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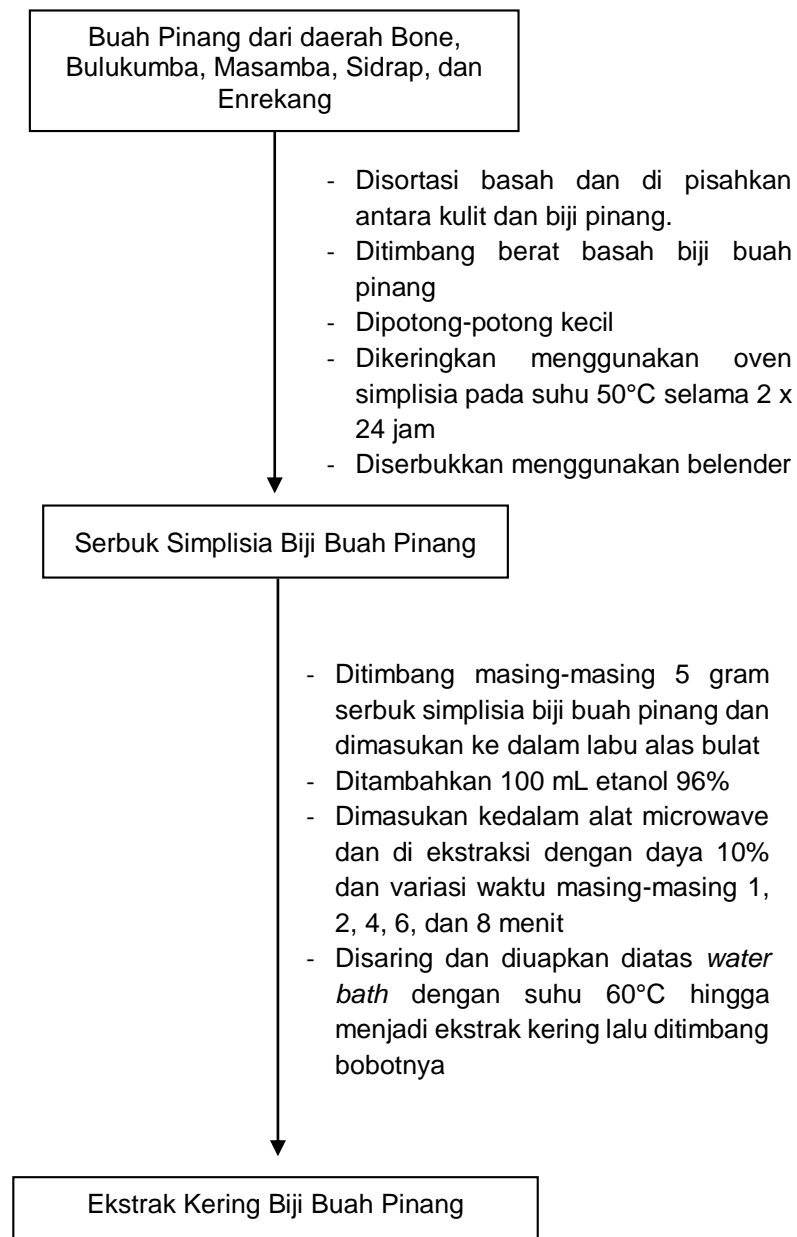
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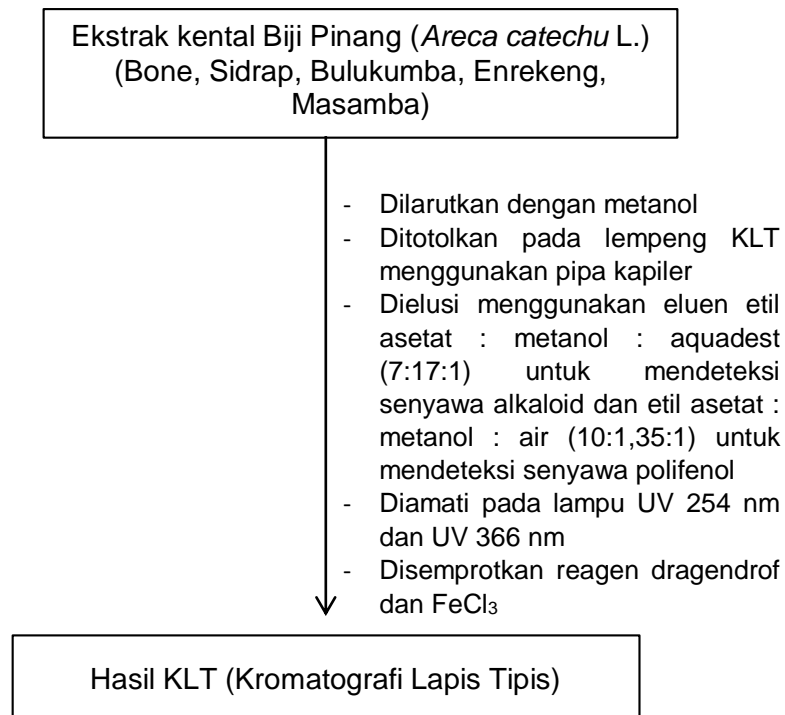
## Lampiran 1

### Skema Kerja

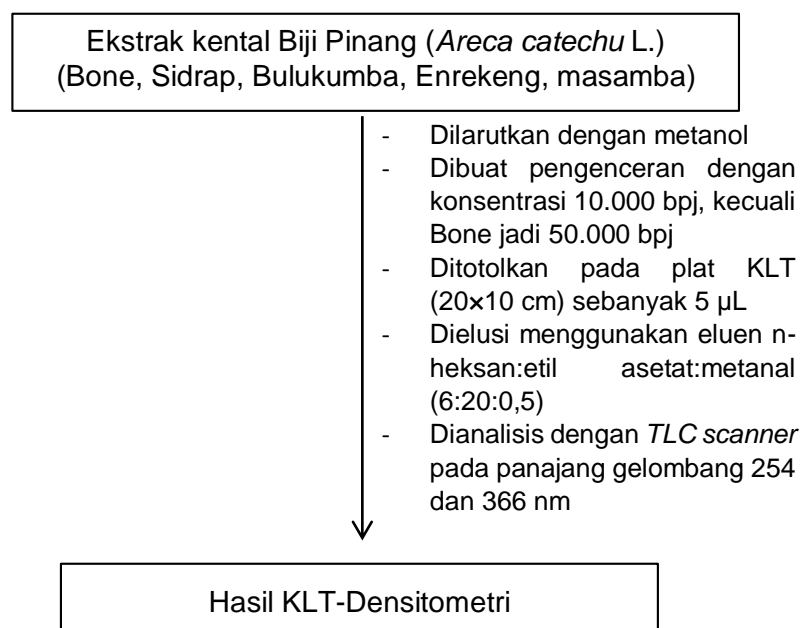
#### 1. Penyiapan Sampel



## 2. Identifikasi Golongan Senyawa



## 3. Penetapan Profil KLT-Densitometri



#### 4. Penetapan Kandungan Polifenol Total dengan Spektrofotometer UV-Vis

##### - Larutan baku

###### Katekin

- Ditimbang sebanyak 10 mg
- Dimasukkan dalam labu tentukur 5 mL
- Dilarutkan dengan metanol hingga tanda batas (1000 bpj)
- Dibuat 5 seri pengenceran (10, 30, 50, 70, dan 90 bpj)
- Diambil masing-masing 0,5 mL
- Dimasukkan dalam vial
- Ditambahkan 2,5 mL reagen *folin-ciocalteu* (7,5% dalam air)
- Didiamkan selama 8 menit lalu tambahkan NaOH 1 % sebanyak 2 mL
- Diinkubasi selama 1 jam
- Diukur dengan panjang gelombang 704,5 nm

Spektrofotometer UV-Vis

##### - Larutan sampel

###### Ekstrak biji buah pinang

- Ditimbang sebanyak 10 mg
- Dimasukkan dalam labu tentukur 5 mL
- Dilarutkan dengan metanol hingga tanda batas (1000 bpj)
- Dibuat pengenceran 400 bpj
- Diambil 0,5 mL dan dimasukkan dalam vial
- Ditambahkan 2,5 mL reagen *folin-ciocalteu* (7,5% dalam air)
- Didiamkan selama 8 menit lalu tambahkan NaOH 1 % sebanyak 2 mL
- Diinkubasi selama 1 jam
- Diukur dengan panjang gelombang 704,5 nm

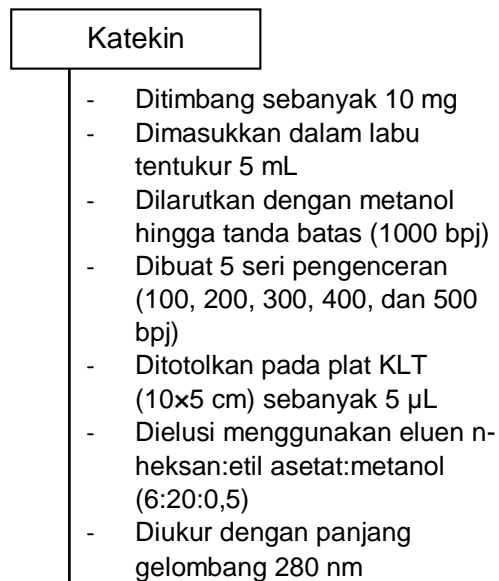
Spektrofotometer UV-Vis

Analisis data



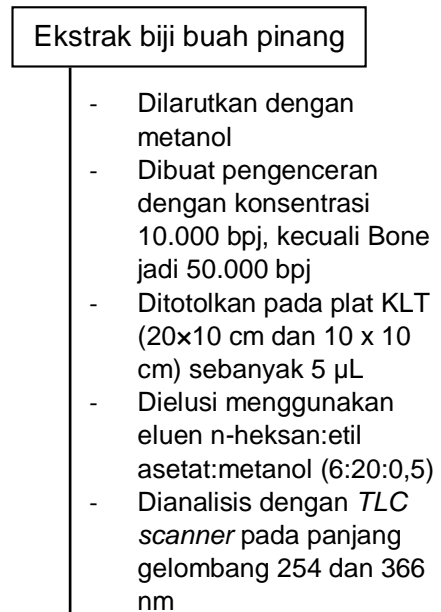
## 5. Penetapan Kandungan katekin dengan KLT-Densitometri

### - Larutan baku



TLC Scanner

### - Larutan sampel



TLC Scanner

Analisis data

```
graph TD; D[TLC Scanner] --> E[Analisis data]; F[TLC Scanner] --> E;
```

## Lampiran 2

### Daftar Gambar



Gambar 14. Buah pinang



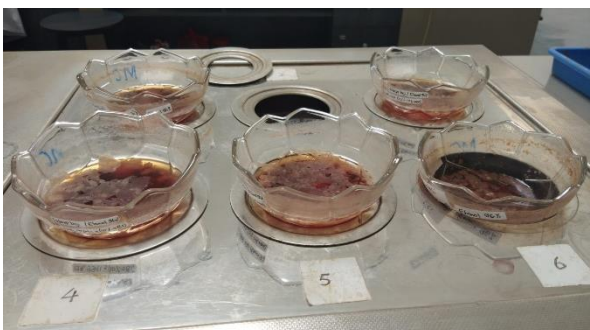
Gambar 15. Biji buah pinang



Gambar 16. proses pengeringan



Gambar 17. Proses Ekstraksi dengan Microwave assisted extraction



Gambar 18. Proses penguapan diatas *Water Bath*



Gambar 19. Ekstrak kering



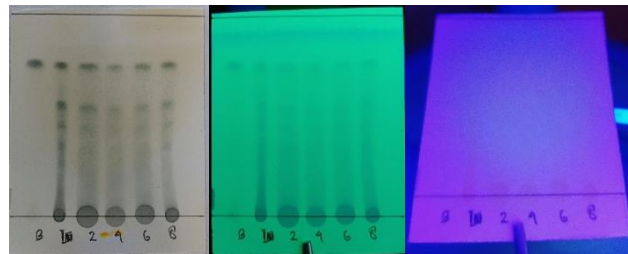
Gambar 20. Penimbangan ekstrak kering



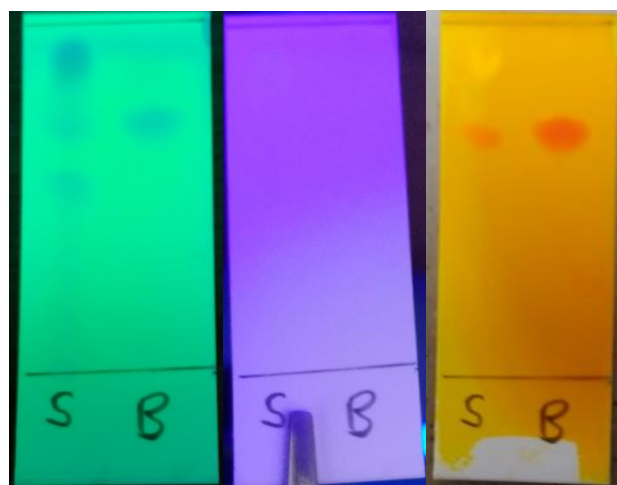
Gambar 21. Proses KLT



Gambar 22. Penyemprotan lempeng dengan reagen



Gambar 22. Identifikasi senyawa polifenol



Gambar 24. Identifikasi senyawa alkaloid



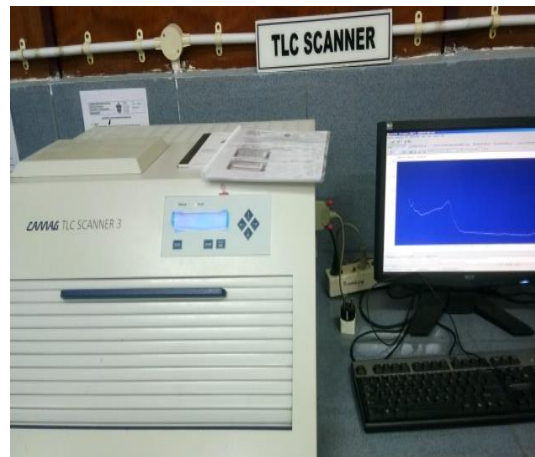
**Gambar 25. Preparasi sampel pengukuran kadar**



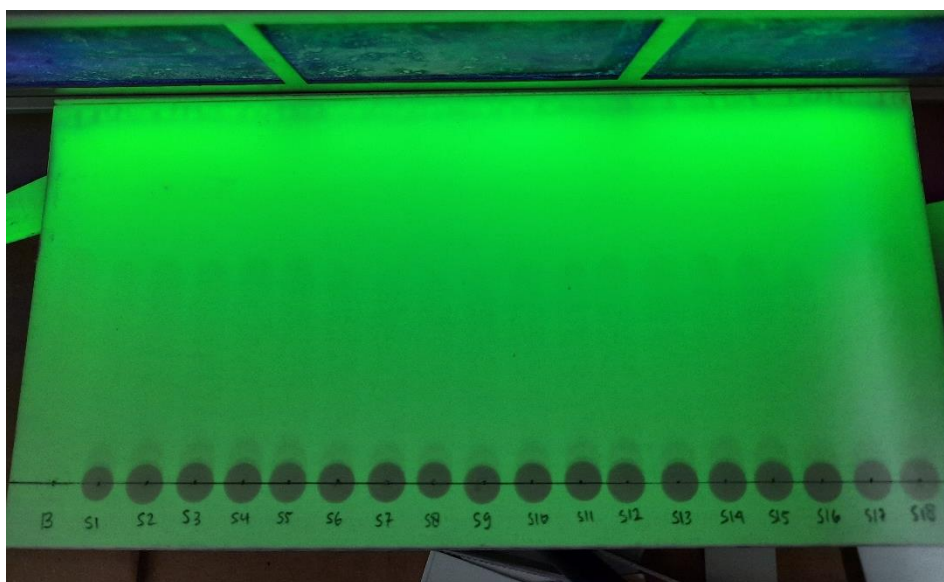
**Gambar 26. Alat Spektrofotometer UV-Vis**



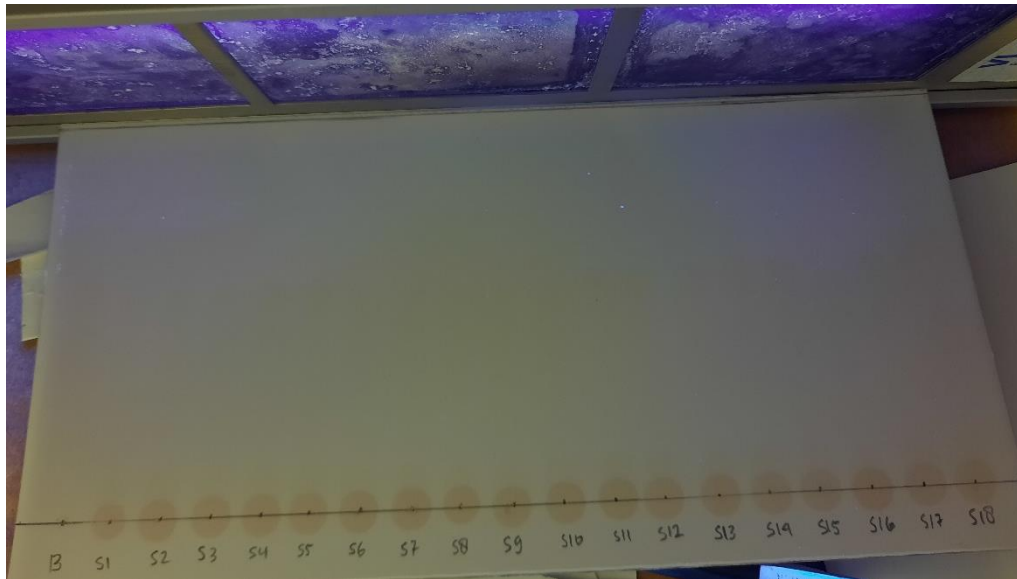
**Gambar 27. Proses Elusi**



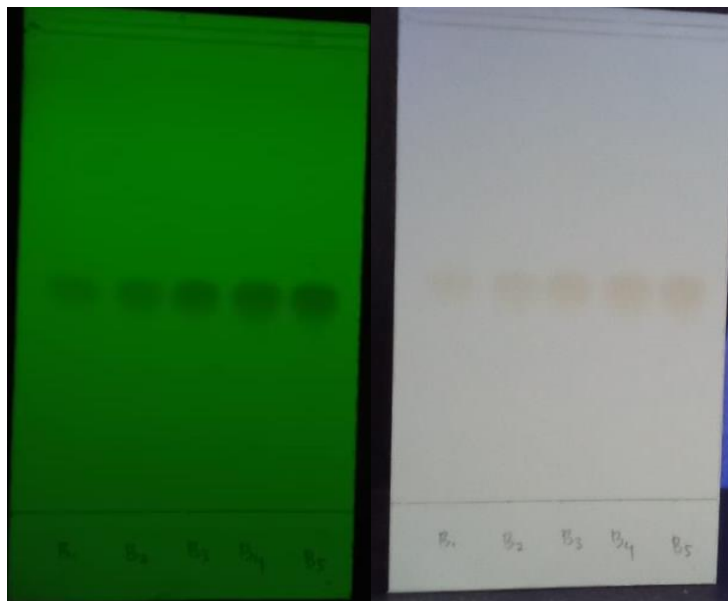
**Gambar 28. Alat TLC Scanner**



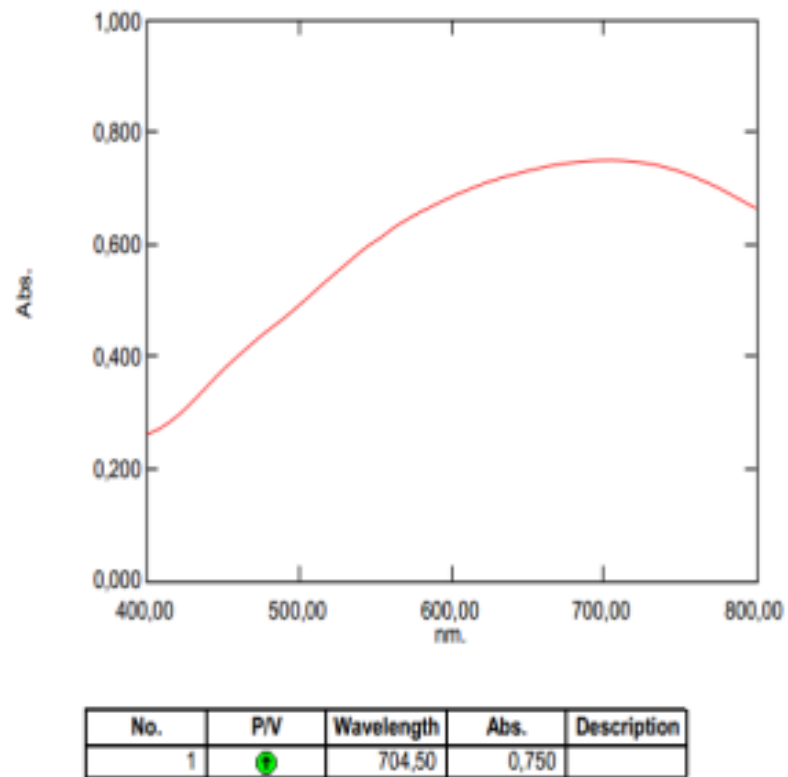
**Gambar 29. Hasil KLT untuk densitometri UV 254**



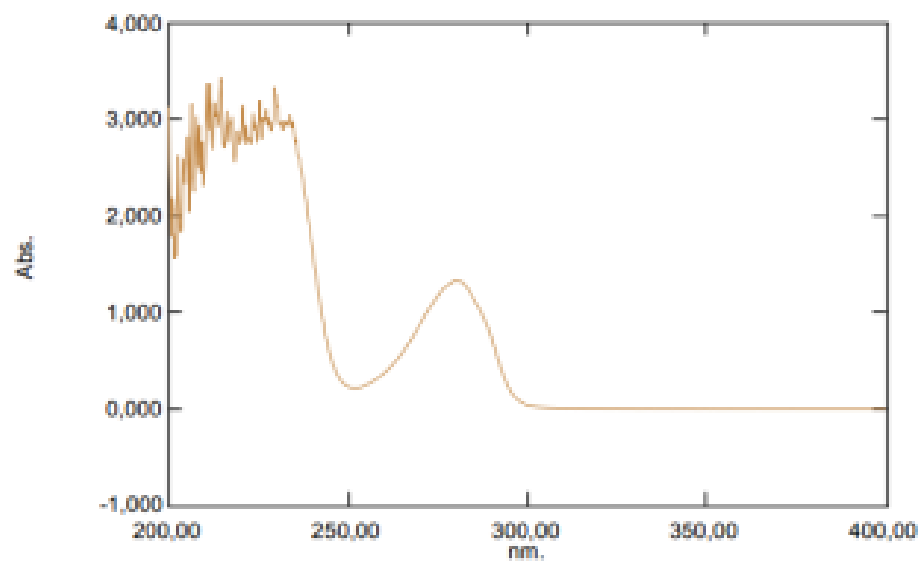
**Gambar 30. Hasil KLT untuk densitometri UV 366**



**Gambar 31. Hasil KLT baku katekin untuk densitometri**



Gambar 32. Spektrum penentuan panjang gelombang baku catekin menggunakan spektrofotometri UV-Vis



Gambar 33. Spektrum penentuan panjang gelombang baku catekin menggunakan KLT - densitometri

### Lampiran 3

#### Hasil pengukuran kandungan baku katekin

**Tabel 14. Hasil pengukuran kandungan baku katekin menggunakan spektrofotometri UV-Vis**

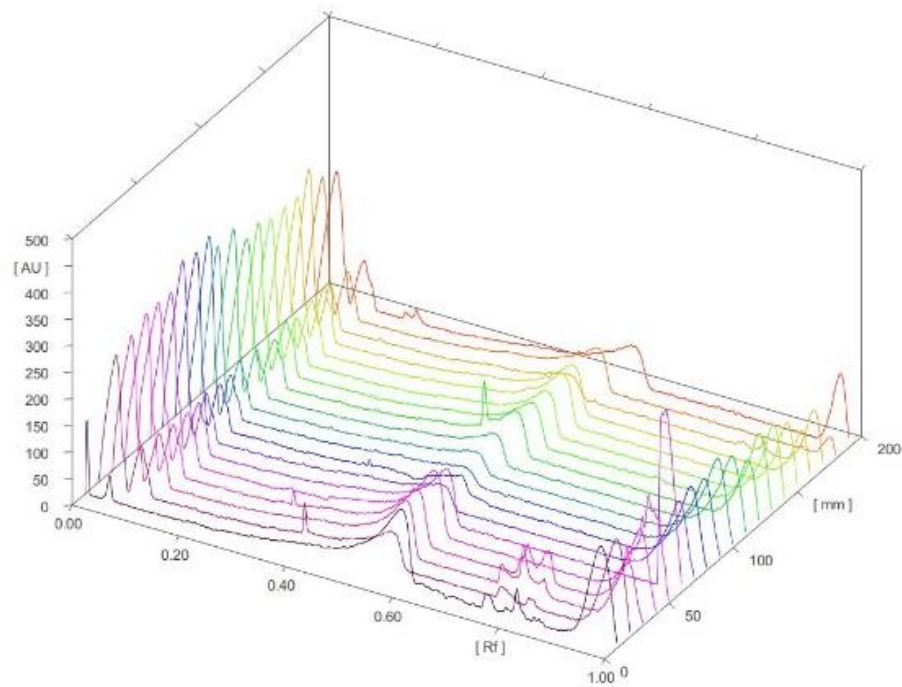
	Katekin Standar				
Konsentrasi	10 bpj	30 bpj	50 bpj	70 bpj	90 bpj
Absorbansi	0,068	0,194	0,352	0,526	0,730

**Tabel 15. Hasil pengukuran kandungan baku katekin menggunakan KLT-Densitometri**

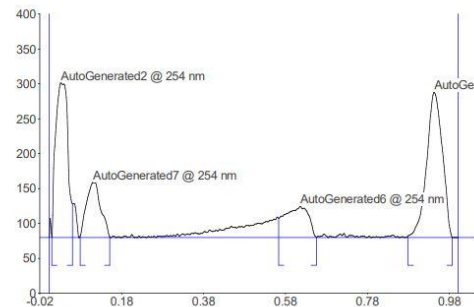
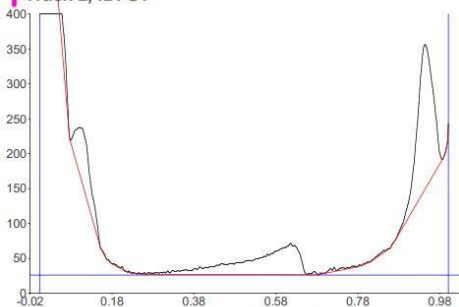
	Katekin Standar				
Konsentrasi	100 bpj	200 bpj	300 bpj	400 bpj	500 bpj
Nilai Rf	0,31	0,39	0,41	0,42	0,43
Luas area	2238,63	4838,36	7739,13	10108,37	13777,78

## Lampiran 4

### Profil KLT-densitometri ekstrak biji buah pinang pada panjang gelombang 254 nm



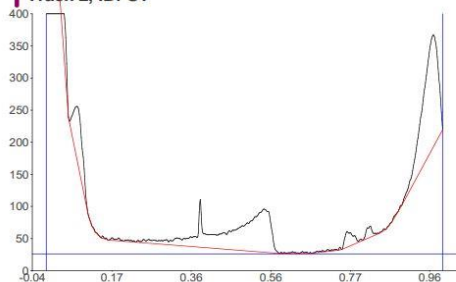
Track 2, ID: S1



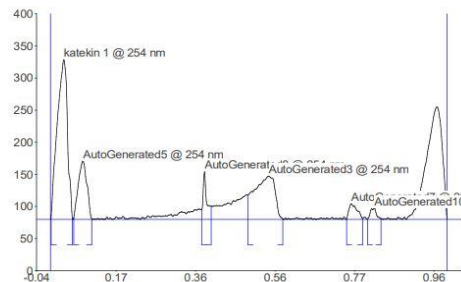
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	0.0	0.03	221.8	40.06	0.06	48.3	6513.7	33.20	AutoGenerated2
2	0.08	1.9	0.11	79.1	14.28	0.15	0.8	2718.8	13.86	AutoGenerated7
3	0.56	27.9	0.61	44.8	8.09	0.65	0.5	2557.9	13.04	AutoGenerated6
4	0.88	2.8	0.94	208.0	37.56	0.99	0.3	7831.8	39.91	AutoGenerated4



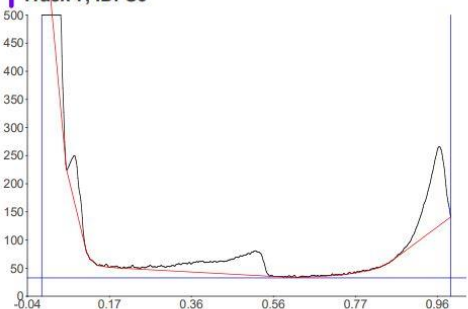
Track 2, ID: S1



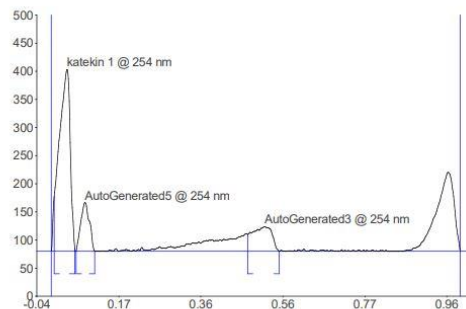
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.00	7.3	0.03	248.8	47.48	0.05	2.5	6222.3	47.94	katekin 1
2	0.06	2.7	0.08	91.2	17.40	0.10	0.8	1922.8	14.81	AutoGenerated5
3	0.38	14.8	0.39	74.4	14.19	0.40	20.7	689.8	5.31	AutoGenerated8
4	0.50	38.4	0.55	67.4	12.87	0.59	1.0	3397.8	26.18	AutoGenerated3
5	0.75	0.8	0.76	24.8	4.73	0.79	1.4	491.7	3.79	AutoGenerated7
6	0.80	0.5	0.82	17.5	3.33	0.83	1.4	256.0	1.97	AutoGenerated10



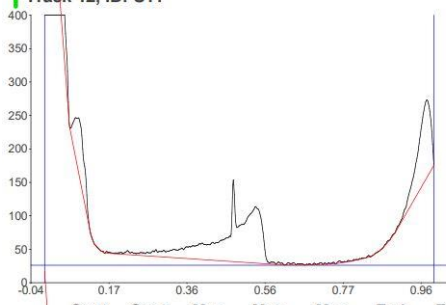
Track 7, ID: S6



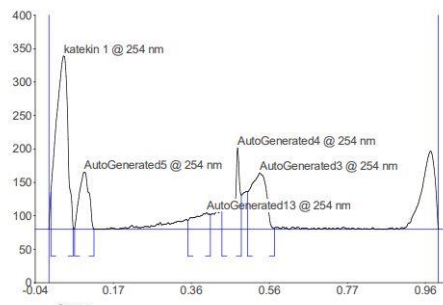
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	97.0	0.04	323.4	71.18	0.06	6.2	8451.8	68.44	katekin 1
2	0.06	0.7	0.08	87.0	19.15	0.11	0.6	1784.9	14.45	AutoGenerated5
3	0.48	30.3	0.52	44.0	9.67	0.56	0.3	2113.1	17.11	AutoGenerated3



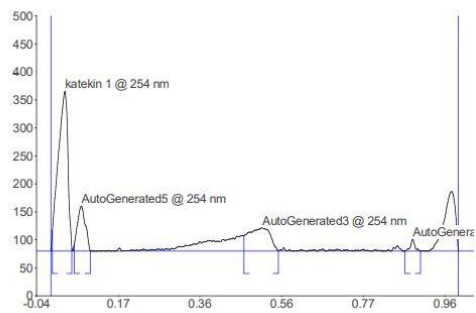
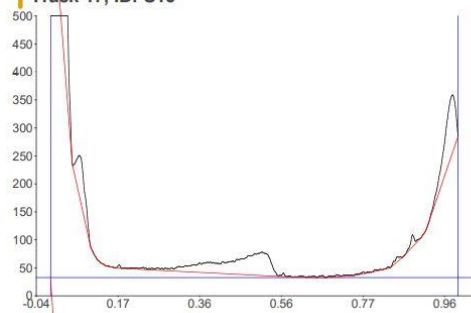
Track 12, ID: S11



Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.00	55.3	0.04	259.5	45.03	0.06	3.5	7479.6	47.27	katekin 1
2	0.07	1.8	0.09	85.6	14.85	0.12	0.0	2044.9	12.92	AutoGenerated5
3	0.36	12.9	0.40	24.8	4.30	0.41	22.5	980.8	6.20	AutoGenerated13
4	0.44	26.9	0.48	122.1	21.19	0.49	51.2	2024.8	12.80	AutoGenerated4
5	0.51	56.3	0.54	84.3	14.63	0.58	1.9	3292.5	20.81	AutoGenerated3



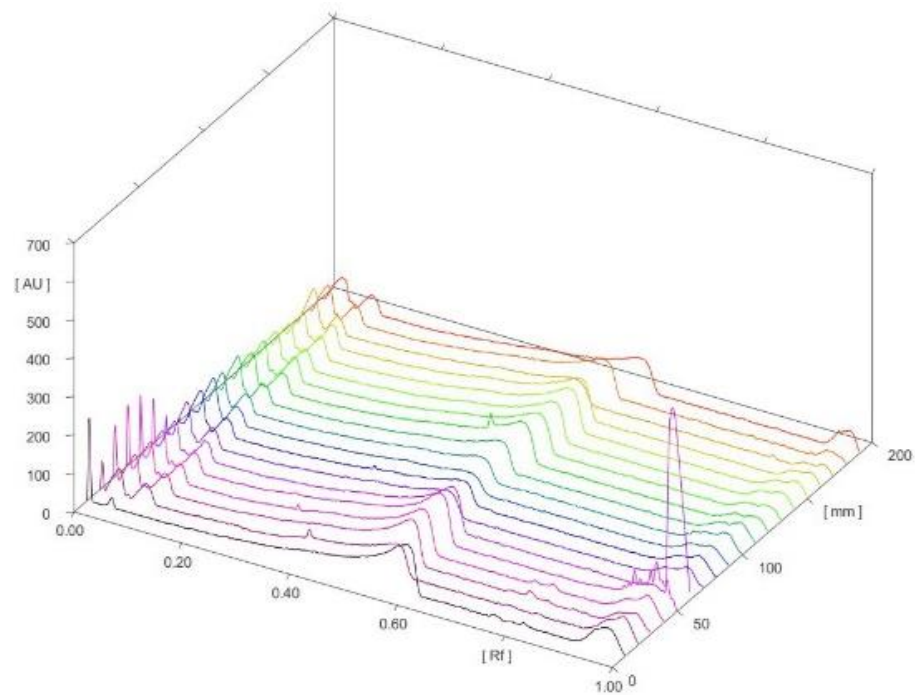
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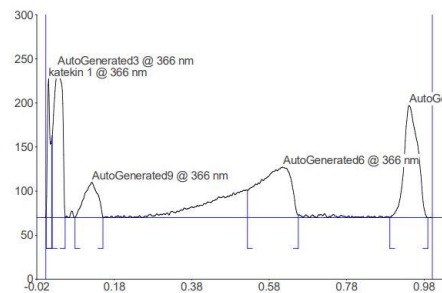
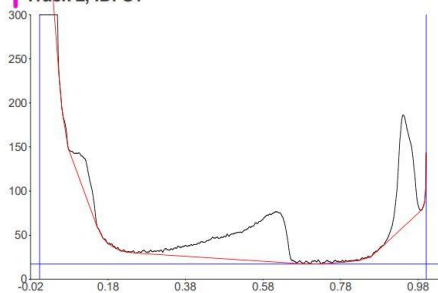
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.00	36.9	0.03	285.4	66.52	0.05	4.8	6591.6	62.50	katekin 1
2	0.06	12.9	0.07	80.4	18.74	0.10	0.2	1543.7	14.64	AutoGenerated5
3	0.47	27.9	0.52	41.6	9.69	0.56	1.1	2190.5	20.77	AutoGenerated3
4	0.87	0.2	0.89	21.7	5.05	0.91	0.2	220.4	2.09	AutoGenerated16

## Lampiran 5

### Profil KLT-densitometri ekstrak biji buah pinang pada panjang gelombang 366 nm

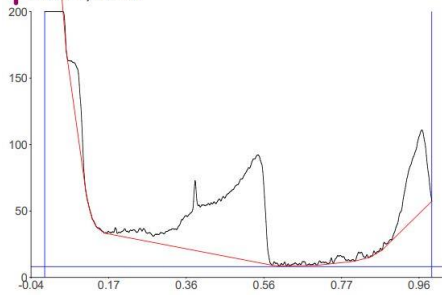


Track 2, ID: S1

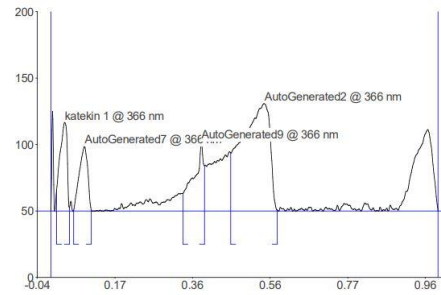


Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.00	7.7	0.01	157.4	28.52	0.02	89.2	1209.1	7.85	katekin 1
2	0.02	92.9	0.03	170.1	30.82	0.05	1.5	3724.3	24.19	AutoGenerated3
3	0.08	0.3	0.12	40.1	7.27	0.15	0.9	1378.9	8.95	AutoGenerated9
4	0.52	30.9	0.61	57.2	10.36	0.65	2.8	4749.6	30.85	AutoGenerated6
5	0.89	0.2	0.94	127.2	23.04	0.99	0.1	4336.1	28.16	AutoGenerated4

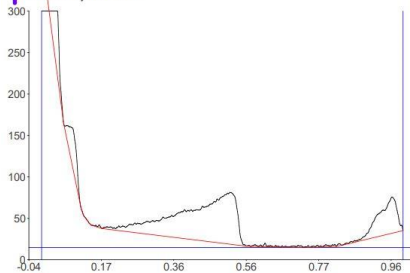
Track 2, ID: S1



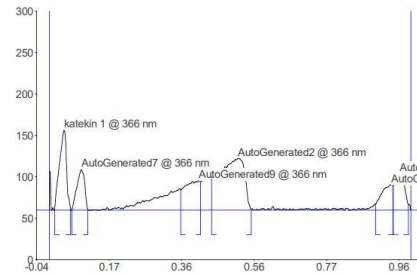
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	15.8	0.04	66.7	26.78	0.05	2.4	1225.7	13.17	katekin 1
2	0.06	0.5	0.09	49.0	19.66	0.10	0.8	1030.7	11.07	AutoGenerated7
3	0.34	13.1	0.39	52.6	21.10	0.40	34.1	1304.9	14.02	AutoGenerated9
4	0.46	43.7	0.55	80.9	32.46	0.58	0.8	5747.9	61.74	AutoGenerated2



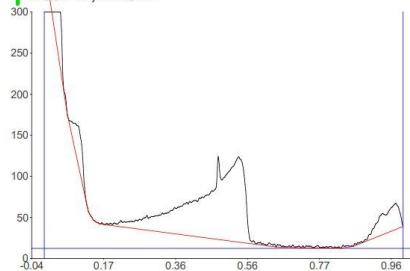
Track 7, ID: S6



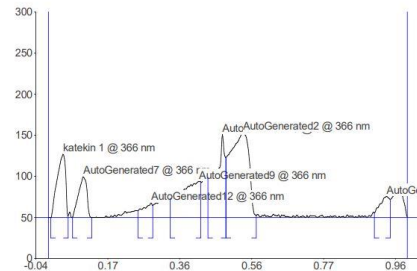
Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	1.7	0.04	96.7	30.41	0.06	1.4	1837.2	17.11	katekin 1
2	0.06	0.5	0.09	48.9	15.39	0.11	0.7	1021.1	9.51	AutoGenerated7
3	0.36	24.9	0.41	35.7	11.23	0.42	34.1	1482.6	13.80	AutoGenerated9
4	0.45	40.7	0.52	62.5	19.66	0.56	1.2	4319.3	40.22	AutoGenerated2
5	0.90	7.4	0.95	30.5	9.60	0.95	29.5	923.6	8.60	AutoGenerated6
6	0.95	30.0	0.97	43.6	13.71	0.99	6.6	1156.2	10.77	AutoGenerated3

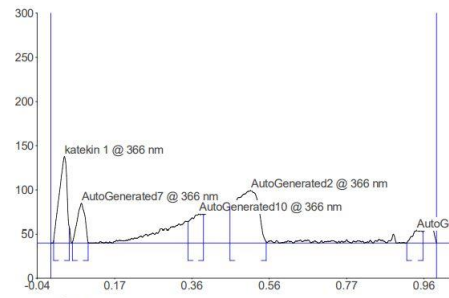
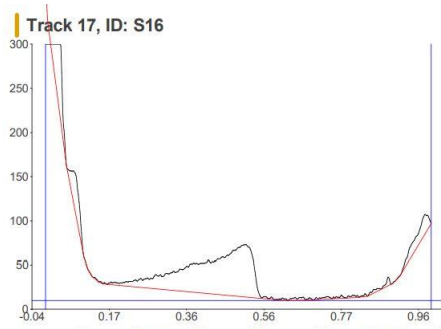


Track 12, ID: S11



Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	0.0	0.04	77.3	18.42	0.05	1.8	1768.1	12.17	katekin 1
2	0.07	0.7	0.10	49.7	11.83	0.12	0.0	1131.5	7.79	AutoGenerated7
3	0.25	8.2	0.29	17.9	4.27	0.29	14.6	453.4	3.12	AutoGenerated12
4	0.34	23.5	0.42	44.1	10.50	0.42	43.6	2505.5	17.24	AutoGenerated9
5	0.44	49.0	0.48	101.1	24.08	0.49	73.0	2734.9	18.82	AutoGenerated5
6	0.50	73.1	0.54	103.8	24.74	0.58	2.5	5239.8	36.06	AutoGenerated2
7	0.91	5.9	0.94	25.8	6.16	0.95	22.2	697.0	4.80	AutoGenerated6





Peak	Start Rf	Start Height	Max Rf	Max Height	Max %	End Rf	End Height	Area	Area %	Assigned substance
1	0.01	2.5	0.04	97.8	39.16	0.05	18.1	1917.0	24.76	katekin 1
2	0.06	1.1	0.08	45.1	18.04	0.10	0.9	871.1	11.25	AutoGenerated7
3	0.36	24.5	0.38	33.1	13.24	0.40	32.3	1018.9	13.16	AutoGenerated10
4	0.46	42.6	0.52	59.7	23.91	0.56	1.6	3578.4	46.22	AutoGenerated2
5	0.92	0.0	0.95	14.1	5.65	0.96	12.9	356.4	4.60	AutoGenerated6

## Lampiran 6

**Hasil Pengukuran Absorbansi Total Polifenol Ekstrak Biji Buah Pinang  
Dari Beberapa Daerah Menggunakan Spektrofotometer Uv-Vis**

<b>Lama Ekstraksi</b>	<b>Repli kasi</b>	<b>BONE</b>	<b>BULUKUMBA</b>	<b>ENREKANG</b>	<b>MASAMBA</b>	<b>SIDRAP</b>					
<b>1 menit</b>	<b>R1</b>	0,531	0,644	0,335	0,469	0,530					
	<b>R2</b>	0,448	0,465	0,603	0,611	0,352	0,328	0,490	0,487	0,554	0,547
	<b>R3</b>	0,415	0,586	0,298	0,502	0,556					
<b>2 menit</b>	<b>R1</b>	0,521	0,488	0,488	0,426	0,580					
	<b>R2</b>	0,338	0,412	0,486	0,496	0,490	0,483	0,473	0,471	0,605	0,591
	<b>R3</b>	0,378	0,497	0,510	0,515	0,588					
<b>4 menit</b>	<b>R1</b>	0,566	0,431	0,554	0,531	0,385					
	<b>R2</b>	0,544	0,554	0,374	0,432	0,518	0,532	0,448	0,476	0,381	0,383
	<b>R3</b>	0,553	0,490	0,525	0,449	0,384					
<b>6 menit</b>	<b>R1</b>	0,430	0,438	0,586	0,415	0,412					
	<b>R2</b>	0,405	0,412	0,438	0,425	0,597	0,587	0,420	0,42	0,411	0,407
	<b>R3</b>	0,402	0,399	0,577	0,425	0,399					
<b>8 menit</b>	<b>R1</b>	0,422	0,573	0,600	0,371	0,481					
	<b>R2</b>	0,371	0,385	0,447	0,495	0,586	0,587	0,380	0,369	0,429	0,459
	<b>R3</b>	0,362	0,464	0,575	0,355	0,467					

## Lampiran 7

### Data Statistik Persen Rendemen

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Persen Rendemen	25	18.58848	4.737873	11.250	27.208

##### One-Sample Kolmogorov-Smirnov Test

		Persen Rendemen
N		25
Normal Parameters <sup>a,b</sup>	Mean	18.58848
	Std. Deviation	4.737873
Most Extreme Differences	Absolute	.120
	Positive	.120
	Negative	-.088
Test Statistic		.120
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

#### a. Lama proses ekstraksi

##### Oneway

##### Descriptives

Persen Rendemen

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
1 menit	5	17.08840	4.068466	1.819473	11.550	22.716
2 menit	5	14.91680	3.518538	1.573538	11.250	19.336
4 menit	5	19.32600	5.898580	2.637925	12.850	27.208
6 menit	5	20.36160	3.819980	1.708347	15.660	24.844
8 menit	5	21.24960	4.820839	2.155945	14.502	26.610
Total	25	18.58848	4.737873	.947575	11.250	27.208

### Test of Homogeneity of Variances

Persen Rendemen

Levene Statistic	df1	df2	Sig.
.699	4	20	.601

### ANOVA

Persen Rendemen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	132.505	4	33.126	1.631	.206
Within Groups	406.234	20	20.312		
Total	538.739	24			

## b. Lokasi Pengambilan

### Descriptives

Persen Rendemen

	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Bone	5	13.16240	1.896525	.848152	11.250	15.660
Bulukumba	5	16.49240	3.551171	1.588132	11.364	20.590
Enrekang	5	21.91360	2.751983	1.230724	18.658	24.914
Masamba	5	22.27720	5.469321	2.445955	16.350	27.208
Sidrap	5	19.09680	2.746535	1.228288	16.284	22.716
Total	25	18.58848	4.737873	.947575	11.250	27.208

### Test of Homogeneity of Variances

Persen Rendemen

Levene Statistic	df1	df2	Sig.
4.409	4	20	.010

### ANOVA

Persen Rendemen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	293.787	4	73.447	5.997	.002
Within Groups	244.952	20	12.248		
Total	538.739	24			



## Lampiran 7

### Data Statistik Kandungan Polifenol Total

#### Npar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Kandungan Polifenol	25	39.09420	6.211958	27.309	49.391

##### One-Sample Kolmogorov-Smirnov Test

		Kandungan Polifenol
N		25
Normal Parameters <sup>a,b</sup>	Mean	39.09420
	Std. Deviation	6.211958
Most Extreme Differences	Absolute	.112
	Positive	.096
	Negative	-.112
Test Statistic		.112
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

#### a. Lokasi pengambilan sampel

##### Descriptives

Kandungan Polifenol

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Bone	5	36.48480	5.242689	2.344602	29.97514	42.99446	31.756	44.943
Bulukumba	5	42.61800	5.737399	2.565843	35.49408	49.74192	35.424	49.391
Enrekang	5	40.99480	8.365367	3.741106	30.60782	51.38178	27.309	47.518
Masamba	5	36.40700	3.862309	1.727277	31.61131	41.20269	30.508	39.715
Sidrap	5	38.96640	6.973911	3.118828	30.30715	47.62565	31.601	47.830
Total	25	39.09420	6.211958	1.242392	36.53003	41.65837	27.309	49.391

**Test of Homogeneity of Variances**

Kandungan Polifenol

Levene Statistic	df1	df2	Sig.
.798	4	20	.541

**ANOVA**

Kandungan Polifenol

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	150.379	4	37.595	.969	.446
Within Groups	775.743	20	38.787		
Total	926.122	24			

**b. Lama proses ekstraksi****Descriptives**

Kandungan Polifenol

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 menit	5	39.76220	8.252098	3.690450	29.51587	50.00853	27.309	49.391
2 menit	5	39.99620	5.046108	2.256688	33.73063	46.26177	33.863	47.830
4 menit	5	38.81020	5.489800	2.455113	31.99371	45.62669	31.601	44.943
6 menit	5	39.37200	7.445055	3.329530	30.12774	48.61626	33.473	47.518
8 menit	5	37.53040	6.897430	3.084625	28.96611	46.09469	30.508	47.518
Total	25	39.09420	6.211958	1.242392	36.53003	41.65837	27.309	49.391

**Test of Homogeneity of Variances**

Kandungan Polifenol

Levene Statistic	df1	df2	Sig.
.612	4	20	.659

**ANOVA**

Kandungan Polifenol

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19.316	4	4.829	.107	.979
Within Groups	906.806	20	45.340		
Total	926.122	24			

## Lampiran 8

### Data Statistik Kandungan Katekin

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Kandungan katekin	25	2.02728	.969666	.362	3.826

##### One-Sample Kolmogorov-Smirnov Test

		Kandungan katekin
N		25
Normal Parameters <sup>a,b</sup>	Mean	2.02728
	Std. Deviation	.969666
Most Extreme Differences	Absolute	.116
	Positive	.116
	Negative	-.080
Test Statistic		.116
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

#### a. Lama proses ekstraksi

##### Descriptives

Kandungan katekin

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1 menit	5	1.45660	.716575	.320462	.56685	2.34635	.362	2.153
2 menit	5	2.02020	.921643	.412171	.87583	3.16457	.818	2.991
4 menit	5	2.03900	.979483	.438038	.82281	3.25519	.844	3.317
6 menit	5	2.37700	1.305656	.583907	.75581	3.99819	.781	3.826
8 menit	5	2.24360	.997887	.446269	1.00456	3.48264	.791	3.109
Total	25	2.02728	.969666	.193933	1.62702	2.42754	.362	3.826

### Test of Homogeneity of Variances

Kandungan katekin

Levene Statistic	df1	df2	Sig.
.762	4	20	.562

### ANOVA

Kandungan katekin

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.475	4	.619	.616	.656
Within Groups	20.091	20	1.005		
Total	22.566	24			

## b. Lokasi Pengambilan

### Descriptives

Kandungan katekin

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Bone	5		
Bulukumba	5	3.07360	.608221	.272005	2.31839	3.82881	2.153	3.826
Enrekang	5	1.43580	.150526	.067317	1.24890	1.62270	1.302	1.676
Masamba	5	2.43040	.250676	.112106	2.11915	2.74165	2.033	2.702
Sidrap	5	2.47740	.862890	.385896	1.40598	3.54882	1.261	3.483
Total	25	2.02728	.969666	.193933	1.62702	2.42754	.362	3.826

### Test of Homogeneity of Variances

Kandungan katekin

Levene Statistic	df1	df2	Sig.
3.127	4	20	.038

### ANOVA

Kandungan katekin

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17.604	4	4.401	17.739	.000
Within Groups	4.962	20	.248		
Total	22.566	24			

## Post Hoc Tests

### Multiple Comparisons

Dependent Variable: Kandungan katekin

Tukey HSD

(I) Lokasi pengambilan	(J) Lokasi pengambilan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Bone	Bulukumba	-2.354400*	.315022	.000	-3.29706	-1.41174
	Enrekang	-.716600	.315022	.194	-1.65926	.22606
	Masamba	-1.711200*	.315022	.000	-2.65386	-.76854
	Sidrap	-1.758200*	.315022	.000	-2.70086	-.81554
Bulukumba	Bone	2.354400*	.315022	.000	1.41174	3.29706
	Enrekang	1.637800*	.315022	.000	.69514	2.58046
	Masamba	.643200	.315022	.283	-.29946	1.58586
	Sidrap	.596200	.315022	.353	-.34646	1.53886
Enrekang	Bone	.716600	.315022	.194	-.22606	1.65926
	Bulukumba	-1.637800*	.315022	.000	-2.58046	-.69514
	Masamba	-.994600*	.315022	.036	-1.93726	-.05194
	Sidrap	-1.041600*	.315022	.026	-1.98426	-.09894
Masamba	Bone	1.711200*	.315022	.000	.76854	2.65386
	Bulukumba	-.643200	.315022	.283	-1.58586	.29946
	Enrekang	.994600*	.315022	.036	.05194	1.93726
	Sidrap	-.047000	.315022	1.000	-.98966	.89566
Sidrap	Bone	1.758200*	.315022	.000	.81554	2.70086
	Bulukumba	-.596200	.315022	.353	-1.53886	.34646
	Enrekang	1.041600*	.315022	.026	.09894	1.98426
	Masamba	.047000	.315022	1.000	-.89566	.98966

\*. The mean difference is significant at the 0.05 level.

## Lampiran 9

### Perhitungan Kandungan Polifenol Total Ekstrak Biji Buah Pinang dari Beberapa Daerah Menggunakan Spektrofotometer Uv-Vis

$y$  = absorban  
 $x$  = konsentrasi senyawa terlarut ( $\mu\text{g/mL}$ )  
 $v$  = total larutan pengenceran (mL)  
 $fp$  = faktor pengenceran  
 $g$  = jumlah ekstrak yang ditimbang (mg)

$$\text{Faktor Pengenceran} = \frac{\text{Total larutan pengenceran}}{\text{Jumlah sampel yang diencerkan}}$$

$$\text{Faktor Pengenceran} = \frac{5 \text{ mL}}{0,4 \text{ mL}} = 12,5$$

$$\text{Persamaan regresi: } y = 0,00801x - 0,02199$$

a. Daerah BONE

- **1 menit**

$$\begin{aligned}
 y &= 0,00801x - 0,02199 \\
 0,465 &= 0,00801x - 0,02199 \\
 0,465 + 0,02199 &= 0,00801x \\
 \frac{0,48699}{0,00801} & \\
 x &= 60,798 \mu\text{g/mL}
 \end{aligned}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{60,798 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 379,988 \mu\text{g/mg}$$

- **2 menit**

$$\begin{aligned}
 y &= 0,00801x - 0,02199 \\
 0,412 &= 0,00801x - 0,02199 \\
 0,412 + 0,02199 &= 0,00801x \\
 \frac{0,43399}{0,00801} & \\
 x &= 54,181 \mu\text{g/mL}
 \end{aligned}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{54,181 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 338,631 \mu\text{g/mg}$$

- **4 menit**

$$y = 0,00801x - 0,02199$$

$$0,554 = 0,00801x - 0,02199$$

$$0,554 + 0,02199 = 0,00801x$$

$$x = \frac{0,57599}{0,00801}$$

$$x = 71,909 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{71,909 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{449,431 \mu\text{g/mg}}$$

- **6 menit**

$$y = 0,00801x - 0,02199$$

$$0,412 = 0,00801x - 0,02199$$

$$0,412 + 0,02199 = 0,00801x$$

$$x = \frac{0,43399}{0,00801}$$

$$x = 54,181 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{54,181 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{338,631 \mu\text{g/mg}}$$

- **8 menit**

$$y = 0,00801x - 0,02199$$

$$0,385 = 0,00801x - 0,02199$$

$$0,385 + 0,02199 = 0,00801x$$

$$x = \frac{0,40699}{0,00801}$$

$$x = 50,810 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{50,810 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{317,563 \mu\text{g/mg}}$$

b. Daerah BULUKUMBA

- **1 menit**

$$y = 0,00801x - 0,02199$$

$$0,611 = 0,00801x - 0,02199$$

$$0,611 + 0,02199 = 0,00801x$$

$$x = \frac{0,63299}{0,00801}$$

$$x = 79,025 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{79,025 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 493,906 \mu\text{g/mg}$$

- **2 menit**

$$y = 0,00801x - 0,02199$$

$$0,496 = 0,00801x - 0,02199$$

$$0,496 + 0,02199 = 0,00801x$$

$$x = \frac{0,51799}{0,00801}$$

$$x = 64,668 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{64,668 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 404,175 \mu\text{g/mg}$$

- **4 menit**

$$y = 0,00801x - 0,02199$$

$$0,432 = 0,00801x - 0,02199$$

$$0,432 + 0,02199 = 0,00801x$$

$$x = \frac{0,45399}{0,00801}$$

$$x = 56,678 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{56,678 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 354,238 \mu\text{g/mg}$$

- **6 menit**

$$y = 0,00801x - 0,02199$$

$$0,587 = 0,00801x - 0,02199$$

$$0,587 + 0,02199 = 0,00801x$$

$$x = \frac{0,60899}{0,00801}$$

$$x = 76,029 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$



$$\text{Kadar polifenol total} = \frac{76,029 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 475,181 \mu\text{g/mg}$$

- **8 menit**

$$y = 0,00801x - 0,02199$$

$$0,495 = 0,00801x - 0,02199$$

$$0,495 + 0,02199 = 0,00801x$$

$$x = \frac{0,51699}{0,00801}$$

$$x = 64,543 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{64,543 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 403,394 \mu\text{g/mg}$$

c. Daerah ENREKANG

- **1 menit**

$$y = 0,00801x - 0,02199$$

$$0,328 = 0,00801x - 0,02199$$

$$0,328 + 0,02199 = 0,00801x$$

$$x = \frac{0,34999}{0,00801}$$

$$x = 43,694 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{43,694 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 273,088 \mu\text{g/mg}$$

- **2 menit**

$$y = 0,00801x - 0,02199$$

$$0,483 = 0,00801x - 0,02199$$

$$0,483 + 0,02199 = 0,00801x$$

$$x = \frac{0,50499}{0,00801}$$

$$x = 63,045 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{63,045 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 394,031 \mu\text{g/mg}$$

- **4 menit**

$$y = 0,00801x - 0,02199$$

$$0,532 = 0,00801x - 0,02199$$

$$0,532 + 0,02199 = 0,00801x$$

$$x = \frac{0,55399}{0,00801}$$

$$x = 69,162 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{69,162 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 432,263 \mu\text{g/mg}$$

- **6 menit**

$$y = 0,00801x - 0,02199$$

$$0,587 = 0,00801x - 0,02199$$

$$0,587 + 0,02199 = 0,00801x$$

$$x = \frac{0,60899}{0,00801}$$

$$x = 76,029 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{76,029 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 475,181 \mu\text{g/mg}$$

- **8 menit**

$$y = 0,00801x - 0,02199$$

$$0,587 = 0,00801x - 0,02199$$

$$0,587 + 0,02199 = 0,00801x$$

$$x = \frac{0,60899}{0,00801}$$

$$x = 76,029 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{76,029 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 475,181 \mu\text{g/mg}$$

d. Daerah MASAMBA

- **1 menit**

$$y = 0,00801x - 0,02199$$

$$0,487 = 0,00801x - 0,02199$$

$$0,487 + 0,02199 = 0,00801x$$

$$x = \frac{0,50899}{0,00801}$$

$$x = 63,544 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{63,544 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 397,15 \mu\text{g/mg}$$

- **2 menit**

$$y = 0,00801x - 0,02199$$

$$0,471 = 0,00801x - 0,02199$$

$$0,471 + 0,02199 = 0,00801x$$

$$x = \frac{0,49299}{0,00801}$$

$$x = 61,547 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{61,547 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 384,669 \mu\text{g/mg}$$

- **4 menit**

$$y = 0,00801x - 0,02199$$

$$0,476 = 0,00801x - 0,02199$$

$$0,476 + 0,02199 = 0,00801x$$

$$x = \frac{0,49799}{0,00801}$$

$$x = 62,171 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{62,171 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = 388,569 \mu\text{g/mg}$$

- **6 menit**

$$y = 0,00801x - 0,02199$$

$$0,42 = 0,00801x - 0,02199$$

$$0,42 + 0,02199 = 0,00801x$$

$$x = \frac{0,44199}{0,00801}$$

$$x = 55,180 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{55,180 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{344,875 \mu\text{g/mg}}$$

- **8 menit**

$$\begin{aligned} y &= 0,00801x - 0,02199 \\ 0,369 &= 0,00801x - 0,02199 \\ 0,369 + 0,02199 &= 0,00801x \end{aligned}$$

$$\begin{aligned} x &= \frac{0,39099}{0,00801} \\ x &= 48,813 \mu\text{g/mL} \end{aligned}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{48,813 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{305,081 \mu\text{g/mg}}$$

e. Daerah SIDRAP

- **1 menit**

$$\begin{aligned} y &= 0,00801x - 0,02199 \\ 0,547 &= 0,00801x - 0,02199 \\ 0,547 + 0,02199 &= 0,00801x \end{aligned}$$

$$\begin{aligned} x &= \frac{0,56899}{0,00801} \\ x &= 71,035 \mu\text{g/mL} \end{aligned}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{71,035 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{443,969 \mu\text{g/mg}}$$

- **2 menit**

$$\begin{aligned} y &= 0,00801x - 0,02199 \\ 0,591 &= 0,00801x - 0,02199 \\ 0,591 + 0,02199 &= 0,00801x \end{aligned}$$

$$\begin{aligned} x &= \frac{0,61299}{0,00801} \\ x &= 76,528 \mu\text{g/mL} \end{aligned}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{76,528 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{478,3 \mu\text{g/mg}}$$

- **4 menit**

$$y = 0,00801x - 0,02199$$

$$0,383 = 0,00801x - 0,02199$$

$$0,383 + 0,02199 = 0,00801x$$

$$x = \frac{0,40499}{0,00801}$$

$$x = 50,561 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{50,561 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{316,006 \mu\text{g/mg}}$$

- **6 menit**

$$y = 0,00801x - 0,02199$$

$$0,407 = 0,00801x - 0,02199$$

$$0,407 + 0,02199 = 0,00801x$$

$$x = \frac{0,42899}{0,00801}$$

$$x = 53,557 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{53,557 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{334,731 \mu\text{g/mg}}$$

- **8 menit**

$$y = 0,00801x - 0,02199$$

$$0,459 = 0,00801x - 0,02199$$

$$0,459 + 0,02199 = 0,00801x$$

$$x = \frac{0,48099}{0,00801}$$

$$x = 60,049 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{60,049 \mu\text{g/mL} \times 5 \text{ mL} \times 12,5}{10 \text{ mg}} = \mathbf{375,306 \mu\text{g/mg}}$$

## Lampiran 10

### Perhitungan Kandungan Katekin Ekstrak Biji Buah Pinang dari Beberapa Daerah Menggunakan KLT-Densitometer

$y$  = absorban  
 $x$  = konsentrasi senyawa terlarut ( $\mu\text{g/mL}$ )  
 $v$  = total larutan pengenceran (mL)  
 $fp$  = faktor pengenceran  
 $g$  = jumlah ekstrak yang ditimbang (mg)

$$\text{Faktor Pengenceran} = \frac{\text{Total larutan pengenceran}}{\text{Jumlah sampel yang diencerkan}}$$

$$\text{Faktor Pengenceran} = \frac{1 \text{ mL}}{1 \text{ mL}} = 1$$

Persamaan regresi:  $y = 28,348x - 764,04$

a. Daerah BONE

- **1 menit**

$$y = 28,348x - 764,04$$

$$4368,5 = 28,348x - 764,04$$

$$4368,5 + 764,04 = 28,348x$$

$$x = \frac{5132,04}{28,348}$$

$$x = 181,037 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{181,037 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{50 \text{ mg}} = 3,621 \mu\text{g/mg}$$

- **2 menit**

$$y = 28,348x - 764,04$$

$$10834,8 = 28,348x - 764,04$$

$$10834,8 + 764,04 = 28,348x$$

$$x = \frac{11598,84}{28,348}$$

$$x = 405,159 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{405,159 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{50 \text{ mg}} = 8,183 \mu\text{g/mg}$$

- **4 menit**

$$y = 28,348x - 764,04$$

$$11201,3 = 28,348x - 764,04$$

$$11201,3 + 764,04 = 28,348x$$

$$x = \frac{11965,34}{28,348}$$

$$x = 422,088 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{422,088 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{50 \text{ mg}} = 8,442 \mu\text{g/mg}$$

- **6 menit**

$$y = 28,348x - 764,04$$

$$10299,3 = 28,348x - 764,04$$

$$10299,3 + 764,04 = 28,348x$$

$$x = \frac{11063,34}{28,348}$$

$$x = 390,269 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{390,269 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{50 \text{ mg}} = 7,805 \mu\text{g/mg}$$

- **8 menit**

$$y = 28,348x - 764,04$$

$$10448,9 = 28,348x - 764,04$$

$$10448,9 + 764,04 = 28,348x$$

$$x = \frac{11212,94}{28,348}$$

$$x = 395,546 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{395,546 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{50 \text{ mg}} = 7,911 \mu\text{g/mg}$$

## b. Daerah BULUKUMBA

- **1 menit**

$$y = 28,348x - 764,04$$

$$5339,5 = 28,348x - 764,04$$

$$5339,5 + 764,04 = 28,348x$$

$$x = \frac{6103,54}{28,348}$$

$$x = 215,308 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{215,308 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{21,531 \mu\text{g/mg}}$$

- **2 menit**

$$y = 28,348x - 764,04$$

$$7715,2 = 28,348x - 764,04$$

$$7715,2 + 764,04 = 28,348x$$

$$x = \frac{8479,24}{28,348}$$

$$x = 299,112 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{299,112 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{29,911 \mu\text{g/mg}}$$

- **4 menit**

$$y = 28,348x - 764,04$$

$$8638,2 = 28,348x - 764,04$$

$$8638,2 + 764,04 = 28,348x$$

$$x = \frac{9402,24}{28,348}$$

$$x = 331,672 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{331,672 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{33,167 \mu\text{g/mg}}$$

- **6 menit**

$$y = 28,348x - 764,04$$

$$10082,9 = 28,348x - 764,04$$

$$10082,9 + 764,04 = 28,348x$$



$$x = \frac{10846,94}{28,348}$$

$$x = 382,635 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{382,635 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 38,264 \mu\text{g/mg}$$

- **8 menit**

$$y = 28,348x - 764,04$$

$$7968,7 = 28,348x - 764,04$$

$$7968,7 + 764,04 = 28,348x$$

$$x = \frac{8732,74}{28,348}$$

$$x = 308,055 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{308,055 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 30,806 \mu\text{g/mg}$$

c. Daerah ENREKANG

- **1 menit**

$$y = 28,348x - 764,04$$

$$3415,6 = 28,348x - 764,04$$

$$3415,6 + 764,04 = 28,348x$$

$$x = \frac{4179,64}{28,348}$$

$$x = 147,440 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{147,440 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 14,744 \mu\text{g/mg}$$

- **2 menit**

$$y = 28,348x - 764,04$$

$$2989,2 = 28,348x - 764,04$$

$$2989,2 + 764,04 = 28,348x$$

$$x = \frac{3753,24}{28,348}$$

$$x = 132,399 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{132,399 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 13,240 \mu\text{g/mg}$$

- **4 menit**

$$y = 28,348x - 764,04$$

$$2929,5 = 28,348x - 764,04$$

$$2929,5 + 764,04 = 28,348x$$

$$x = \frac{3693,54}{28,348}$$

$$x = 130,293 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{130,293 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 13,029 \mu\text{g/mg}$$

- **6 menit**

$$y = 28,348x - 764,04$$

$$3214,4 = 28,348x - 764,04$$

$$3214,4 + 764,04 = 28,348x$$

$$x = \frac{3978,44}{28,348}$$

$$x = 140,343 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{140,343 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 14,034 \mu\text{g/mg}$$

- **8 menit**

$$y = 28,348x - 764,04$$

$$3985,6 = 28,348x - 764,04$$

$$3985,6 + 764,04 = 28,348x$$

$$x = \frac{4749,64}{28,348}$$

$$x = 167,548 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{167,548 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = 16,755 \mu\text{g/mg}$$

## d. Daerah MASAMBA

- **1 menit**

$$y = 28,348x - 764,04$$

$$5000 = 28,348x - 764,04$$

$$5000 + 764,04 = 28,348x$$

$$x = \frac{5764,04}{28,348}$$

$$x = 203,331 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{203,331 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{20,333 \mu\text{g/mg}}$$

- **2 menit**

$$y = 28,348x - 764,04$$

$$6895,9 = 28,348x - 764,04$$

$$6895,9 + 764,04 = 28,348x$$

$$x = \frac{7659,94}{28,348}$$

$$x = 270,211 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{270,211 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{27,021 \mu\text{g/mg}}$$

- **4 menit**

$$y = 28,348x - 764,04$$

$$6221,9 = 28,348x - 764,04$$

$$6221,9 + 764,04 = 28,348x$$

$$x = \frac{6985,94}{28,348}$$

$$x = 246,435 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{246,435 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{24,644 \mu\text{g/mg}}$$

- **6 menit**

$$y = 28,348x - 764,04$$

$$7548,7 = 28,348x - 764,04$$

$$7548,7 + 764,04 = 28,348x$$

$$x = \frac{8312,74}{28,348}$$

$$x = 293,239 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{293,239 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{29,324 \mu\text{g/mg}}$$

- **8 menit**

$$y = 28,348x - 764,04$$

$$6495,9 = 28,348x - 764,04$$

$$6495,9 + 764,04 = 28,348x$$

$$x = \frac{7259,94}{28,348}$$

$$x = 256,101 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{256,101 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{25,610 \mu\text{g/mg}}$$

e. Daerah SIDRAP

- **1 menit**

$$y = 28,348x - 764,04$$

$$2810,6 = 28,348x - 764,04$$

$$2810,6 + 764,04 = 28,348x$$

$$x = \frac{3574,64}{28,348}$$

$$x = 126,098 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{126,098 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{12,610 \mu\text{g/mg}}$$

- **2 menit**

$$y = 28,348x - 764,04$$

$$5660,4 = 28,348x - 764,04$$

$$5660,4 + 764,04 = 28,348x$$

$$x = \frac{6424,44}{28,348}$$

$$x = 226,628 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{226,628 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{22,663 \mu\text{g/mg}}$$

- **4 menit**

$$y = 28,348x - 764,04$$

$$5665,3 = 28,348x - 764,04$$

$$5665,3 + 764,04 = 28,348x$$

$$x = \frac{6429,34}{28,348}$$

$$x = 226,800 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{226,800 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{22,680 \mu\text{g/mg}}$$

- **6 menit**

$$y = 28,348x - 764,04$$

$$9109,1 = 28,348x - 764,04$$

$$9109,1 + 764,04 = 28,348x$$

$$x = \frac{9873,14}{28,348}$$

$$x = 348,283 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{348,283 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{34,828 \mu\text{g/mg}}$$

- **8 menit**

$$y = 28,348x - 764,04$$

$$8049,7 = 28,348x - 764,04$$

$$8049,7 + 764,04 = 28,348x$$

$$x = \frac{8813,74}{28,348}$$

$$x = 310,912 \mu\text{g/mL}$$

$$\text{Kadar polifenol total} = \frac{x \times v \times fp}{g}$$

$$\text{Kadar polifenol total} = \frac{310,912 \mu\text{g/mL} \times 1 \text{ mL} \times 1}{10 \text{ mg}} = \mathbf{31,091 \mu\text{g/mg}}$$