		,187

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR LEMAK

Descriptives

perlakuan				Statistic	Std. Error
lemak	kontrol	Mean		,43230	,055756
		95% Confidence Interval for Mean	Lower Bound	,30617	
			Upper Bound	,55843	
		5% Trimmed Mean		,43539	
		Median		,42200	
		Variance		,031	
		Std. Deviation		,176315	
		Minimum		,130	
		Maximum		,679	
		Range		,549	
		Interquartile Range		,290	
		Skewness		-,184	,687
		Kurtosis		-,811	1,334
		rebus		Mean	
95% Confidence Interval for Mean	Lower Bound			,19451	
	Upper Bound			,25389	
5% Trimmed Mean				,22406	
Median				,23200	
Variance				,002	
Std. Deviation				,041510	
Minimum				,162	
Maximum				,289	
Range				,127	
Interquartile Range				,073	
Skewness				-,190	,687
Kurtosis				-,804	1,334
garam				Mean	
		95% Confidence Interval for Mean	Lower Bound	,30443	
			Upper Bound	,38657	
		5% Trimmed Mean		,34417	
		Median		,32350	
		Variance		,003	
		Std. Deviation		,057411	
		Minimum		,279	
		Maximum		,436	
		Range		,157	
		Interquartile Range		,113	
		Skewness		,537	,687
		Kurtosis		-1,410	1,334

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
lemak kontrol	,123	10	,200*	,970	10	,893
rebus	,156	10	,200*	,954	10	,719
garam	,220	10	,185	,893	10	,183

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

lemak

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,219	2	,109	9,078	,001
Within Groups	,325	27	,012		
Total	,543	29			

lemak

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
rebus	10	,22420	
garam	10		,34550
kontrol	10		,43230
Sig.		1,000	,088

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR KARBOHIDRAT Descriptives

perlakuan	Statistic	Std. Error
karbohidrat kontrol	Mean	13,76950
	95% Confidence Interval for Mean	12,40971
	Lower Bound	15,12929
	Upper Bound	
	5% Trimmed Mean	13,80489
	Median	13,60150
	Variance	3,613
	Std. Deviation	1,900860
	Minimum	10,927
	Maximum	15,975
	Range	5,048
	Interquartile Range	3,849
	Skewness	-,095
	Kurtosis	-1,683
		,687
	1,334	
rebus	Mean	13,46400
	95% Confidence Interval for Mean	12,49668
	Lower Bound	14,43132
	Upper Bound	
	5% Trimmed Mean	13,45233
	Median	13,29000
	Variance	1,828
	Std. Deviation	1,352215
	Minimum	11,421
	Maximum	15,717
	Range	4,296
	Interquartile Range	1,852
	Skewness	,441
	Kurtosis	-,420
		,687
	1,334	
garam	Mean	15,06170
	95% Confidence Interval for Mean	13,97328
	Lower Bound	16,15012
	Upper Bound	
	5% Trimmed Mean	14,99378
	Median	14,71000
	Variance	2,315
	Std. Deviation	1,521503
	Minimum	13,301
	Maximum	18,045
	Range	4,744
	Interquartile Range	2,449
	Skewness	,885
	Kurtosis	,087
		,687
	1,334	

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
karbohidrat kontrol	,206	10	,200*	,899	10	,215
rebus	,166	10	,200*	,946	10	,627
garam	,193	10	,200*	,927	10	,420

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

karbohidrat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14,386	2	7,193	2,782	,080
Within Groups	69,811	27	2,586		
Total	84,196	29			

## karbohidrat

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
rebus	10	13,46400	
kontrol	10	13,76950	13,76950
garam	10		15,06170
Sig.		,674	,084

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR OKSALAT

## Descriptives

perlakuan	Statistic	Std. Error
oksalat_umbi kontrol	Mean	4,30900
	95% Confidence Interval for Mean	4,06491
	Lower Bound	4,55309
	Upper Bound	4,32300
	5% Trimmed Mean	4,30900
	Median	,116
	Variance	,341210
	Std. Deviation	3,679
	Minimum	4,687
	Maximum	1,008
	Range	,567
	Interquartile Range	-,504
	Skewness	1,334
	Kurtosis	,687
	rebus	Mean
95% Confidence Interval for Mean		2,43314
Lower Bound		2,80486
Upper Bound		2,62728
5% Trimmed Mean		2,66800
Median		,068
Variance		,259815
Std. Deviation		2,167
Minimum		2,922
Maximum		,755
Range		,504
Interquartile Range		-,266
Skewness		1,334
Kurtosis		,687
garam		Mean
	95% Confidence Interval for Mean	,75910
	Lower Bound	1,05310
	Upper Bound	,90606
	5% Trimmed Mean	,90600
	Median	,042
	Variance	,205486
	Std. Deviation	,654
	Minimum	1,159
	Maximum	,505
	Range	,502
	Interquartile Range	-,002
	Skewness	1,334
	Kurtosis	,687

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
oksalat_umbi kontrol	,166	10	,200*	,909	10	,276
rebus	,179	10	,200*	,896	10	,199
garam	,200	10	,200*	,834	10	,037

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

oksalat\_umbi

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	57,900	2	28,950	384,030	,000
Within Groups	2,035	27	,075		
Total	59,935	29			

## oksalat\_umbi

Duncan <sup>a</sup>

perlakuan	N	Subset for alpha = .05		
		1	2	3
garam	10	,90610		
rebus	10		2,61900	
kontrol	10			4,30900
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## Lampiran 4. ANALISIS DATA UJI PROKSIMAT & OKSALAT TEPUNG SUWEG

### KADAR AIR

		Descriptives		Statistic	Std. Error	
kadar_air	perlakuan kontrol	Mean		5,12420	,183947	
		95% Confidence Interval for Mean	Lower Bound	4,70808		
			Upper Bound	5,54032		
		5% Trimmed Mean		5,13867		
		Median		5,23100		
		Variance		,338		
		Std. Deviation		,581691		
		Minimum		4,129		
		Maximum		5,859		
		Range		1,730		
		Interquartile Range		1,008		
		Skewness		-,339	,687	
		Kurtosis		-1,016	1,334	
	rebus		Mean		5,09480	,141842
			95% Confidence Interval for Mean	Lower Bound	4,77393	
			Upper Bound	5,41567		
		5% Trimmed Mean		5,05850		
		Median		4,94900		
		Variance		,201		
		Std. Deviation		,448543		
		Minimum		4,618		
		Maximum		6,225		
		Range		1,607		
		Interquartile Range		,372		
		Skewness		1,975	,687	
		Kurtosis		4,860	1,334	
garam			Mean		4,82710	,106647
			95% Confidence Interval for Mean	Lower Bound	4,58585	
			Upper Bound	5,06835		
		5% Trimmed Mean		4,82506		
		Median		4,80650		
		Variance		,114		
		Std. Deviation		,337248		
		Minimum		4,361		
		Maximum		5,330		
		Range		,969		
		Interquartile Range		,666		
		Skewness		,042	,687	
		Kurtosis		-1,253	1,334	

### Tests of Normality

perlakuan		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
kadar_air	kontrol	,133	10	,200*	,950	10	,668
	rebus	,220	10	,187	,804	10	,016
	garam	,138	10	,200*	,950	10	,672

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### ANOVA

kadar\_air

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,536	2	,268	1,231	,308
Within Groups	5,880	27	,218		
Total	6,416	29			

kadar\_air

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05
		1
garam	10	4,82710
rebus	10	5,09480
kontrol	10	5,12420
Sig.		,190

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

**KADAR ABU**

## Descriptives

perlakuan				Statistic	Std. Error
kadar_Abu	kontrol	Mean		5,54150	,148888
		95% Confidence Interval for Mean	Lower Bound	5,20469	
			Upper Bound	5,87831	
		5% Trimmed Mean		5,54372	
		Median		5,66800	
		Variance		,222	
		Std. Deviation		,470826	
		Minimum		4,880	
		Maximum		6,163	
		Range		1,283	
		Interquartile Range		,848	
		Skewness		-,296	,687
		Kurtosis		-1,567	1,334
		rebus		Mean	
95% Confidence Interval for Mean	Lower Bound			4,21289	
	Upper Bound			5,25791	
5% Trimmed Mean				4,73822	
Median				4,73700	
Variance				,534	
Std. Deviation				,730418	
Minimum				3,794	
Maximum				5,626	
Range				1,832	
Interquartile Range				1,454	
Skewness				-,025	,687
Kurtosis				-1,980	1,334
garam				Mean	
		95% Confidence Interval for Mean	Lower Bound	5,59068	
			Upper Bound	6,76512	
		5% Trimmed Mean		6,19750	
		Median		6,31800	
		Variance		,674	
		Std. Deviation		,820878	
		Minimum		4,948	
		Maximum		7,055	
		Range		2,107	
		Interquartile Range		1,699	
		Skewness		-,324	,687
		Kurtosis		-1,761	1,334

**Tests of Normality**

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kadar_Abu kontrol	,203	10	,200*	,911	10	,287
rebus	,207	10	,200*	,870	10	,100
garam	,237	10	,118	,871	10	,101

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**ANOVA**

kadar\_Abu

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10,452	2	5,226	10,971	,000
Within Groups	12,861	27	,476		
Total	23,313	29			

kadar\_Abu

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05		
		1	2	3
rebus	10	4,73540		
kontrol	10		5,54150	
garam	10			6,17790
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR PROTEIN

### Descriptives

perlakuan				Statistic	Std. Error	
protein	kontrol	Mean		7,49570		
		95% Confidence Interval for Mean	Lower Bound	6,87770	,273192	
			Upper Bound	8,11370		
		5% Trimmed Mean		7,48494		
		Median		7,49800		
			Variance	,746		
			Std. Deviation	,863908		
			Minimum	6,497		
			Maximum	8,688		
			Range	2,191		
			Interquartile Range	1,573		
			Skewness	,096	,687	
			Kurtosis	-2,127	1,334	
	rebus		Mean		7,40250	
			95% Confidence Interval for Mean	Lower Bound	6,67787	,320329
			Upper Bound	8,12713		
5% Trimmed Mean				7,42883		
Median				7,51750		
			Variance	1,026		
			Std. Deviation	1,012968		
			Minimum	5,644		
			Maximum	8,687		
			Range	3,043		
			Interquartile Range	1,664		
			Skewness	-,352	,687	
			Kurtosis	-1,191	1,334	
garam			Mean		6,50600	
			95% Confidence Interval for Mean	Lower Bound	6,00989	,219309
			Upper Bound	7,00211		
	5% Trimmed Mean			6,52878		
	Median			6,70350		
			Variance	,481		
			Std. Deviation	,693516		
			Minimum	5,147		
			Maximum	7,455		
			Range	2,308		
			Interquartile Range	,958		
			Skewness	-,668	,687	
			Kurtosis	,145	1,334	

### Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
protein kontrol	,234	10	,128	,846	10	,053
rebus	,219	10	,192	,904	10	,245
garam	,177	10	,200*	,958	10	,762

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### ANOVA

protein

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,973	2	2,987	3,976	,031
Within Groups	20,281	27	,751		
Total	26,254	29			

### protein

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
garam	10	6,50600	
rebus	10		7,40250
kontrol	10		7,49570
Sig.		1,000	,812

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

**KADAR LEMAK****Descriptives**

perlakuan				Statistic	Std. Error
lemak	kontrol	Mean		1,51630	,123224
		95% Confidence Interval for Mean	Lower Bound	1,23755	
			Upper Bound	1,79505	
		5% Trimmed Mean		1,49456	
		Median		1,41100	
		Variance		,152	
		Std. Deviation		,389668	
		Minimum		1,040	
		Maximum		2,384	
		Range		1,344	
		Interquartile Range		,471	
		Skewness		1,180	,687
		Kurtosis		1,848	1,334
	rebus		Mean		1,26080
95% Confidence Interval for Mean			Lower Bound	1,11484	
			Upper Bound	1,40676	
		5% Trimmed Mean		1,26417	
		Median		1,32400	
		Variance		,042	
		Std. Deviation		,204035	
		Minimum		,938	
		Maximum		1,523	
		Range		,585	
		Interquartile Range		,291	
		Skewness		-,485	,687
		Kurtosis		-,504	1,334
garam			Mean		,93010
	95% Confidence Interval for Mean		Lower Bound	,67538	
			Upper Bound	1,18482	
		5% Trimmed Mean		,92800	
		Median		,94650	
		Variance		,127	
		Std. Deviation		,356074	
		Minimum		,475	
		Maximum		1,423	
		Range		,948	
		Interquartile Range		,688	
		Skewness		,059	,687
		Kurtosis		-1,917	1,334

**Tests of Normality**

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
lemak kontrol	,206	10	,200*	,913	10	,304
rebus	,220	10	,187	,894	10	,189
garam	,215	10	,200*	,891	10	,174

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**ANOVA**

lemak					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,728	2	,864	8,091	,002
Within Groups	2,882	27	,107		
Total	4,610	29			

**lemak**

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
garam	10	,93010	
rebus	10		1,26080
kontrol	10		1,51630
Sig.		1,000	,092

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## KADAR KARBOHIDRAT Descriptives

perlakuan				Statistic	Std. Error
karbohidrat	kontrol	Mean		80,32220	,514859
		95% Confidence Interval for Mean	Lower Bound	79,15751	
			Upper Bound	81,48689	
		5% Trimmed Mean		80,29422	
		Median		79,99600	
		Variance		2,651	
		Std. Deviation		1,628127	
		Minimum		78,580	
		Maximum		82,568	
		Range		3,988	
		Interquartile Range		3,111	
		Skewness		,222	,687
		Kurtosis		-2,028	1,334
	air hangat		Mean		81,50640
95% Confidence Interval for Mean			Lower Bound	80,34703	
			Upper Bound	82,66577	
		5% Trimmed Mean		81,50622	
		Median		81,12350	
		Variance		2,627	
		Std. Deviation		1,620688	
		Minimum		79,522	
		Maximum		83,494	
		Range		3,972	
		Interquartile Range		3,433	
		Skewness		,146	,687
		Kurtosis		-1,988	1,334
garam			Mean		81,55920
	95% Confidence Interval for Mean		Lower Bound	80,99660	
			Upper Bound	82,12180	
		5% Trimmed Mean		81,53706	
		Median		81,16450	
		Variance		,619	
		Std. Deviation		,786459	
		Minimum		80,729	
		Maximum		82,788	
		Range		2,059	
		Interquartile Range		1,333	
		Skewness		,669	,687
		Kurtosis		-1,282	1,334

### Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
karbohidrat kontrol	,259	10	,057	,845	10	,051
air hangat	,200	10	,200*	,862	10	,081
garam	,243	10	,095	,854	10	,065

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### ANOVA

karbohidrat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9,784	2	4,892	2,489	,102
Within Groups	53,064	27	1,965		
Total	62,848	29			

karbohidrat

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05
kontrol	10	1
air hangat	10	81,50640
garam	10	81,55920
Sig.		,072

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

**KADAR OKSALAT****Descriptives**

perlakuan				Statistic	Std. Error	
oksalat_tepung	kontrol	Mean		4,03017	,105946	
		95% Confidence Interval for Mean	Lower Bound	3,79050		
			Upper Bound	4,26983		
		5% Trimmed Mean		4,03034		
		Median		4,03119		
			Variance	,112		
			Std. Deviation	,335030		
			Minimum	3,527		
			Maximum	4,531		
			Range	1,004		
			Interquartile Range	,567		
			Skewness	-,358	,687	
			Kurtosis	-,758	1,334	
	air hangat		Mean		2,41722	,093552
			95% Confidence Interval for Mean	Lower Bound	2,20559	
			Upper Bound	2,62885		
5% Trimmed Mean				2,43401		
Median				2,51799		
			Variance	,088		
			Std. Deviation	,295837		
			Minimum	1,761		
			Maximum	2,771		
			Range	1,010		
			Interquartile Range	,315		
			Skewness	-1,080	,687	
			Kurtosis	1,870	1,334	
garam			Mean		1,20856	,090444
			95% Confidence Interval for Mean	Lower Bound	1,00396	
			Upper Bound	1,41316		
	5% Trimmed Mean			1,20288		
	Median			1,25800		
			Variance	,082		
			Std. Deviation	,286008		
			Minimum	,755		
			Maximum	1,764		
			Range	1,009		
			Interquartile Range	,315		
			Skewness	,484	,687	
			Kurtosis	,570	1,334	

**Tests of Normality**

perlakuan		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
oksalat_tepung	kontrol	,198	10	,200*	,919	10	,351
	air hangat	,232	10	,136	,874	10	,111
	garam	,229	10	,148	,934	10	,489

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

**ANOVA**

oksalat\_tepung

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	40,080	2	20,040	213,520	,000
Within Groups	2,534	27	,094		
Total	42,614	29			

oksalat\_tepung

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05		
		1	2	3
garam	10	1,20856		
air hangat	10		2,41722	
kontrol	10			4,03017
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

**Lampiran 5. ANALISA DATA UJI PROKSIMAT & OKSALAT MANTAU  
PROKSIMAT MANTAU**

**Group Statistics**

perlakuan	N	Mean	Std. Deviation	Std. Error Mean
KA kontrol	10	32,56280	,331100	,104703
30%	10	32,07130	,329740	,104273
abu kontrol	10	,83280	,096700	,030579
30%	10	2,12840	,103860	,032843
protein kontrol	10	1,89200	,073802	,023338
30%	10	1,67270	,114632	,036250
lemak kontrol	10	4,81730	,616500	,194954
30%	10	5,03880	,427594	,135217
KH kontrol	10	59,84500	,568861	,179890
30%	10	58,49700	,264848	,083752

**Tests of Normality**

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KA kontrol	,225	10	,165	,940	10	,548
30%	,190	10	,200*	,968	10	,870
abu kontrol	,197	10	,200*	,840	10	,044
30%	,238	10	,115	,868	10	,096
protein kontrol	,232	10	,134	,881	10	,135
30%	,153	10	,200*	,974	10	,929
lemak kontrol	,244	10	,095	,859	10	,074
30%	,185	10	,200*	,914	10	,310
KH kontrol	,163	10	,200*	,947	10	,639
30%	,154	10	,200*	,933	10	,478

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## Independent Samples Test

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
KA	Equal variances assumed	,051	,824	3,326	18	,004	,491500	,147769	181050	801950
	Equal variances not assumed			3,326	18,000	,004	,491500	,147769	181049	801951
abu	Equal variances assumed	,980	,335	-28,871	18	,000	,295600	,044875	389879	201321
	Equal variances not assumed			-28,871	17,909	,000	,295600	,044875	389914	201286
proteir	Equal variances assumed	1,206	,287	5,087	18	,000	,219300	,043113	128723	309877
	Equal variances not assumed			5,087	15,367	,000	,219300	,043113	127598	311002
lemak	Equal variances assumed	3,055	,098	-,934	18	,363	-,221500	,237257	719958	276958
	Equal variances not assumed			-,934	16,032	,364	-,221500	,237257	724381	281381
KH	Equal variances assumed	3,172	,092	6,793	18	,000	,348000	,198431	931113	764887
	Equal variances not assumed			6,793	12,727	,000	,348000	,198431	918378	777622

## OKSALAT MANTAU

## Descriptives

oksalat

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
kontrol	10	,40310	,142871	,045180	,30090	,50530	,252	,629
10%	10	,90650	,242904	,076813	,73274	1,08026	,504	1,258
20%	10	,90720	,165887	,052458	,78853	1,02587	,756	1,260
30%	10	,94490	,159713	,050506	,83065	1,05915	,756	1,259
Total	40	,79043	,286531	,045305	,69879	,88206	,252	1,260

## Tests of Normality

perlakuan		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
oksalat	kontrol	,260	10	,054	,825	10	,029
	10%	,232	10	,135	,905	10	,249
	20%	,219	10	,191	,843	10	,048
	30%	,254	10	,068	,847	10	,054

a. Lilliefors Significance Correction

## ANOVA

oksalat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,010	3	,670	20,235	,000
Within Groups	1,192	36	,033		
Total	3,202	39			

oksalat

Duncan <sup>a</sup>

perlakuan	N	Subset for alpha = .05	
		1	2
kontrol	10	,40310	
10%	10		,90650
20%	10		,90720
30%	10		,94490
Sig.		1,000	,661

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## Lampiran 6. ANALISA DATA UJI FISIK MANTAU HARDNESS

## Descriptives

hardness

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
mantau 0%	10	55,99061	7,580343	2,397115	50,56796	61,41326	42,534	68,795
mantau 10%	10	61,68347	11,654060	3,685337	53,34666	70,02029	47,191	78,907
mantau 20%	10	69,14439	6,148941	1,944466	64,74570	73,54308	60,429	78,592
mantau 30%	10	82,53978	8,621003	2,726200	76,37269	88,70687	71,017	98,291
mantau 40%	10	102,07134	9,639972	3,048427	95,17532	108,96736	90,052	115,954
Total	50	74,28592	18,728108	2,648554	68,96345	79,60839	42,534	115,954

## Tests of Normality

konsentrasi		Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
hardness	mantau suweg 0%	,145	10	,200*	,976	10	,941
	mantau suweg 10%	,150	10	,200*	,924	10	,392
	mantau suweg 20%	,191	10	,200*	,927	10	,420
	mantau suweg 30%	,134	10	,200*	,966	10	,854
	mantau suweg 40%	,144	10	,200*	,918	10	,341

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

hardness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13601,310	4	3400,327	42,681	,000
Within Groups	3585,050	45	79,668		
Total	17186,360	49			

## hardness

Duncan<sup>a</sup>

konsentrasi	N	Subset for alpha = .05			
		1	2	3	4
mantau suweg 0%	10	55,99061			
mantau suweg 10%	10	61,68347	61,68347		
mantau suweg 20%	10		69,14439		
mantau suweg 30%	10			82,53978	
mantau suweg 40%	10				102,07134
Sig.		,161	,068	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

**SPRINGINESS**

## Descriptives

springiness

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
kontrol	10	1,51004	,278946	,088210	1,31049	1,70958	1,080	1,898
10%	10	1,47516	,347008	,109734	1,22693	1,72340	1,036	1,977
20%	10	1,56770	,252462	,079835	1,38710	1,74830	1,277	1,983
30%	10	1,66013	,276011	,087282	1,46268	1,85758	1,226	2,264
40%	10	1,73610	,450605	,142494	1,41376	2,05845	1,211	2,474
Total	50	1,58983	,329939	,046660	1,49606	1,68359	1,036	2,474

## Tests of Normality

springiness	konsentrasi	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
	kontrol	,118	10	,200*	,955	10	,727
	10%	,182	10	,200*	,904	10	,245
	20%	,230	10	,143	,902	10	,231
	30%	,213	10	,200*	,918	10	,339
	40%	,162	10	,200*	,918	10	,340

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

springiness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,463	4	,116	1,070	,382
Within Groups	4,871	45	,108		
Total	5,334	49			

springiness

Duncan<sup>a</sup>

konsentrasi	N	Subset for alpha = .05
		1
10%	10	1,47516
kontrol	10	1,51004
20%	10	1,56770
30%	10	1,66013
40%	10	1,73610
Sig.		,120

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## PORORSITAS

## Descriptives

diameter\_rata2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
kontrol	10	,6646460	,12601461	,03984932	,5745006	,7547914	,50000	,86330
10%	10	,6642100	,10731463	,03393587	,5874417	,7409783	,50680	,82500
20%	10	,5232320	,04115371	,01301395	,4937924	,5526716	,46360	,58930
30%	10	,5151400	,09678848	,03060720	,4459017	,5843783	,38790	,70650
40%	10	,4262200	,04591712	,01452027	,3933729	,4590671	,35290	,47920
Total	50	,5586896	,12743372	,01802185	,5224733	,5949059	,35290	,86330

## Tests of Normality

perlakuan	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
diameter_rata2 kontrol	,180	10	,200*	,929	10	,441
10%	,133	10	,200*	,945	10	,614
20%	,142	10	,200*	,968	10	,874
30%	,126	10	,200*	,959	10	,769
40%	,258	10	,059	,867	10	,093

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

diameter\_rata2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,431	4	,108	13,269	,000
Within Groups	,365	45	,008		
Total	,796	49			

diameter\_rata2

Duncan<sup>a</sup>

perlakuan	N	Subset for alpha = .05		
		1	2	3
40%	10	,4262200		
30%	10		,5151400	
20%	10		,5232320	
10%	10			,6642100
kontrol	10			,6646460
Sig.		1,000	,842	,991

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## VOLUME PENGEMBANGAN

## Descriptives

vol\_pengembangan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0%	10	155,32300	6,286737	1,988041	150,82574	159,82026	146,667	169,231
10%	10	149,62240	5,824131	1,841752	145,45607	153,78873	140,964	158,333
20%	10	112,80350	5,356262	1,693799	108,97186	116,63514	101,053	120,833
30%	10	108,14170	7,860887	2,485831	102,51836	113,76504	98,571	118,182
40%	10	81,99150	6,026307	1,905686	77,68054	86,30246	71,429	90,000
Total	50	121,57642	28,320502	4,005124	113,52782	129,62502	71,429	169,231

## Tests of Normality

konsentrasi	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
vol_pengembangar 0%	,210	10	,200*	,924	10	,392
10%	,174	10	,200*	,939	10	,542
20%	,157	10	,200*	,939	10	,542
30%	,161	10	,200*	,889	10	,164
40%	,150	10	,200*	,956	10	,736

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

vol\_pengembangan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37498,304	4	9374,576	234,080	,000
Within Groups	1802,187	45	40,049		
Total	39300,491	49			

vol\_pengembangan

Duncan<sup>a</sup>

konsentrasi	N	Subset for alpha = .05			
		1	2	3	4
40%	10	81,99150			
30%	10		108,14170		
20%	10		112,80350		
10%	10			149,62240	
0%	10				155,32300
Sig.		1,000	,106	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## WARNA MANTAU

## Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Mantau 0%	10	83,92700	2,134958	,675133	82,39974	85,45426	81,480	86,440
mantau 10%	10	74,60700	,261511	,082697	74,41993	74,79407	74,308	75,258
mantau 20%	10	67,96100	,535250	,169261	67,57811	68,34389	66,806	68,580
mantau 30%	10	63,47280	,644151	,203699	63,01200	63,93360	62,306	64,452
mantau 40%	10	59,74440	,886134	,280220	59,11050	60,37830	58,092	60,984
Total	50	69,94244	8,720258	1,233231	67,46417	72,42071	58,092	86,440
mantau 0%	10	-2,52780	,128780	,040724	-2,61992	-2,43568	-2,740	-2,388
mantau 10%	10	1,19380	,168141	,053171	1,07352	1,31408	,966	1,428
mantau 20%	10	3,04040	,287422	,090891	2,83479	3,24601	2,710	3,448
mantau 30%	10	4,12320	,245247	,077554	3,94776	4,29864	3,764	4,486
mantau 40%	10	4,69820	,146977	,046478	4,59306	4,80334	4,364	4,836
Total	50	2,10556	2,640122	,373370	1,35525	2,85587	-2,740	4,836
mantau 0%	10	18,52260	,596118	,188509	18,09616	18,94904	17,326	19,580
mantau 10%	10	17,90700	,471567	,149123	17,56966	18,24434	17,128	18,512
mantau 20%	10	16,61680	,415590	,131421	16,31950	16,91410	16,018	17,190
mantau 30%	10	15,70100	,315847	,099880	15,47506	15,92694	15,272	16,294
mantau 40%	10	14,14700	,604626	,191200	13,71448	14,57952	13,564	15,054
Total	50	16,57888	1,648890	,233188	16,11027	17,04749	13,564	19,580

## Tests of Normality

konsentrasi	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
l mantau suweg 0%	,196	10	,200*	,845	10	,050
mantau suweg 10%	,230	10	,143	,832	10	,035
mantau suweg 20%	,191	10	,200*	,921	10	,365
mantau suweg 30%	,121	10	,200*	,985	10	,985
mantau suweg 40%	,147	10	,200*	,960	10	,784
a mantau suweg 0%	,216	10	,200*	,899	10	,212
mantau suweg 10%	,231	10	,138	,889	10	,166
mantau suweg 20%	,204	10	,200*	,871	10	,104
mantau suweg 30%	,183	10	,200*	,945	10	,611
mantau suweg 40%	,183	10	,200*	,854	10	,065
b mantau suweg 0%	,216	10	,200*	,946	10	,617
mantau suweg 10%	,209	10	,200*	,918	10	,338
mantau suweg 20%	,146	10	,200*	,934	10	,483
mantau suweg 30%	,237	10	,119	,939	10	,542
mantau suweg 40%	,259	10	,056	,834	10	,037

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
l	Between Groups	3671,084	4	917,771	750,661	,000
	Within Groups	55,018	45	1,223		
	Total	3726,102	49			
a	Between Groups	339,659	4	84,915	2029,362	,000
	Within Groups	1,883	45	,042		
	Total	341,542	49			
b	Between Groups	122,281	4	30,570	125,723	,000
	Within Groups	10,942	45	,243		
	Total	133,223	49			

l

Duncan<sup>a</sup>

konsentrasi	N	Subset for alpha = .05				
		1	2	3	4	5
mantau suweg 40%	10	59,74440				
mantau suweg 30%	10		63,47280			
mantau suweg 20%	10			67,96100		
mantau suweg 10%	10				74,60700	
mantau suweg 0%	10					83,92700
Sig.		1,000	1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

b

Duncan<sup>a</sup>

konsentrasi	N	Subset for alpha = .05				
		1	2	3	4	5
mantau suweg 40%	10	14,14700				
mantau suweg 30%	10		15,70100			
mantau suweg 20%	10			16,61680		
mantau suweg 10%	10				17,90700	
mantau suweg 0%	10					18,52260
Sig.		1,000	1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 10,000.

## Lampiran 7. ANALISA DATA UJI RATING HEDONIK

### WARNA

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
warna	250	3,4200	1,27203	1,00	5,00
konsentrasi	250	3,000	1,4171	1,0	5,0

#### Test Statistics<sup>a,b</sup>

	warna
Chi-Square	43,451
df	4
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: konsentrasi

#### 0% & 40%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	713,500
Wilcoxon W	1988,500
Z	-3,779
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

#### 0% & 10%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	984,000
Wilcoxon W	2259,000
Z	-1,908
Asymp. Sig. (2-tailed)	,056

a. Grouping Variable: konsentrasi

#### 10% & 20%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	1110,000
Wilcoxon W	2385,000
Z	-1,025
Asymp. Sig. (2-tailed)	,305

a. Grouping Variable: konsentrasi

#### 0% & 20%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	1057,500
Wilcoxon W	2332,500
Z	-1,374
Asymp. Sig. (2-tailed)	,169

a. Grouping Variable: konsentrasi

#### 10% & 30%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	907,000
Wilcoxon W	2182,000
Z	-2,459
Asymp. Sig. (2-tailed)	,014

a. Grouping Variable: konsentrasi

#### 0% & 30%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	1215,000
Wilcoxon W	2490,000
Z	-,248
Asymp. Sig. (2-tailed)	,804

a. Grouping Variable: konsentrasi

#### 10% & 40%

#### Test Statistics<sup>a</sup>

	warna
Mann-Whitney U	434,500
Wilcoxon W	1709,500
Z	-5,759
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**20% & 30%**  
**Test Statistics<sup>a</sup>**

	warna
Mann-Whitney U	998,000
Wilcoxon W	2273,000
Z	-1,803
Asymp. Sig. (2-tailed)	,071

a. Grouping Variable: konsentrasi

**20% & 40%**  
**Test Statistics<sup>a</sup>**

	warna
Mann-Whitney U	465,500
Wilcoxon W	1740,500
Z	-5,546
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**30% & 40%**  
**Test Statistics<sup>a</sup>**

	warna
Mann-Whitney U	722,000
Wilcoxon W	1997,000
Z	-3,726
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**TEKSTUR** **Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
tekstur	250	3,22800	1,307998	1,000	5,000
konsentrasi	250	3,000	1,4171	1,0	5,0

**Test Statistics<sup>a,b</sup>**

	tekstur
Chi-Square	28,923
df	4
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: konsentrasi

**0% & 30%**

**Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	915,000
Wilcoxon W	2190,000
Z	-2,367
Asymp. Sig. (2-tailed)	,018

a. Grouping Variable: konsentrasi

**0% & 10%**

**Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	1210,000
Wilcoxon W	2485,000
Z	-,287
Asymp. Sig. (2-tailed)	,774

a. Grouping Variable: konsentrasi

**0% & 40%**

**Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	670,000
Wilcoxon W	1945,000
Z	-4,086
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**0% & 20%**

**Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	953,500
Wilcoxon W	2228,500
Z	-2,101
Asymp. Sig. (2-tailed)	,036

a. Grouping Variable: konsentrasi

**10% & 20%**

**Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	896,500
Wilcoxon W	2171,500
Z	-2,538
Asymp. Sig. (2-tailed)	,011

a. Grouping Variable: konsentrasi

**10% & 30%****Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	882,000
Wilcoxon W	2157,000
Z	-2,629
Asymp. Sig. (2-tailed)	,009

a. Grouping Variable: konsentrasi

**20% & 40%****Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	845,000
Wilcoxon W	2120,000
Z	-2,856
Asymp. Sig. (2-tailed)	,004

a. Grouping Variable: konsentrasi

**10% & 40%****Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	623,000
Wilcoxon W	1898,000
Z	-4,434
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**30% & 40%****Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	942,500
Wilcoxon W	2217,500
Z	-2,167
Asymp. Sig. (2-tailed)	,030

a. Grouping Variable: konsentrasi

**20% & 30%****Test Statistics<sup>a</sup>**

	tekstur
Mann-Whitney U	1184,500
Wilcoxon W	2459,500
Z	-,464
Asymp. Sig. (2-tailed)	,643

a. Grouping Variable: konsentrasi

**RASA****Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
rasa	250	3,14000	1,391454	1,000	5,000
konsentrasi	250	3,000	1,4171	1,0	5,0

**Test Statistics<sup>a,b</sup>**

	rasa
Chi-Square	29,844
df	4
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: konsentrasi

**0% & 10%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	1132,000
Wilcoxon W	2407,000
Z	-,841
Asymp. Sig. (2-tailed)	,401

a. Grouping Variable: konsentrasi

**0% & 20%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	1147,000
Wilcoxon W	2422,000
Z	-,729
Asymp. Sig. (2-tailed)	,466

a. Grouping Variable: konsentrasi

**10% & 40%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	552,000
Wilcoxon W	1827,000
Z	-4,915
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**0% & 30%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	976,500
Wilcoxon W	2251,500
Z	-1,929
Asymp. Sig. (2-tailed)	,054

a. Grouping Variable: konsentrasi

**20% & 30%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	1063,000
Wilcoxon W	2338,000
Z	-1,318
Asymp. Sig. (2-tailed)	,187

a. Grouping Variable: konsentrasi

**0% & 40%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	691,500
Wilcoxon W	1966,500
Z	-3,932
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**20% & 40%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	759,000
Wilcoxon W	2034,000
Z	-3,459
Asymp. Sig. (2-tailed)	,001

a. Grouping Variable: konsentrasi

**10% & 20%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	1012,000
Wilcoxon W	2287,000
Z	-1,692
Asymp. Sig. (2-tailed)	,091

a. Grouping Variable: konsentrasi

**30% & 40%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	943,000
Wilcoxon W	2218,000
Z	-2,170
Asymp. Sig. (2-tailed)	,030

a. Grouping Variable: konsentrasi

**10% & 30%****Test Statistics<sup>a</sup>**

	rasa
Mann-Whitney U	838,000
Wilcoxon W	2113,000
Z	-2,912
Asymp. Sig. (2-tailed)	,004

a. Grouping Variable: konsentrasi

**OVERALL****Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
overall	250	3,30400	1,315487	1,000	5,000
konsentrasi	250	3,000	1,4171	1,0	5,0

**Test Statistics<sup>a,b</sup>**

	overall
Chi-Square	28,864
df	4
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: konsentrasi

**10% & 20%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	1086,500
Wilcoxon W	2361,500
Z	-1,173
Asymp. Sig. (2-tailed)	,241

a. Grouping Variable: konsentrasi

**0% & 10%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	1209,500
Wilcoxon W	2484,500
Z	-,289
Asymp. Sig. (2-tailed)	,772

a. Grouping Variable: konsentrasi

**10% & 30%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	997,500
Wilcoxon W	2272,500
Z	-1,798
Asymp. Sig. (2-tailed)	,072

a. Grouping Variable: konsentrasi

**0% & 20%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	1102,500
Wilcoxon W	2377,500
Z	-1,048
Asymp. Sig. (2-tailed)	,295

a. Grouping Variable: konsentrasi

**10% & 40%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	594,000
Wilcoxon W	1869,000
Z	-4,637
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**0% & 30%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	1011,500
Wilcoxon W	2286,500
Z	-1,689
Asymp. Sig. (2-tailed)	,091

a. Grouping Variable: konsentrasi

**20% & 30%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	1132,000
Wilcoxon W	2407,000
Z	-,837
Asymp. Sig. (2-tailed)	,402

a. Grouping Variable: konsentrasi

**0% & 40%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	660,000
Wilcoxon W	1935,000
Z	-4,155
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**20% & 40%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	695,000
Wilcoxon W	1970,000
Z	-3,923
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: konsentrasi

**30% & 40%****Test Statistics<sup>a</sup>**

	overall
Mann-Whitney U	833,000
Wilcoxon W	2108,000
Z	-2,941
Asymp. Sig. (2-tailed)	,003

a. Grouping Variable: konsentrasi

**Lampiran 8. ANALISA DATA RANKING HEDONIK**

$$\begin{aligned} \text{Uji LSD rank (manual)} &= t_{\alpha/2} \sqrt{p \times t \times (t+1) / 6} \\ &= 1,960 \times \sqrt{\frac{50 \times 5 \times (5+1)}{6}} \\ &= 30,990 \end{aligned}$$

**RASA****Ranks**

	Mean Rank
rasa0	3,34
rasa1	3,72
rasa2	3,36
rasa3	2,80
rasa4	1,78

**Test Statistics<sup>a</sup>**

N	50
Chi-Square	45,840
df	4
Asymp. Sig.	,000

a. Friedman Test

$$\begin{aligned} R_{0\%} &= 167 \\ R_{10\%} &= 186 \\ R_{20\%} &= 168 \\ R_{30\%} &= 140 \\ R_{40\%} &= 89 \end{aligned}$$

$$\begin{aligned} R_{10\%} - R_{0\%} &= 19 < \text{LSD} \rightarrow 10\% = 0\% & R_{20\%} - R_{30\%} &= 28 < \text{LSD} \rightarrow 20\% = 30\% \\ R_{10\%} - R_{20\%} &= 18 < \text{LSD} \rightarrow 10\% = 20\% & R_{20\%} - R_{40\%} &= 79 > \text{LSD} \rightarrow 20\% \neq 40\% \\ R_{10\%} - R_{30\%} &= 46 > \text{LSD} \rightarrow 10\% \neq 30\% & R_{0\%} - R_{30\%} &= 27 < \text{LSD} \rightarrow 0\% = 30\% \\ R_{10\%} - R_{40\%} &= 97 > \text{LSD} \rightarrow 10\% \neq 40\% & R_{0\%} - R_{40\%} &= 78 > \text{LSD} \rightarrow 0\% \neq 40\% \\ R_{20\%} - R_{0\%} &= 1 < \text{LSD} \rightarrow 20\% = 0\% & R_{30\%} - R_{40\%} &= 51 > \text{LSD} \rightarrow 30\% \neq 40\% \end{aligned}$$

**TEKSTUR****Ranks**

	Mean Rank
tekstur0	3,39
tekstur1	3,88
tekstur2	2,98
tekstur3	2,88
tekstur4	1,87

**Test Statistics<sup>a</sup>**

N	50
Chi-Square	44,408
df	4
Asymp. Sig.	,000

a. Friedman Test

$$\begin{aligned} T_{0\%} &= 170 \\ T_{10\%} &= 194 \\ T_{20\%} &= 149 \\ T_{30\%} &= 144 \\ T_{40\%} &= 94 \end{aligned}$$

$$\begin{aligned} T_{10\%} - T_{0\%} &= 24 < \text{LSD} \rightarrow 10\% = 0\% & T_{0\%} - T_{30\%} &= 26 < \text{LSD} \rightarrow 0\% = 30\% \\ T_{10\%} - T_{20\%} &= 45 > \text{LSD} \rightarrow 10\% \neq 20\% & T_{0\%} - T_{40\%} &= 76 > \text{LSD} \rightarrow 0\% \neq 40\% \\ T_{10\%} - T_{30\%} &= 50 > \text{LSD} \rightarrow 10\% \neq 30\% & T_{20\%} - T_{30\%} &= 5 < \text{LSD} \rightarrow 20\% = 30\% \\ T_{10\%} - T_{40\%} &= 100 > \text{LSD} \rightarrow 10\% \neq 40\% & T_{20\%} - T_{40\%} &= 55 > \text{LSD} \rightarrow 20\% \neq 40\% \\ T_{0\%} - T_{20\%} &= 21 < \text{LSD} \rightarrow 0\% = 20\% & T_{30\%} - T_{40\%} &= 50 > \text{LSD} \rightarrow 30\% \neq 40\% \end{aligned}$$

### WARNA Ranks

	Mean Rank
warna0	3,13
warna1	3,66
warna2	3,44
warna3	3,07
warna4	1,70

#### Test Statistics<sup>a</sup>

N	50
Chi-Square	46,867
df	4
Asymp. Sig.	,000

a. Friedman Test

$$\begin{aligned} W_{0\%} &= 157 \\ W_{10\%} &= 184 \\ W_{20\%} &= 172 \\ W_{30\%} &= 154 \\ W_{40\%} &= 85 \end{aligned}$$

$$\begin{aligned} W_{10\%} - W_{20\%} &= 12 < \text{LSD} \rightarrow 10\% = 20\% \\ W_{10\%} - W_{0\%} &= 27 < \text{LSD} \rightarrow 10\% = 0\% \\ W_{10\%} - W_{30\%} &= 30 < \text{LSD} \rightarrow 10\% = 30\% \\ W_{10\%} - W_{40\%} &= 99 > \text{LSD} \rightarrow 10\% \neq 40\% \\ W_{20\%} - W_{0\%} &= 15 < \text{LSD} \rightarrow 20\% = 0\% \\ W_{20\%} - W_{30\%} &= 18 < \text{LSD} \rightarrow 20\% = 30\% \\ W_{20\%} - W_{40\%} &= 87 > \text{LSD} \rightarrow 20\% \neq 40\% \\ W_{0\%} - W_{30\%} &= 3 < \text{LSD} \rightarrow 20\% = 30\% \\ W_{0\%} - W_{40\%} &= 72 > \text{LSD} \rightarrow 0\% \neq 40\% \\ W_{30\%} - W_{40\%} &= 69 > \text{LSD} \rightarrow 30\% \neq 40\% \end{aligned}$$

### OVERALL Ranks

	Mean Rank
overall0	3,30
overall1	3,78
overall2	3,10
overall3	2,96
overall4	1,86

#### Test Statistics<sup>a</sup>

N	50
Chi-Square	40,192
df	4
Asymp. Sig.	,000

a. Friedman Test

$$\begin{aligned} O_{0\%} &= 165 \\ O_{10\%} &= 189 \\ O_{20\%} &= 155 \\ O_{30\%} &= 148 \\ O_{40\%} &= 93 \end{aligned}$$

$$\begin{aligned} O_{10\%} - O_{0\%} &= 24 < \text{LSD} \rightarrow 10\% = 0\% \\ O_{10\%} - O_{20\%} &= 34 > \text{LSD} \rightarrow 10\% \neq 20\% \\ O_{10\%} - O_{30\%} &= 41 > \text{LSD} \rightarrow 10\% \neq 30\% \\ O_{10\%} - O_{40\%} &= 96 > \text{LSD} \rightarrow 10\% \neq 40\% \\ O_{0\%} - O_{20\%} &= 10 < \text{LSD} \rightarrow 0\% = 20\% \\ O_{0\%} - O_{30\%} &= 17 < \text{LSD} \rightarrow 0\% = 30\% \\ O_{0\%} - O_{40\%} &= 72 > \text{LSD} \rightarrow 0\% \neq 40\% \\ O_{20\%} - O_{30\%} &= 7 < \text{LSD} \rightarrow 20\% = 30\% \\ O_{20\%} - O_{40\%} &= 62 > \text{LSD} \rightarrow 20\% \neq 40\% \\ O_{30\%} - O_{40\%} &= 55 > \text{LSD} \rightarrow 30\% \neq 40\% \end{aligned}$$