7. LAMPIRAN

LAMPIRAN 1. *Worksheet* Uji Sensori Kopi Tempur Tanpa Ampas

Tanggal uji:

Jenis Sampel: Kopi Tanpa Ampas

Identifikasi sampel	**Kode**
Kopi instan komersial merk ”Nescafe”	A
Kopi tanpa ampas perlakuan *roasting* 160^0C-22,5 menit	B
Kopi tanpa ampas perlakuan *roasting* 180^0C-25 menit	C

Kode kombinasi urutan penyajian:

ABC = 1 BAC = 2 CBA = 3 BCA = 4

Penyajian:

Booth	Panelis	Kode Sampel			Urutan Penyajian
I	#1	861	694	184	1
II	#2	437	658	633	2
III	#3	847	248	272	3
IV	#4	762	526	333	4
I	#5	919	879	291	5
II	#6	985	747	352	6
III	#7	475	326	485	7
IV	#8	513	769	526	8
I	#9	194	151	714	9
II	#10	171	256	927	10
III	#11	345	948	595	11
IV	#12	214	662	614	12
I	#13	873	536	559	13
II	#14	725	162	196	14
III	#15	871	683	449	15
IV	#16	362	233	938	16
I	#17	387	499	114	17
II	#18	857	721	376	18
III	#19	793	768	926	19
IV	#20	373	949	487	20
I	#21	345	225	652	21
II	#22	811	164	531	22
III	#23	457	632	818	23
IV	#24	959	882	733	24

I	#25	559	197	417	[25]
II	#26	586	676	838	[26]
III	#27	956	444	222	[27]
IV	#28	225	684	991	[28]
I	#29	461	751	549	[29]
II	#30	683	695	161	[30]

Kode Sampel:

A	861	658	272	333	919	747	485	526	194	256
	595	614	873	162	449	938	387	721	926	487
	345	164	818	733	559	676	222	991	461	695
B	694	437	248	762	879	985	326	513	151	171
	948	214	536	725	683	362	499	857	768	373
	225	811	632	959	197	586	444	225	751	683
C	184	633	847	526	291	352	475	769	714	927
	345	662	559	196	871	233	114	376	793	949
	652	531	457	882	417	838	956	684	549	161

LAMPIRAN 2. *Scoresheet* Uji Sensori Kopi Tempur Tanpa Ampas

2.1. *Scoresheet* Uji Sensori Kopi Seduh Tanpa Ampas

UJI RATING

Nama : Tanggal:

Produk : Kopi Seduh Tanpa Ampas

Atribut : Warna

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel kopi seduh tanpa ampas. Amati sampel secara berurutan satu per satu dari **kiri** ke **kanan**. Setelah mengamati semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **coklat muda**, (2) **coklat,** (3) **coklat tua**, (4) **coklat kehitaman**, (5) **hitam.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

UJI RATING

Nama : Tanggal:

Produk : Kopi Seduh Tanpa Ampas

Atribut : Aroma

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel kopi seduh tanpa ampas. Hirup aroma sampel secara berurutan dari **kiri** ke **kanan**. Setelah menghirup aroma semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **tidak ada aroma kopi,** (2) **aroma kopi tidak kuat**, (3) **aroma kopi agak kuat**, (4) **aroma kopi kuat**, (5) **aroma kopi sangat kuat.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

UJI RATING

Nama : Tanggal:

Produk : Kopi Seduh Tanpa Ampas

Atribut : Rasa

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel kopi seduh tanpa ampas. Cicipi sampel secara berurutan dari **kiri** ke **kanan**, rasakan masing-masing. Setiap pergantian sampel, minumlah terlebih dahulu. Setelah merasakan semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **tidak ada rasa kopi** (2) **rasa kopi tidak pahit,** (3) **rasa kopi agak pahit**, (4) **rasa kopi pahit**, (5) **rasa kopi sangat pahit**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

UJI RATING

Nama : Tanggal:

Produk : Kopi Seduh Tanpa Ampas

Atribut : *Overall*

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel kopi seduh tanpa ampas. Setelah memberi rating dari segi rasa, aroma, dan warna anda diminta untuk mengurutkan sampel dari segi keseluruhan/*overall* (rasa, aroma, dan warna). Setelah mengamati semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **tidak terdapat karakter kopi,** (2) **karakter kopi tidak kuat**, (3) **karakter kopi agak kuat**, (4) **karakter kopi kuat**, (5) **karakter kopi sangat kuat.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

2.2. *Scoresheet* Uji Sensori Kopi Serbuk Tanpa Ampas

UJI RATING

Nama : Tanggal:

Produk : Serbuk Kopi Tanpa Ampas

Atribut : Warna

Instruksi:

Di hadapan Anda terdapat 3 jenis sampel serbuk kopi tanpa ampas. Amati sampel secara berurutan satu per satu dari **kiri** ke **kanan**. Setelah mengamati semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **coklat muda**, (2) **coklat,** (3) **coklat tua**, (4) **coklat kehitaman**, (5) **hitam.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

UJI RATING

Nama : Tanggal:

Produk : Serbuk Kopi Tanpa Ampas

Atribut : Aroma

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel serbuk kopi tanpa ampas. Hirup aroma sampel secara berurutan dari **kiri** ke **kanan**. Setelah menghirup aroma semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **tidak ada aroma kopi** (2) **aroma kopi tidak kuat**, (3) **aroma kopi agak kuat**, (4) **aroma kopi kuat**, (5) **aroma kopi sangat kuat.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

UJI RATING

Nama : Tanggal:

Produk : Serbuk Kopi Tanpa Ampas

Atribut : *Overall*

Instruksi :

Di hadapan Anda terdapat 3 jenis sampel serbuk kopi tanpa ampas. Setelah memberi rating dari segi aroma dan warna anda diminta untuk mengurutkan sampel dari segi keseluruhan/*overall* (aroma dan warna). Setelah mengamati semua sampel, anda boleh mengulang sesering yang Anda perlukan. Beri nilai pada sampel sesuai pilihan berikut : (1) **tidak terdapat karakter kopi,** (2) **karakter kopi tidak kuat**, (3) **karakter kopi agak kuat**, (4) **karakter kopi kuat**, (5) **karakter kopi sangat kuat.**

Kode Sampel	**Rating (BOLEH ada yang sama)**
_____	_____
_____	_____
_____	_____

Terima kasih

LAMPIRAN 3. Analisa Data

3.1. Data Interaksi Suhu dan Waktu Penyangraian terhadap Rendemen Kopi Tempur Tanpa Ampas

Rendemen (%)				
Suhu / Waktu	160^0C	170^0C	180^0C	Rata-rata
12,5 menit	17,153 ± 1,758	17,528 ± 0,662	17,960 ± 0,865	17,547 ± 0,404
15 menit	17,401 ± 0,396	17,531 ± 0,520	17,892 ± 0,515	17,608 ± 0,254
17,5 menit	17,620 ± 0,685	17,927 ± 0,250	17,931 ± 0,519	17,826 ± 0,178
20 menit	18,099 ± 0,838	18,124 ± 0,935	18,585 ± 0,436	18,269 ± 0,274
22,5 menit	18,799 ± 0,195	18,938 ± 0,048	18,993 ± 0,465	18,910 ± 0,100
25 menit	18,986 ± 0,673	19,309 ± 0,997	19,868 ± 0,997	19,388 ± 0,446
Rata-Rata	18,010 ± 0,754	18,226 ± 0,742	18,538 ± 0,787	

3.2. Data Interaksi Suhu dan Waktu Penyangraian terhadap Kadar Air Kopi Tempur Tanpa Ampas

Kadar Air (%)				
Suhu / Waktu	160^0C	170^0C	180^0C	Rata-Rata
12,5 menit	1,326 ± 0,136	1,262 ± 0,142	1,258 ± 0,126	1,282 ± 0,038
15 menit	1,147 ± 0,132	1,127 ± 0,123	1,111 ± 0,122	1,128 ± 0,018
17,5 menit	1,053 ± 0,059	0,981 ± 0,150	0,948 ± 0,099	0,994 ± 0,054
20 menit	0,931 ± 0,102	0,930 ± 0,076	0,863 ± 0,105	0,908 ± 0,039
22,5 menit	0,814 ± 0,126	0,729 ± 0,122	0,678 ± 0,147	0,740 ± 0,069
25 menit	0,665 ± 0,060	0,433 ± 0,057	0,383 ± 0,077	0,494 ± 0,151
Rata-Rata	0,989 ± 0,237	0,910 ± 0,295	0,874 ± 0,313	

3.3. Data Interaksi Suhu dan Waktu Penyangraian terhadap Kadar Abu Kopi Tempur Tanpa Ampas

Kadar Abu (%)				
Waktu \ Suhu	160^0C	170^0C	180^0C	Rata-Rata
12,5 menit	9,890 ± 0,951	10,452 ± 1,338	11,222 ± 0,758	10,521 ± 0,669
15 menit	9,967 ± 0,545	10,562 ± 0,668	11,550 ± 0,667	10,693 ± 0,799
17,5 menit	10,358 ± 1,061	10,863 ± 0,650	11,563 ± 2,101	10,928 ± 0,605
20 menit	10,702 ± 0,899	11,629 ± 1,159	11,687 ± 0,688	11,339 ± 0,553
22,5 menit	11,430 ± 0,398	11,833 ± 0,417	11,873 ± 0,734	11,712 ± 0,245
25 menit	11,892 ± 1,354	12,208 ± 1,085	12,417 ± 0,433	12,172 ± 0,264
Rata-Rata	10,706 ± 0,808	11,258 ± 0,730	11,719 ± 0,403	

3.4. Data Interaksi Suhu dan Waktu Penyangraian terhadap Kealkalian Abu Kopi Tempur Tanpa Ampas

Kealkalian Abu (ml N NaOH/100g)				
Waktu \ Suhu	160^0C	170^0C	180^0C	Rata-Rata
12,5 menit	82,916 ± 1,151	84,524 ± 1,826	86,024 ± 0,934	84,488 ± 1,554
15 menit	84,747 ± 0,335	84,872 ± 2,434	89,309 ± 1,043	86,309 ± 2,599
17,5 menit	92,423 ± 0,027	97,843 ± 1,281	98,293 ± 6,634	96,186 ± 3,267
20 menit	96,755 ± 0,333	98,493 ± 0,977	104,651 ± 0,108	99,967 ± 4,149
22,5 menit	104,014 ± 1,091	106,437 ± 1,522	107,989 ± 0,612	106,147 ± 2,003
25 menit	109,238 ± 0,624	113,919 ± 1,323	118,912 ± 0,571	114,023 ± 4,838
Rata-Rata	95,016 ± 10,439	97,681 ± 11,647	100,863 ± 12,257	

3.6. Uji Normalitas Data

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	suhu	Statistic	df	Sig.	Statistic	df	Sig.
rendemen	160dC	,116	18	,200*	,935	18	,240
	170dC	,147	18	,200*	,951	18	,437
	180dC	,127	18	,200*	,947	18	,377
air	160dC	,108	18	,200*	,969	18	,772
	170dC	,127	18	,200*	,948	18	,392
	180dC	,134	18	,200*	,969	18	,777
abu	160dC	,132	18	,200*	,953	18	,473
	170dC	,144	18	,200*	,959	18	,577
	180dC	,133	18	,200*	,963	18	,670
alkali	160dC	,179	18	,130	,905	18	,071
	170dC	,160	18	,200*	,920	18	,129
	180dC	,197	18	,064	,901	18	,059

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

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	waktu	Statistic	df	Sig.	Statistic	df	Sig.
rendemen	12,5 m	,196	9	,200*	,917	9	,368
	15 m	,147	9	,200*	,940	9	,586
	17,5 m	,152	9	,200*	,967	9	,866
	20 m	,156	9	,200*	,940	9	,582
	22,5 m	,242	9	,138	,894	9	,221
	25 m	,158	9	,200*	,948	9	,673
air	12,5 m	,162	9	,200*	,973	9	,918
	15 m	,217	9	,200*	,830	9	,044
	17,5 m	,137	9	,200*	,940	9	,580
	20 m	,131	9	,200*	,978	9	,956
	22,5 m	,199	9	,200*	,918	9	,374
	25 m	,189	9	,200*	,901	9	,260
abu	12,5 m	,207	9	,200*	,912	9	,333
	15 m	,211	9	,200*	,968	9	,875
	17,5 m	,206	9	,200*	,845	9	,066
	20 m	,188	9	,200*	,923	9	,422
	22,5 m	,177	9	,200*	,931	9	,490
	25 m	,167	9	,200*	,938	9	,564
alkali	12,5 m	,210	9	,200*	,891	9	,202
	15 m	,247	9	,120	,915	9	,352
	17,5 m	,246	9	,124	,899	9	,249
	20 m	,229	9	,191	,789	9	,015
	22,5 m	,253	9	,101	,894	9	,221
	25 m	,177	9	,200*	,902	9	,262

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

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	suhu	Statistic	df	Sig.	Statistic	df	Sig.
kafein	160 dC	,128	6	,200*	,996	6	,999
	170 dC	,219	6	,200*	,929	6	,572
	180 dC	,256	6	,200*	,897	6	,358

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

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	waktu	Statistic	df	Sig.	Statistic	df	Sig.
kafein	22,5 m	,174	9	,200*	,936	9	,542
	25 m	,241	9	,140	,867	9	,114

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

a. Lilliefors Significance Correction

3.7. Uji Beda

✡ Rendemen

Tests of Between-Subjects Effects

Dependent Variable: rendemen

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	28,611[a]	17	1,683	2,961	,003
Intercept	18001,256	1	18001,256	31669,317	,000
suhu	2,542	2	1,271	2,236	,122
waktu	25,348	5	5,070	8,919	,000
suhu * waktu	,721	10	,072	,127	,999
Error	20,463	36	,568		
Total	18050,330	54			
Corrected Total	49,074	53			

a. R Squared = ,583 (Adjusted R Squared = ,386)

rendemen

Duncan[a,b]

suhu	N	Subset 1
160dC	18	18,00978
170dC	18	18,22606
180dC	18	18,53833
Sig.		,053

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,568.

a. Uses Harmonic Mean Sample Size = 18,000.

b. Alpha = ,05.

rendemen

Duncan[a,b]

waktu	N	Subset 1	2	3
12,5 m	9	17,54711		
15 m	9	17,60789		
17,5 m	9	17,82611		
20 m	9	18,26922	18,26922	
22,5 m	9		18,91022	18,91022
25 m	9			19,38778
Sig.		,070	,080	,187

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,568.

a. Uses Harmonic Mean Sample Size = 9,000.

b. Alpha = ,05.

✡ Kadar Air

Tests of Between-Subjects Effects

Dependent Variable: air

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3,745[a]	17	,220	17,264	,000	,891
Intercept	46,139	1	46,139	3615,612	,000	,990
suhu	,126	2	,063	4,934	,013	,215
waktu	3,544	5	,709	55,544	,000	,885
suhu * waktu	,075	10	,008	,591	,811	,141
Error	,459	36	,013			
Total	50,344	54				
Corrected Total	4,205	53				

a. R Squared = ,891 (Adjusted R Squared = ,839)

air

Duncan[a,b]

suhu	N	Subset 1	Subset 2
180dC	18	,87356	
170dC	18	,91022	
160dC	18		,98928
Sig.		,337	1,000

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,013.

a. Uses Harmonic Mean Sample Size = 18,000.

b. Alpha = ,05.

air

Duncan[a,b]

waktu	N	Subset 1	Subset 2	Subset 3	Subset 4	Subset 5
25 m	9	,49356				
22,5 m	9		,74044			
20 m	9			,90811		
17,5 m	9			,99422		
15 m	9				1,12800	
12,5 m	9					1,28178
Sig.		1,000	1,000	,115	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,013.

a. Uses Harmonic Mean Sample Size = 9,000.

b. Alpha = ,05.

✡ Kadar Abu

Tests of Between-Subjects Effects

Dependent Variable: abu

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	29,448[a]	17	1,732	1,821	,064	,462
Intercept	6807,087	1	6807,087	7157,678	,000	,995
suhu	9,245	2	4,622	4,861	,014	,213
waktu	18,121	5	3,624	3,811	,007	,346
suhu * waktu	2,082	10	,208	,219	,993	,057
Error	34,237	36	,951			
Total	6870,772	54				
Corrected Total	63,685	53				

a. R Squared = ,462 (Adjusted R Squared = ,209)

abu

Duncan[a,b]

suhu	N	Subset 1	Subset 2
160dC	18	10,70633	
170dC	18	11,25772	11,25772
180dC	18		11,71850
Sig.		,098	,165

Means for groups in homogeneous subsets are displayed
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,951.

a. Uses Harmonic Mean Sample Size = 18,000.

b. Alpha = ,05.

abu

Duncan[a,b]

waktu	N	Subset 1	Subset 2	Subset 3
12,5 m	9	10,52144		
15 m	9	10,69300		
17,5 m	9	10,92767	10,92767	
20 m	9	11,33900	11,33900	11,33900
22,5 m	9		11,71189	11,71189
25 m	9			12,17211
Sig.		,112	,115	,094

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = ,951.

a. Uses Harmonic Mean Sample Size = 9,000.

b. Alpha = ,05.

✡ Kealkalian Abu

Tests of Between-Subjects Effects

Dependent Variable: alkali

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6231,360(a)	17	366,551	100,377	,000	,979
Intercept	517063,863	1	517063,863	141594,119	,000	1,000
suhu	308,521	2	154,261	42,243	,000	,701
waktu	5844,535	5	1168,907	320,097	,000	,978
suhu * waktu	78,304	10	7,830	2,144	,046	,373
Error	131,462	36	3,652			
Total	523426,686	54				
Corrected Total	6362,823	53				

a R Squared = ,979 (Adjusted R Squared = ,970)

alkali

Duncan[a,b]

suhu	N	Subset 1	Subset 2	Subset 3
160dC	18	95,01561		
170dC	18		97,68117	
180dC	18			100,86294
Sig.		1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 3,652.

a. Uses Harmonic Mean Sample Size = 18,000.

b. Alpha = ,05.

alkali

Duncan

waktu	N	Subset 1	Subset 2	Subset 3	Subset 4	Subset 5
12,5 m	9	84,48789				
15 m	9	86,30900				
17,5 m	9		96,18622			
20 m	9			99,96656		
22,5 m	9				106,14667	
25 m	9					114,02311
Sig.		,051	1,000	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares
The error term is Mean Square(Error) = 3,652.

a Uses Harmonic Mean Sample Size = 9,000.

b Alpha = ,05.

3.8. Kombinasi Suhu dan Waktu

✡ **Rendemen**

ANOVA

rendemen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28,611	17	1,683	2,961	,003
Within Groups	20,463	36	,568		
Total	49,074	53			

✡ **Kadar Air**

ANOVA

air

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,745	17	,220	17,264	,000
Within Groups	,459	36	,013		
Total	4,205	53			

✡ **Kadar Abu**

ANOVA

abu

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29,448	17	1,732	1,821	,064
Within Groups	34,237	36	,951		
Total	63,685	53			

✡ **Kealkalian Abu**

ANOVA

alkali

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6231,360	17	366,551	100,377	,000
Within Groups	131,462	36	3,652		
Total	6362,823	53			

3.9. Kadar Kafein

ANOVA

kafein

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,103	5	,021	49,219	,000
Within Groups	,005	12	,000		
Total	,108	17			

kafein

Duncan[a]

komb	N	Subset for alpha = .05		
		1	2	3
180 dC_25 m	3	7,10167		
170 dC_25 m	3		7,24833	
180 dC_22,5 m	3		7,25833	
170 dC_22,5 m	3			7,30433
160 dC_25 m	3			7,30600
160 dC_22,5 m	3			7,33033
Sig.		1,000	,560	,163

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

3.10. Analisa Data Sensori

3.10.1. Analisa Sensori Kopi Tempur Seduh Tanpa Ampas

Ranks

	sampel	N	Mean Rank
warna	kontrol	30	48,12
	160dC_12,5m	30	23,92
	180dC_25m	30	64,47
	Total	90	
aroma	kontrol	30	69,55
	160dC_12,5m	30	36,85
	180dC_25m	30	30,10
	Total	90	
rasa	kontrol	30	25,48
	160dC_12,5m	30	64,83
	180dC_25m	30	46,18
	Total	90	
overall	kontrol	30	66,00
	160dC_12,5m	30	30,53
	180dC_25m	30	39,97
	Total	90	

Test Statistics[a,b]

	warna	aroma	rasa	overall
Chi-Square	38,993	41,586	37,033	31,565
df	2	2	2	2
Asymp. Sig.	,000	,000	,000	,000

a. Kruskal Wallis Test

b. Grouping Variable: sampel

✡ **Sampel Kontrol dengan 160^{0}C 22,5 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	kontrol	30	39,83	1195,00
	160dC_12,5m	30	21,17	635,00
	Total	60		
aroma	kontrol	30	41,73	1252,00
	160dC_12,5m	30	19,27	578,00
	Total	60		
rasa	kontrol	30	17,87	536,00
	160dC_12,5m	30	43,13	1294,00
	Total	60		
overall	kontrol	30	41,13	1234,00
	160dC_12,5m	30	19,87	596,00
	Total	60		

Test Statistics[a]

	warna	aroma	rasa	overall
Mann-Whitney U	170,000	113,000	71,000	131,000
Wilcoxon W	635,000	578,000	536,000	596,000
Z	-4,304	-5,177	-5,829	-4,831
Asymp. Sig. (2-tailed)	,000	,000	,000	,000

a. Grouping Variable: sampel

✡ **Sampel Kontrol dengan 180^{0}C 25 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	kontrol	30	23,78	713,50
	180dC_25m	30	37,22	1116,50
	Total	60		
aroma	kontrol	30	43,32	1299,50
	180dC_25m	30	17,68	530,50
	Total	60		
rasa	kontrol	30	23,12	693,50
	180dC_25m	30	37,88	1136,50
	Total	60		
overall	kontrol	30	40,37	1211,00
	180dC_25m	30	20,63	619,00
	Total	60		

Test Statistics[a]

	warna	aroma	rasa	overall
Mann-Whitney U	248,500	65,500	228,500	154,000
Wilcoxon W	713,500	530,500	693,500	619,000
Z	-3,146	-5,839	-3,415	-4,543
Asymp. Sig. (2-tailed)	,002	,000	,001	,000

a. Grouping Variable: sampel

✡ **Sampel 160^{0}C 22,5 menit dengan 180^{0}C 25 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	160dC_12,5m	30	18,25	547,50
	180dC_25m	30	42,75	1282,50
	Total	60		
aroma	160dC_12,5m	30	33,08	992,50
	180dC_25m	30	27,92	837,50
	Total	60		
rasa	160dC_12,5m	30	37,20	1116,00
	180dC_25m	30	23,80	714,00
	Total	60		
overall	160dC_12,5m	30	26,17	785,00
	180dC_25m	30	34,83	1045,00
	Total	60		

Test Statistics[a]

	warna	aroma	rasa	overall
Mann-Whitney U	82,500	372,500	249,000	320,000
Wilcoxon W	547,500	837,500	714,000	785,000
Z	-5,603	-1,203	-3,202	-2,057
Asymp. Sig. (2-tailed)	,000	,229	,001	,040

a. Grouping Variable: sampel

3.10.2. Analisa Sensori Serbuk Kopi Tempur Tanpa Ampas

Ranks

	sampel	N	Mean Rank
warna	kontrol	30	25,48
	160 dC_22,5 m	30	43,02
	180 dC_25 m	30	68,00
	Total	90	
aroma	kontrol	30	68,10
	160 dC_22,5 m	30	38,57
	180 dC_25 m	30	29,83
	Total	90	
overall	kontrol	30	53,58
	160 dC_22,5 m	30	48,85
	180 dC_25 m	30	34,07
	Total	90	

Test Statistics[a,b]

	warna	aroma	overall
Chi-Square	42,551	37,970	9,995
df	2	2	2
Asymp. Sig.	,000	,000	,007

a. Kruskal Wallis Test

b. Grouping Variable: sampel

✡ **Sampel Kontrol dengan 160^0C 22.5 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	kontrol	30	22,18	665,50
	160 dC_22,5 m	30	38,82	1164,50
	Total	60		
aroma	kontrol	30	40,60	1218,00
	160 dC_22,5 m	30	20,40	612,00
	Total	60		
overall	kontrol	30	32,57	977,00
	160 dC_22,5 m	30	28,43	853,00
	Total	60		

Test Statistics[a]

	warna	aroma	overall
Mann-Whitney U	200,500	147,000	388,000
Wilcoxon W	665,500	612,000	853,000
Z	-3,835	-4,739	-,975
Asymp. Sig. (2-tailed)	,000	,000	,330

a. Grouping Variable: sampel

✡ **Sampel Kontrol dengan 180^{0}C 25 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	kontrol	30	18,80	564,00
	180 dC_25 m	30	42,20	1266,00
	Total	60		
aroma	kontrol	30	43,00	1290,00
	180 dC_25 m	30	18,00	540,00
	Total	60		
overall	kontrol	30	36,52	1095,50
	180 dC_25 m	30	24,48	734,50
	Total	60		

Test Statistics[a]

	warna	aroma	overall
Mann-Whitney U	99,000	75,000	269,500
Wilcoxon W	564,000	540,000	734,500
Z	-5,495	-5,715	-2,774
Asymp. Sig. (2-tailed)	,000	,000	,006

a. Grouping Variable: sampel

✡ **Sampel 160^{0}C 22,5 menit dengan 180^{0}C 25 menit**

Ranks

	sampel	N	Mean Rank	Sum of Ranks
warna	160 dC_22,5 m	30	19,70	591,00
	180 dC_25 m	30	41,30	1239,00
	Total	60		
aroma	160 dC_22,5 m	30	33,67	1010,00
	180 dC_25 m	30	27,33	820,00
	Total	60		
overall	160 dC_22,5 m	30	35,92	1077,50
	180 dC_25 m	30	25,08	752,50
	Total	60		

Test Statistics[a]

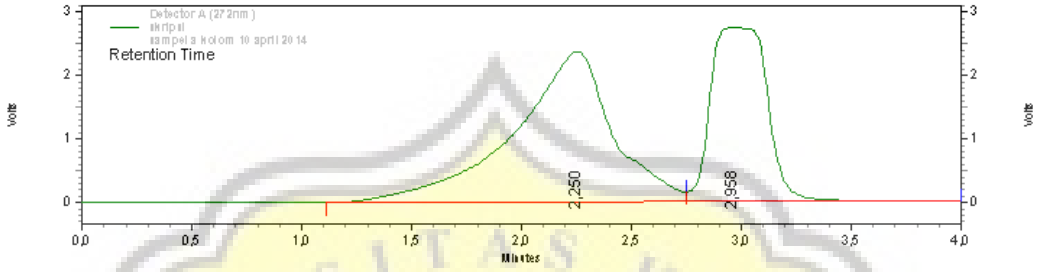
	warna	aroma	overall
Mann-Whitney U	126,000	355,000	287,500
Wilcoxon W	591,000	820,000	752,500
Z	-5,009	-1,496	-2,549
Asymp. Sig. (2-tailed)	,000	,135	,011

a. Grouping Variable: sampel

Kurva Standar Kafein

Shimadzu CLASS-VP V6.14 SP1 ***Area % Report*** **Page 1 of 1**

Method Name: C:\CLASS-VP\Methods\cafein.met
Data Name: C:\CLASS-VP\cafein\sampel a kolom 10 april 2014
User: System
Acquired: 01/01/2005 6:58:36
Printed: 01/01/2005 0:16:59



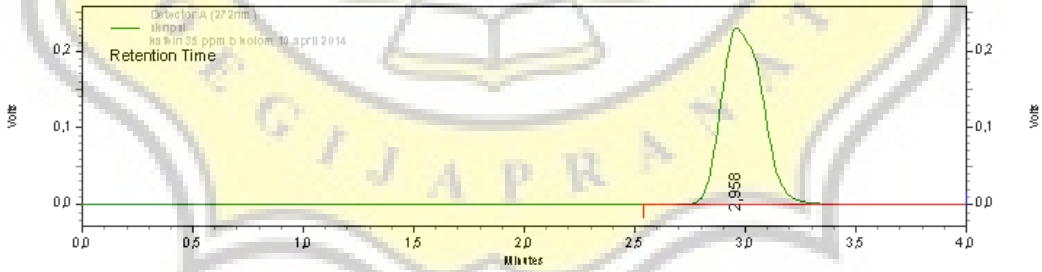
Detector A (272nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	2,250	74227431	60,147	2367575	46,269
2	2,958	49181996	39,853	2749375	53,731

Totals		123409427	100,000	5116950	100,000

Shimadzu CLASS-VP V6.14 SP1 ***Area % Report*** **Page 1 of 1**

Method Name: C:\CLASS-VP\Methods\cafein.met
Data Name: C:\CLASS-VP\cafein\kafein 35 ppm b kolom 10 april 2014
User: System
Acquired: 01/01/2005 6:53:02
Printed: 01/01/2005 0:19:08



Detector A (272nm)

Pk#	Retention Time	Area	Area %	Height	Height %
1	2,958	3018119	100,000	229859	100,000

Totals		3018119	100,000	229859	100,000