



Lampiran 1. Hasil uji normalitas berdasarkan suhu yang digunakan

Tests of Normality

SUHU	Kolmogorov-Smimov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KAFEIN	suhu ruang	.135	40	.064	40	.010**
	waterbath	.090	40	.200*	40	.211
TANIN	suhu ruang	.138	40	.052	40	.010**
	waterbath	.110	40	.200*	40	.017
WARNA	suhu ruang	.138	40	.054	40	.011
	waterbath	.138	40	.054	40	.010**

** . This is an upper bound of the true significance.

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

a. Lilliefors Significance Correction

Lampiran 2. Hasil uji normalitas berdasarkan waktu penyeduhan

Tests of Normality

WAKTU	Kolmogorov-Smimov ^a			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
KAFEIN	1 menit	.187	10	.200*	.918	10	.386
	2 menit	.163	10	.200*	.966	10	.824
	3 menit	.172	10	.200*	.920	10	.396
	4 menit	.211	10	.200*	.881	10	.172
	5 menit	.256	10	.063	.818	10	.030
	10 menit	.177	10	.200*	.911	10	.346
	20 menit	.206	10	.200*	.956	10	.712
	30 menit	.149	10	.200*	.917	10	.376
TANIN	1 menit	.209	10	.200*	.876	10	.140
	2 menit	.175	10	.200*	.956	10	.712
	3 menit	.189	10	.200*	.871	10	.109
	4 menit	.187	10	.200*	.892	10	.231
	5 menit	.246	10	.087	.854	10	.072
	10 menit	.194	10	.200*	.928	10	.444
	20 menit	.230	10	.142	.924	10	.419
	30 menit	.186	10	.200*	.910	10	.340
WARNA	1 menit	.177	10	.200*	.941	10	.530
	2 menit	.195	10	.200*	.896	10	.259
	3 menit	.103	10	.200*	.976	10	.935
	4 menit	.193	10	.200*	.958	10	.734
	5 menit	.230	10	.144	.887	10	.205
	10 menit	.149	10	.200*	.979	10	.955
	20 menit	.162	10	.200*	.939	10	.507
	30 menit	.217	10	.199	.882	10	.177

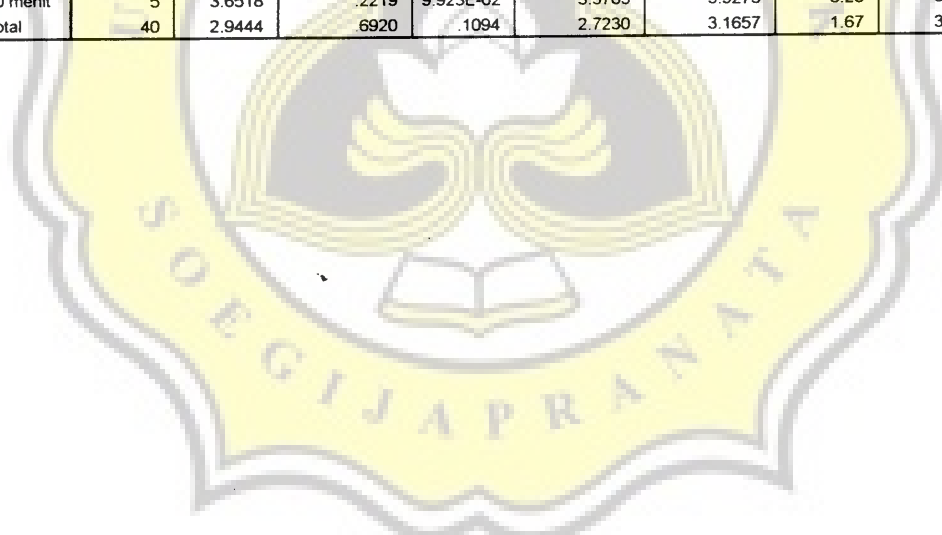
* . This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Lampiran 3. Nilai deskriptif penyeduhan pada suhu ruang

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
KAFEIN	1 menit	5	1656.5935	126.7510	56.6848	1499.2113	1813.9757	1506.61	1858.23
	2 menit	5	1880.3862	123.4479	55.2076	1727.1054	2033.6670	1687.70	1980.18
	3 menit	5	2498.3132	311.3462	139.2383	2111.7258	2884.9006	2038.52	2804.27
	4 menit	5	3441.0160	592.1743	264.8284	2705.7345	4176.2975	2592.28	4137.40
	5 menit	5	6612.1136	435.5995	194.8060	6071.2454	7152.9818	5988.11	7078.56
	10 menit	5	4572.5200	379.8915	169.8926	4100.8224	5044.2176	4130.89	5099.29
	20 menit	5	5279.5936	622.9234	278.5798	4506.1321	6053.0551	4525.71	6035.37
	30 menit	5	5345.3052	486.9215	217.7579	4740.7123	5949.8981	4606.81	5777.85
	Total	40	3910.7302	1762.7446	278.7144	3346.9771	4474.4832	1506.61	7078.56
TANIN	1 menit	5	675.6405	115.6508	51.7206	532.0410	819.2399	554.19	848.97
	2 menit	5	1009.3337	171.3999	76.6524	796.5126	1222.1548	778.22	1226.29
	3 menit	5	1409.0584	181.9072	81.3514	1183.1908	1634.9260	1131.96	1615.41
	4 menit	5	1922.5788	1083.4955	484.5539	577.2414	3267.9161	875.55	3572.76
	5 menit	5	2219.1191	1361.3032	608.7933	528.8379	3909.4003	613.15	4280.23
	10 menit	5	3427.0182	790.2048	353.3903	2445.8493	4408.1871	2381.84	4471.25
	20 menit	5	3470.1740	279.1446	124.8373	3123.5702	3816.7778	3195.44	3773.21
	30 menit	5	3134.1224	658.8575	294.6500	2316.0427	3952.2021	2322.88	4056.20
	Total	40	2158.3806	1230.6675	194.5856	1764.7941	2551.9672	554.19	4471.25
WARNA	1 menit	5	1.7960	.1405	6.283E-02	1.6215	1.9704	1.67	2.01
	2 menit	5	2.2327	.1958	8.755E-02	1.9896	2.4758	1.95	2.50
	3 menit	5	2.6269	.2540	.1136	2.3115	2.9422	2.25	2.92
	4 menit	5	2.8411	.1491	6.669E-02	2.6559	3.0262	2.60	2.97
	5 menit	5	3.2225	.4016	.1796	2.7239	3.7212	2.70	3.61
	10 menit	5	3.5371	.2257	.1010	3.2567	3.8174	3.31	3.84
	20 menit	5	3.6469	.2525	.1129	3.3333	3.9604	3.31	3.88
	30 menit	5	3.6518	.2219	9.923E-02	3.3763	3.9273	3.28	3.84
	Total	40	2.9444	.6920	.1094	2.7230	3.1657	1.67	3.88



Lampiran 4. Hasil uji anova untuk suhu ruang

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
KAFEIN	Between Groups	1.15E+08	7	16490152.10	91.733	.000
	Within Groups	5752411	32	179762.831		
	Total	1.21E+08	39			
TANIN	Between Groups	42109590	7	6015655.650	11.352	.000
	Within Groups	16957564	32	529923.865		
	Total	59067153	39			
WARNA	Between Groups	16.797	7	2.400	40.839	.000
	Within Groups	1.880	32	5.876E-02		
	Total	18.677	39			

Lampiran 5. Hasil uji nilai post hoc untuk kafein

KAFEIN

Duncan^a

WAKTU	N	Subset for alpha = .05					
		1	2	3	4	5	6
1 menit	5	1656.5935					
2 menit	5	1880.3862					
3 menit	5		2498.3132				
4 menit	5			3441.0160			
10 menit	5				4572.5200		
20 menit	5					5279.5936	
30 menit	5					5345.3052	
5 menit	5						6612.1136
Sig.		.410	1.000	1.000	1.000	.808	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 6. Hasil uji post hoc untuk tanin

TANIN

Duncan^a

WAKTU	N	Subset for alpha = .05				
		1	2	3	4	5
1 menit	5	675.6405				
2 menit	5	1009.3337	1009.3337			
3 menit	5	1409.0584	1409.0584	1409.0584		
4 menit	5		1922.5788	1922.5788		
5 menit	5			2219.1191	2219.1191	
30 menit	5				3134.1224	3134.1224
10 menit	5					3427.0182
20 menit	5					3470.1740
Sig.		.142	.069	.105	.055	.498

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 7. Hasil uji post hoc untuk warna

WARNA

Duncan^a

WAKTU	N	Subset for alpha = .05				
		1	2	3	4	5
1 menit	5	1.7960				
2 menit	5		2.2327			
3 menit	5			2.6269		
4 menit	5			2.8411		
5 menit	5				3.2225	
10 menit	5					3.5371
20 menit	5					3.6469
30 menit	5					3.6518
Sig.		1.000	1.000	.172	1.000	.487

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 8. Nilai deskriptif penyeduhan diatas *waterbath*

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
KAFEIN	1 menit	5	1037.0920	152.1305	68.0348	848.1970	1225.9870	861.99	1252.54
	2 menit	5	1765.0000	419.7304	187.7091	1243.8359	2286.1641	1378.66	2338.52
	3 menit	5	2191.7280	354.5515	158.5603	1751.4942	2631.9618	1833.94	2774.09
	4 menit	5	3224.5520	1098.0299	491.0539	1861.1678	4587.9362	2526.83	5080.28
	5 menit	5	3478.3760	278.7869	124.6773	3132.2163	3824.5357	3160.47	3876.12
	10 menit	5	4564.0040	1298.5132	580.7128	2951.6869	6176.3211	3451.02	6598.78
	20 menit	5	4722.3980	507.1028	226.7832	4092.7468	5352.0492	3923.17	5146.95
	30 menit	5	4782.8860	769.7699	344.2516	3827.0905	5738.6815	3684.33	5830.08
Total	40	3220.7545	1511.8248	239.0405	2737.2495	3704.2595	861.99	6598.78	
TANIN	1 menit	5	555.1520	43.7073	19.5465	500.8822	609.4218	505.60	613.15
	2 menit	5	919.0260	114.8055	51.3426	776.4761	1061.5759	731.06	1025.84
	3 menit	5	1401.9420	493.3785	220.6456	789.3317	2014.5523	999.70	2240.34
	4 menit	5	1741.5920	233.8206	104.5677	1451.2654	2031.9186	1436.35	2045.37
	5 menit	5	1993.1440	313.1533	140.0464	1604.3129	2381.9751	1735.11	2452.59
	10 menit	5	2658.0640	336.8374	150.6382	2239.8252	3076.3028	2206.24	2987.61
	20 menit	5	3048.9040	332.0914	148.5158	2636.5581	3461.2499	2596.93	3325.14
	30 menit	5	2773.6940	190.6675	85.2691	2536.9490	3010.4390	2459.04	2971.40
Total	40	1886.4398	894.8820	141.4933	1600.2426	2172.6369	505.60	3325.14	
WARNA	1 menit	5	1.7500	.1175	5.254E-02	1.6041	1.8959	1.62	1.92
	2 menit	5	2.2900	.2329	.1042	2.0008	2.5792	1.89	2.46
	3 menit	5	2.7220	.1921	8.593E-02	2.4834	2.9606	2.46	2.99
	4 menit	5	3.0320	.1817	8.126E-02	2.8064	3.2576	2.81	3.29
	5 menit	5	3.2600	.3574	.1598	2.8163	3.7037	2.99	3.69
	10 menit	5	3.2300	.1904	8.515E-02	2.9936	3.4664	2.97	3.46
	20 menit	5	3.5320	7.225E-02	3.231E-02	3.4423	3.6217	3.45	3.61
	30 menit	5	3.6680	.1280	5.724E-02	3.5071	3.8249	3.54	3.84
Total	40	2.9352	.6422	.1015	2.7299	3.1406	1.62	3.84	

Lampiran 9. Hasil uji anova untuk suhu ruang

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
KAFEIN	Between Groups	72561946	7	10365992.23	20.010	.000
	Within Groups	16577005	32	518031.403		
	Total	89138950	39			
TANIN	Between Groups	28546342	7	4078048.853	48.595	.000
	Within Groups	2685393	32	83918.523		
	Total	31231735	39			
WARNA	Between Groups	14.792	7	2.113	52.251	.000
	Within Groups	1.294	32	4.044E-02		
	Total	16.086	39			

Lampiran 10. Nilai post hoc untuk kafein pada *waterbath*

KAFEIN

Duncan^a

WAKTU	N	Subset for alpha = .05			
		1	2	3	4
1 menit	5	1037.0920			
2 menit	5	1765.0000	1765.0000		
3 menit	5		2191.7280		
4 menit	5			3224.5520	
5 menit	5			3478.3760	
10 menit	5				4564.0040
20 menit	5				4722.3980
30 menit	5				4782.8860
Sig.		.120	.356	.581	.655

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 11. Nilai post hoc untuk tanin pada *waterbath*

TANIN

Duncan^a

WAKTU	N	Subset for alpha = .05			
		1	2	3	4
1 menit	5	555.1503			
2 menit	5	919.0267			
3 menit	5		1401.9421		
4 menit	5		1741.5908	1741.5908	
5 menit	5			1993.1432	
10 menit	5				2658.0646
30 menit	5				2773.6938
20 menit	5				3048.9034
Sig.		.056	.073	.179	.051

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 12. Nilai post hoc untuk tanin pada *waterbath*

WARNA

Duncan^a

WAKTU	N	Subset for alpha = .05				
		1	2	3	4	5
1 menit	5	1.7495				
2 menit	5		2.2883			
3 menit	5			2.7203		
4 menit	5				3.0331	
10 menit	5				3.2275	
5 menit	5				3.2600	
20 menit	5					3.5311
30 menit	5					3.6646
Sig.		1.000	1.000	1.000	.101	.302

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 13. Nilai deskriptif untuk penyeduhan suu ruang dan *waterbath*

Waktu dan tempat	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
KAFEIN	5	1656.5935	126.7510	56.6848	1499.2113	1813.9757	1506.61	1858.23	
	1, waterbath	5	1037.0935	152.1300	68.0346	848.1992	1225.9879	861.99	1252.54
	2, ruang	5	1880.3862	123.4479	55.2076	1727.1054	2033.6670	1687.70	1980.18
	2, waterbath	5	1765.0000	419.7280	187.7081	1243.8389	2286.1611	1378.66	2338.52
	3, ruang	5	2498.3132	311.3462	139.2383	2111.7258	2884.9006	2038.52	2804.27
	3, waterbath	5	2191.7278	354.5492	158.5592	1751.4968	2631.9588	1833.94	2774.09
	4, ruang	5	3441.0160	592.1743	264.8284	2705.7345	4176.2975	2592.28	4137.40
	4, waterbath	5	3224.5528	1098.0316	491.0547	1861.1665	4587.9391	2526.83	5080.28
	5, ruang	5	6612.1136	435.5995	194.8060	6071.2454	7152.9818	5988.11	7078.56
	5, waterbath	5	3478.3740	278.7867	124.6772	3132.2145	3824.5335	3160.47	3876.12
	10, ruang	5	4572.5200	379.8915	169.8926	4100.8224	5044.2176	4130.89	5099.29
	10, waterbath	5	4564.0040	1298.5135	580.7129	2951.6865	6176.3215	3451.02	6598.78
	20, ruang	5	5279.5936	622.9234	278.5798	4506.1321	6053.0551	4525.71	6035.37
	20, waterbath	5	4722.3984	507.1043	226.7839	4092.7452	5352.0516	3923.17	5146.95
30, ruang	5	4782.8864	769.7707	344.2519	3827.0898	5738.6830	3664.33	5830.08	
30, waterbath	5	5345.3052	486.9215	217.7579	4740.7123	5949.8981	4606.81	5777.85	
Total	80	3565.7424	1668.1823	186.5085	3194.5066	3936.9782	861.99	7078.56	
TANIN	5	675.6405	115.6508	51.7206	532.0410	819.2399	554.19	848.97	
	1, waterbath	5	555.1503	43.7080	19.5468	500.8797	609.4209	505.60	613.15
	2, ruang	5	1009.3337	171.3999	76.6524	796.5126	1222.1548	778.22	1226.29
	2, waterbath	5	919.0267	114.8057	51.3427	776.4766	1061.5768	731.06	1025.84
	3, ruang	5	1409.0584	181.9072	81.3514	1183.1908	1634.9260	1131.96	1615.41
	3, waterbath	5	1401.9421	493.3798	220.6462	789.3302	2014.5540	999.70	2240.34
	4, ruang	5	1922.5788	1083.4955	484.5539	577.2414	3267.9161	875.55	3572.76
	4, waterbath	5	1741.5908	233.8176	104.5664	1451.2679	2031.9137	1436.35	2045.37
	5, ruang	5	2219.1191	1361.3032	608.7933	528.8379	3909.4003	613.15	4280.23
	5, waterbath	5	1993.1432	313.1514	140.0456	1604.3144	2381.9720	1735.11	2452.59
	10, ruang	5	3427.0182	790.2048	353.3903	2445.8493	4408.1871	2381.84	4471.25
	10, waterbath	5	2658.0646	336.8381	150.6386	2239.8249	3076.3043	2206.24	2987.61
	20, ruang	5	3470.1740	279.1446	124.8373	3123.5702	3816.7778	3195.44	3773.21
	20, waterbath	5	3048.9034	332.0929	148.5165	2636.5556	3461.2512	2596.93	3325.14
30, ruang	5	2773.6938	190.6700	85.2702	2536.9458	3010.4418	2459.04	2971.40	
30, waterbath	5	3134.1224	658.8575	294.6500	2316.0427	3952.2021	2322.88	4056.20	
Total	80	2022.4100	1077.8433	120.5065	1782.5477	2262.2723	505.60	4471.25	

Lampiran 14. Hasil uji anova penyeduhan suhu ruang dan *waterbath*

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
KAFEIN	Between Groups	1.98E+08	15	13167620.75	37.741	.000
	Within Groups	22329430	64	348897.336		
	Total	2.20E+08	79			
TANIN	Between Groups	72134985	15	4808999.000	15.669	.000
	Within Groups	19642962	64	306921.274		
	Total	91777947	79			
WARNA	Between Groups	31.591	15	2.106	42.445	.000
	Within Groups	3.176	64	4.962E-02		
	Total	34.766	79			

Lampiran 15. Nilai post hoc kafein pada penyeduhan di suhu ruang dan *waterbath*

KAFEIN

Duncan^a

ONEWAY	N	Subset for alpha = .05						
		1	2	3	4	5	6	7
1, <i>waterbath</i>	5	1037.0935						
1, ruang	5	1656.5935	1656.5935					
2, <i>waterbath</i>	5	1765.0000	1765.0000	1765.0000				
2, ruang	5		1880.3862	1880.3862				
3, <i>waterbath</i>	5		2191.7278	2191.7278				
3, ruang	5			2498.3132	2498.3132			
4, <i>waterbath</i>	5				3224.5528	3224.5528		
4, ruang	5					3441.0160		
5, <i>waterbath</i>	5					3478.3740		
10, <i>waterbath</i>	5						4564.0040	
10, ruang	5						4572.5200	
20, <i>waterbath</i>	5						4722.3984	
30, ruang	5						4782.8864	
20, ruang	5						5279.5936	
30, <i>waterbath</i>	5						5345.3052	
5, ruang	5							6612.1136
Sig.		.069	.198	.077	.056	.527	.070	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 16. Nilai post hoc tanin pada penyeduhan di suhu ruang dan *waterbath*

TANIN

Duncan^a

ONEWAY	N	Subset for alpha = .05								
		1	2	3	4	5	6	7	8	9
1, waterbath	5	555.1503								
1, ruang	5	675.6405	675.6405							
2, waterbath	5	919.0267	919.0267							
2, ruang	5	1009.3337	1009.3337	1009.3337						
3, waterbath	5		1401.9421	1401.9421	1401.9421					
3, ruang	5		1409.0584	1409.0584	1409.0584					
4, waterbath	5			1741.5908	1741.5908	1741.5908				
4, ruang	5				1922.5788	1922.5788	1922.5788			
5, waterbath	5				1993.1432	1993.1432	1993.1432			
5, ruang	5					2219.1191	2219.1191	2219.1191		
10, waterbath	5						2658.0646	2658.0646	2658.0646	
30, ruang	5							2773.6938	2773.6938	2773.6938
20, waterbath	5								3048.9034	3048.9034
30, waterbath	5								3134.1224	3134.1224
10, ruang	5								3427.0182	3427.0182
20, ruang	5									3470.1740
Sig.		.244	.065	.059	.138	.221	.058	.140	.053	.080

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 17. Nilai post hoc warna pada penyeduhan di suhu ruang dan *waterbath*

WARNA

Duncan^a

ONEWAY	N	Subset for alpha = .05						
		1	2	3	4	5	6	7
1, waterbath	5	1.7495						
1, ruang	5	1.7960						
2, ruang	5		2.2327					
2, waterbath	5		2.2883					
3, ruang	5			2.6269				
3, waterbath	5			2.7203				
4, ruang	5			2.8411	2.8411			
4, waterbath	5				3.0331	3.0331		
5, ruang	5					3.2225		
10, waterbath	5					3.2275		
5, waterbath	5					3.2600	3.2600	
20, waterbath	5						3.5311	3.5311
10, ruang	5						3.5371	3.5371
20, ruang	5							3.6469
30, waterbath	5							3.6518
30, ruang	5							3.6646
Sig.		.742	.694	.156	.178	.147	.067	.408

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 18. Nilai deskriptif suhu air penyeduh pada penyeduhan suhu ruang

Descriptives

Waktu	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 menit	3	85.8333	.7638	.4410	83.9360	87.7306	85.00	86.50
2 menit	3	82.8333	.7638	.4410	80.9360	84.7306	82.00	83.50
3 menit	3	81.6667	.7638	.4410	79.7694	83.5640	81.00	82.50
4 menit	3	80.5000	.5000	.2887	79.2579	81.7421	80.00	81.00
5 menit	3	79.6667	.2887	.1667	78.9496	80.3838	79.50	80.00
10 menit	3	75.8333	.2887	.1667	75.1162	76.5504	75.50	76.00
20 menit	3	69.0000	.5000	.2887	67.7579	70.2421	68.50	69.50
30 menit	3	64.5000	.5000	.2887	63.2579	65.7421	64.00	65.00
Total	24	77.4792	6.9914	1.4271	74.5269	80.4314	64.00	86.50

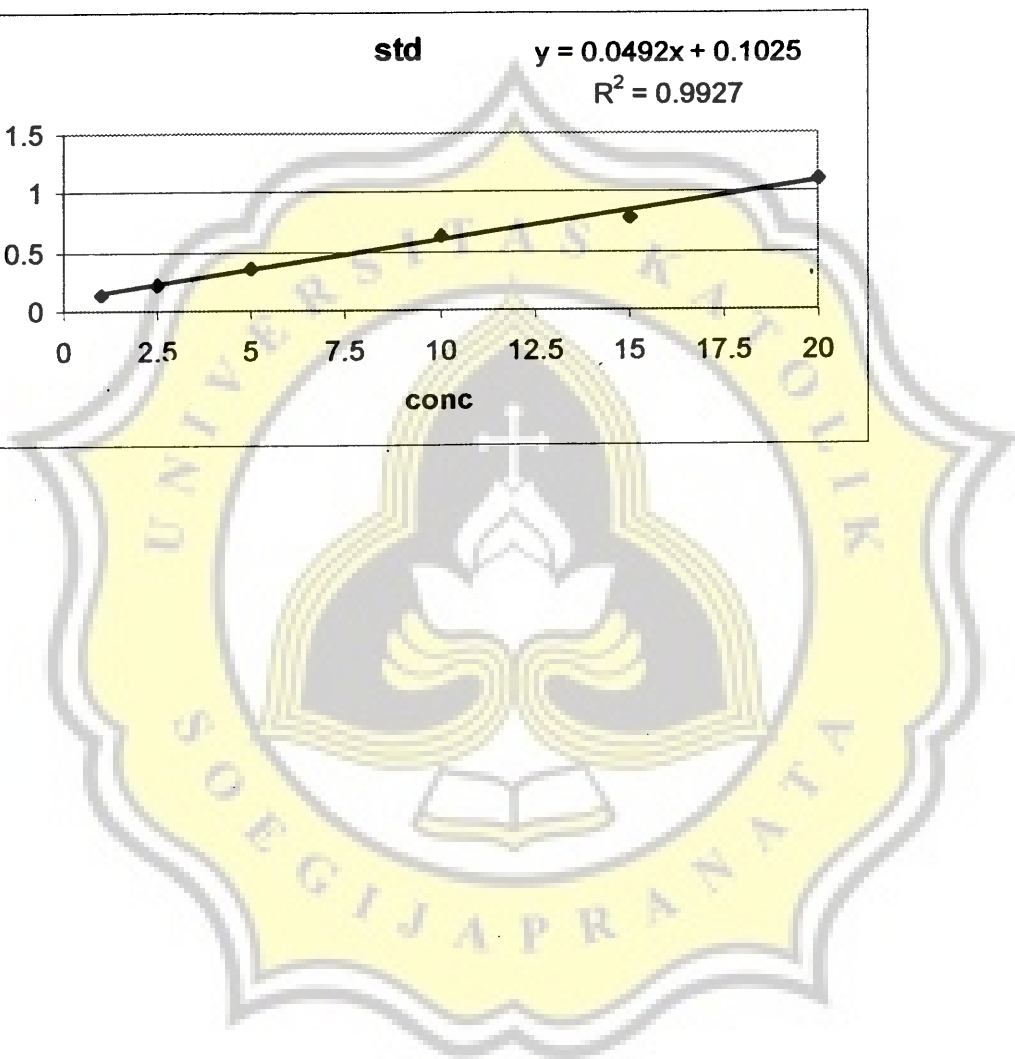
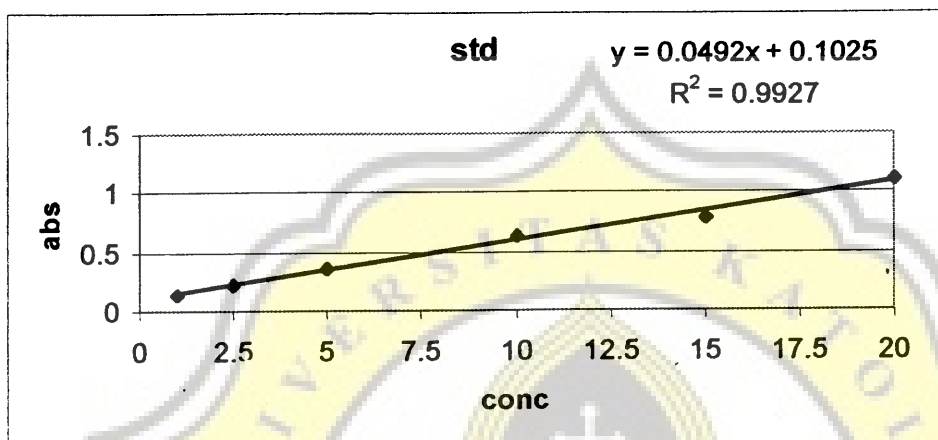
Lampiran 19. Nilai deskriptif suhu air penyeduh pada penyeduhan suhu ruang

Descriptives

Waktu	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 menit	3	89.8333	.7638	.4410	87.9360	91.7306	89.00	90.50
2 menit	3	88.3333	.5774	.3333	86.8991	89.7676	88.00	89.00
3 menit	3	87.5000	.5000	.2887	86.2579	88.7421	87.00	88.00
4 menit	3	86.8333	.2887	.1667	86.1162	87.5504	86.50	87.00
5 menit	3	86.1667	.2887	.1667	85.4496	86.8838	86.00	86.50
10 menit	3	85.5000	.5000	.2887	84.2579	86.7421	85.00	86.00
20 menit	3	82.8333	.2887	.1667	82.1162	83.5504	82.50	83.00
30 menit	3	81.1667	.2887	.1667	80.4496	81.8838	81.00	81.50
Total	24	86.0208	2.7484	.5610	84.8603	87.1814	81.00	90.50

Lampiran 20. Standar Kafein

conc	abs
0	0
1	0.14485
2.5	0.22285
5	0.35085
10	0.6342
15	0.78585
20	1.1058



No.:	Jenis Uji	Satuan	Persyaratan
5.	Cemaran Arsen (As)	mg/kg	maks. 0,1
6.	Cemaran Mikroba:		
6.1	Angka lempeng total	Kol/ml	maks. 10^2
6.2	Coliform	APM/ml	< 3
6.3	Clostridium perfringens	per ml	0
6.4	Staphylococcus aureus	per ml	0

* dikemas dalam kaleng

4. CARA PENGAMBILAN CONTOH

Cara pengambilan contoh sesuai dengan SNI 19-0429-1989, Petunjuk Pengambilan Contoh Cairan dan Semi Padat.

5. CARA UJI

5.1 Persiapan Contoh

Cara uji persiapan contoh sesuai dengan SNI 01-2891-1992, Cara Uji Makanan dan Minuman, butir 4.5.

5.2. Keadaan

Cara uji keadaan sesuai dengan SNI 01-2891-1992, Cara Uji Makanan dan Minuman, butir 1.2.

5.3 Kafein

Cara uji kafein sesuai dengan AOAC 962.13 (Spektrofotometric Method)

5.3.1 Prinsip

Kafein yang terlarut dalam contoh diekstrak menggunakan kloroform, kemudian absorbennya diukur dengan spektrofotometer pada panjang gelombang 276,5 nm.

5.3.2 Pereaksi

- a. larutan pereduksi: larutkan 5 g Na_2SO_3 dan 5 g KCNS ke dalam 100 ml air suling. 500 gr / 275 rb. ↑
- b. Larutan asam fosfat encer: encerkan 15 ml H_3PO_4 p.a. dengan 85 ml air suling. 100.5 ↑
- c. Larutan natrium hidroksida: larutkan 25 g NaOH p.a ke dalam 75 ml air suling. 500 gr / 205 rb.
- d. Larutan standar kafein dalam kloroform 1000 ppm (1mg/ml) : larutkan 100 mg kafein murni dalam CHCl_3 dan encerkan sampai 100 ml dengan CHCl_3 . 100 / 659 rb.

5.3.3 Peralatan

- a. Neraca analitis 1 mg
- b. Spektrofotometer 0.01 gr
- c. Labu kocok/labuan pemisah 125 ml
- d. Labu ukur 100 ml
- e. Corong gelas Ø.7 cm
- f. Pipet gondok 10 ml
- g. Pipet ukur 1 ml
- h. Piala gelas 300 ml, 400 ml, 50 ml
- i. Kertas saring.

5.3.4 Persiapan kurva standar

Dari larutan standar kafein 1000 ppm dibuat deret larutan standar yang mengandung 0,1 - 0,25 - 0,50 - 1,00 - 1,50 - 2,00 mg kafein dalam 100 ml CHCl_3 .

Ukur absorbansi dari masing-masing larutan standar tadi dengan spektrofotometer pada panjang gelombang 276,5 nm. Plot absorbansi terhadap konsentrasi dari semua pembacaan.

5.3.5 Cara kerja

- a. Timbang dengan teliti 1 - 5 g larutan contoh kedalam piala gelas 50 ml, tuangkan kedalam labu kocok 125 ml. 2.5 ml
- Tambahkan 5 ml larutan KMnO_4 1,5% lalu kocok selama 5 menit tepat. 200 gr / 319 rb. 20.15 gr + 100 ml

- b. Tambah 10⁵ ml larutan pereduksi, kocok, tambah 1 ml larutan. H₃ PO₄ encer, kocok, Tambahkan 1 ml larutan. NaOH 25%, kocok. ^{0,5}
 Ekstraksi dengan menambahkan ²⁵ 50 ml CHCl₃, kocok selama 1 menit. Diamkan beberapa menit sampai terlihat jelas batas pisah kedua cairan.
- c. Alirkan cairan yang berada dibawah batas pisah, yaitu CHCl₃ melalui corong gelas yang telah diberi kertas saring kedalam labu ukur ⁵⁰ 100 ml.
- d. Ekstraksi diulangi lagi dengan menambahkan 40 ml CHCl₃ sampai batas garis ²⁰ 100 ml.
- e. Labu kocok dan kertas saring dibilasi dengan ^{1,5} 3 ml CHCl₃ sebanyak dua kali.
- f. Encerkan cairan ekstrak tadi dengan CHCl₃ sampai batas garis ⁵⁰ 100 ml.
- g. Ukur absorbansi larutan hasil ekstraksi tadi dengan spektrofotometer pada panjang gelombang 276,5 nm.
- h. Bandingkan dengan hasil pengukuran absorbansi larutan standar dan hitung kadar kafein dalam contoh.

5.3.5 Perhitungan:

$$\text{Kafein dalam contoh, mg/kg} = \frac{A \times 1000}{C}$$

Keterangan :

A = Nilai kafein hasil pembacaan oleh spektrofotometer.

C = Bobot contoh dalam gram.

5.4 Bahan Tambahan Makanan

5.4.1 Pemanis buatan

Cara uji pemanis buatan sesuai dengan SNI 01-2893-1992, Cara Uji Pemanis Buatan.