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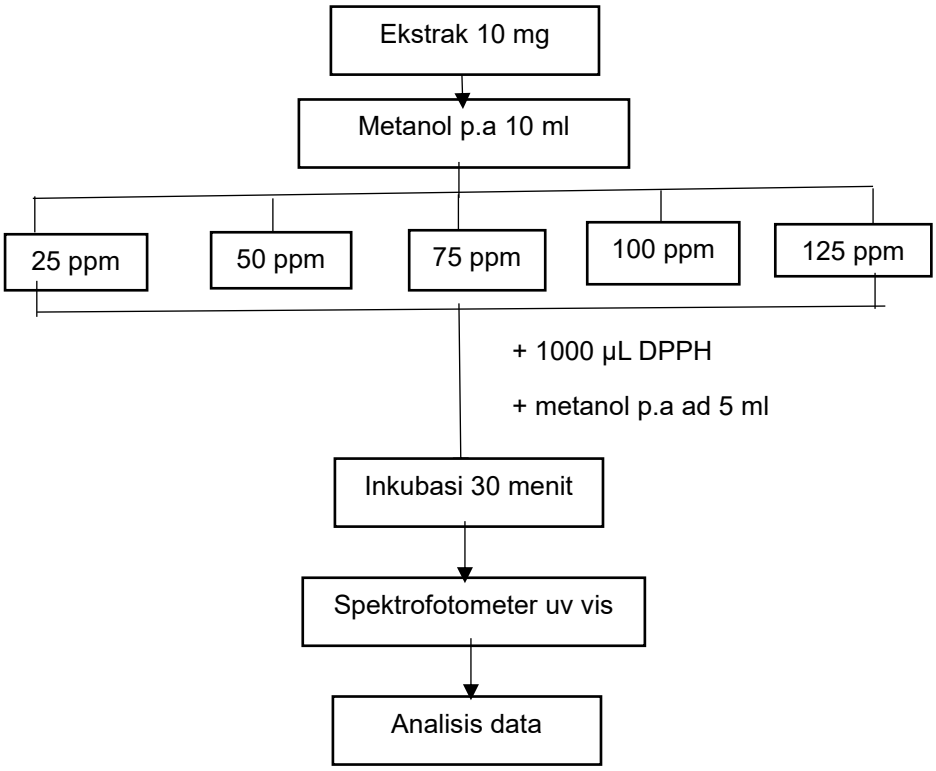
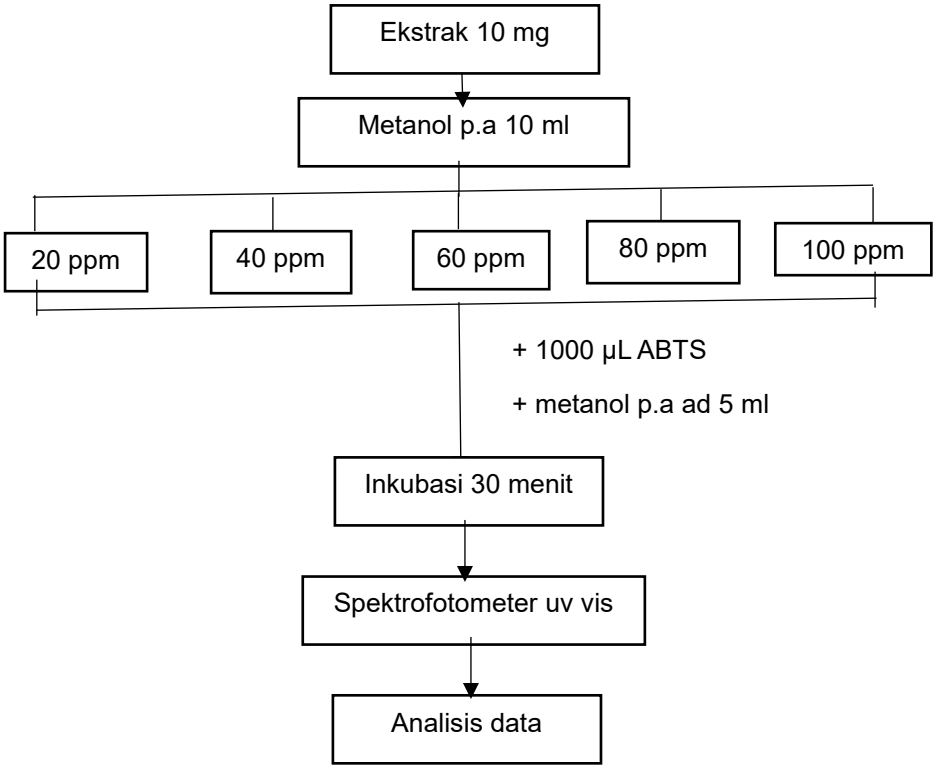
Lampiran

Lampiran 1. Skema kerja penelitian

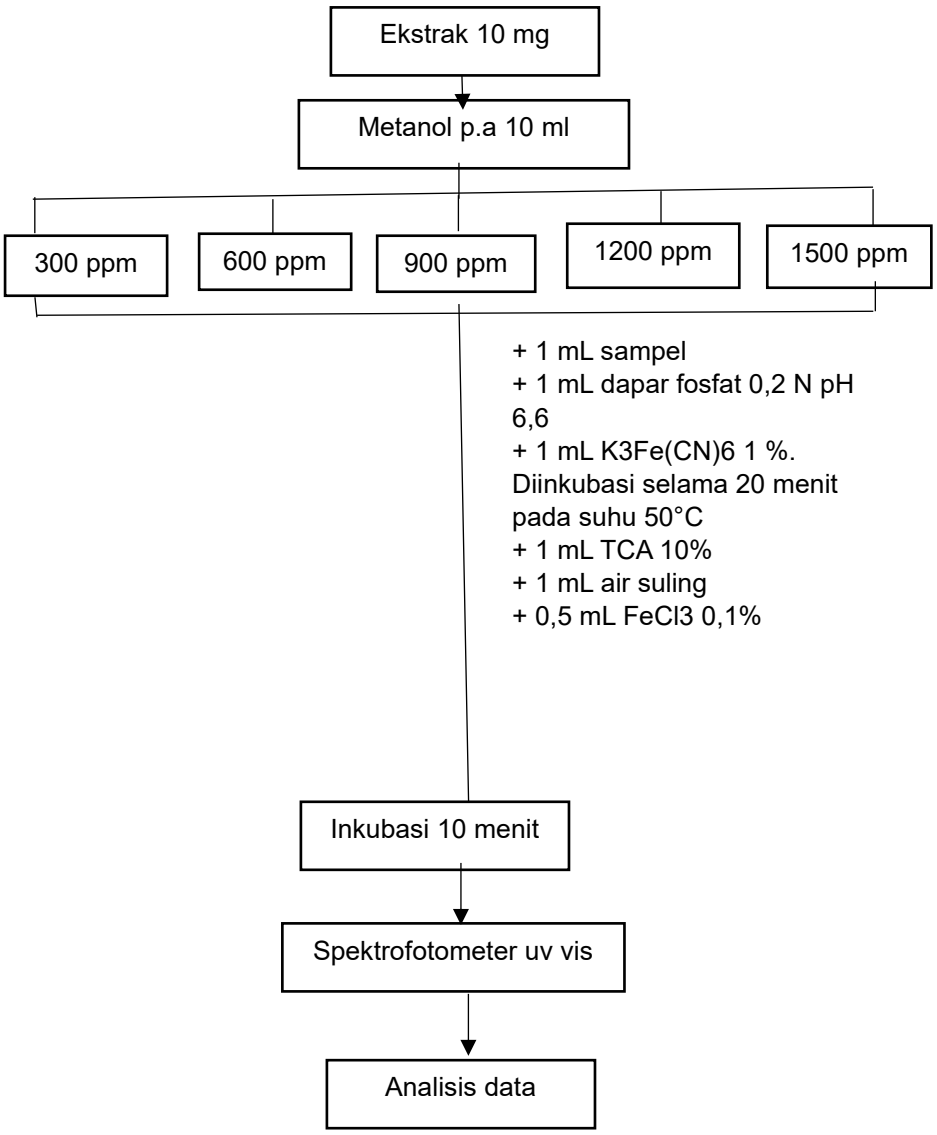
1.1 skema kerja uji antioksidan dengan metode DPPH



1.2 skema kerja uji antioksidan dengan metode ABTS



1.3 skema kerja uji antioksidan dengan metode FRAP



Lampiran 2. Perhitungan

2.1 perhitungan DPPH

Tabel 5. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* Asam Askorbat metode DPPH

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko DPPH	Blanko	0.902 0.915 0.915	0.910		
2	Asam askorbat	1	0.901 0.894 0.894	0.896	1.5	4.727
		2	0.786 0.764 0.787	0.779	14	
		3	0.652 0.631 0.646	0.643	29	
		4	0.561 0.586 0.560	0.569	37	
		5	0.415 0.408 0.408	0.410	54	

Persentase inhibisi radikal bebas asam askorbat

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

Konsentrasi 1 ppm = $\frac{0.910-0.896}{0.910}\ x\ 100\%$ = 1.5 %

Konsentrasi 2 ppm = $\frac{0.910-0.779}{0.910}\ x\ 100\%$= 14 %

Konsentrasi 3 ppm = $\frac{0.935-0.643}{0.935}\ x\ 100\%$ = 29 %

Konsentrasi 4 ppm = $\frac{0.935-0.569}{0.935}\ x\ 100\%$ = 37 %

Konsentrasi 5 ppm = $\frac{0.935-0.410}{0.935}\ x\ 100\%$ = 54 %

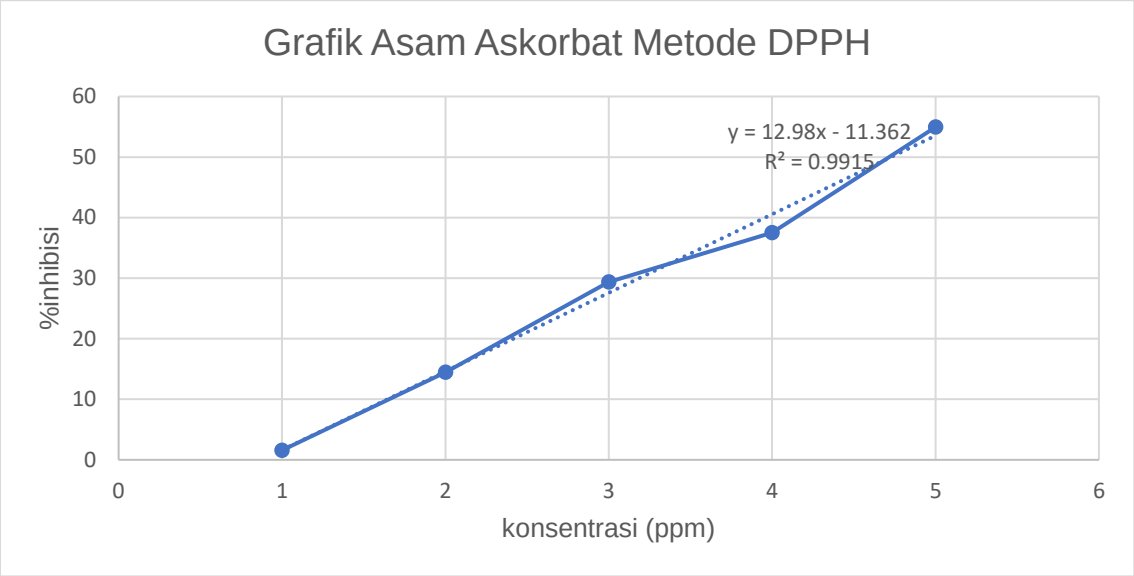
Perhitungan IC50

Y = ax+b

Y = 12.98x+(-11.32)

50 = 12.98+11.32

X = 4.727



Gambar 3. Grafik asam askorbat metode DPPH

Tabel 6. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode DPPH Fraksi D

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko DPPH	Blanko	1.087 1.087 1.075	1.083		
2	Fraksi D	25	0.844 0.851 0.852	0.849	21.60	80.90
		50	0.678 0.682 0.672	0.677	37.48	
		75	0.526 0.551 0.521	0.532	50.87	
		100	0.433 0.446 0.447	0.442	59.18	
		125	0.344 0.353 0.358	0.351	67.59	

Persentase inhibisi radikal bebas fraksi D

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

Konsentrasi 25 ppm = $\frac{1.083-0.849}{1.083}\ x\ 100\%$ = 21.60 %

Konsentrasi 50 ppm = $\frac{1.083-0.677}{1.083}\ x\ 100\%$ = 37.48 %

Konsentrasi 75 ppm = $\frac{1.083-0.532}{1.083}\ x\ 100\%$ = 50.87 %

Konsentrasi 100 ppm = $\frac{1.083-0.442}{1.083}\ x\ 100\%$ = 59.18 %

Konsentrasi 125 ppm = $\frac{1.083-0.351}{1.083}$ x 100% = 67.59%

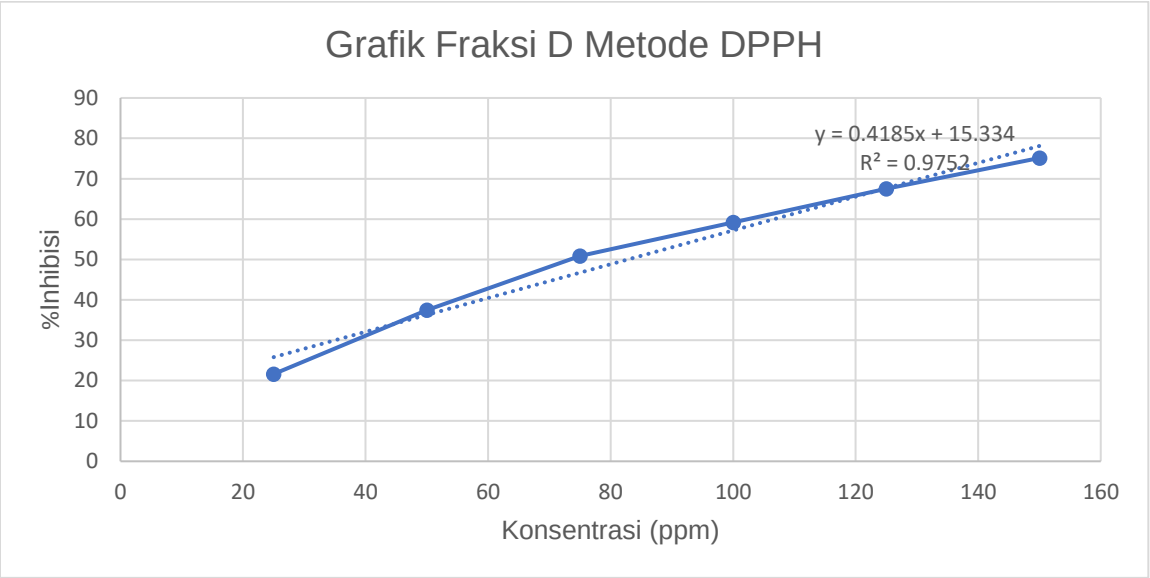
Perhitungan IC50

Y = ax+b

Y = 0.4185x+15.334

50 = 0.4185x+15.334

X = 82.83



Gambar 4. Grafik fraksi D metode DPPH

Table 7. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode DPPH Fraksi N

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko DPPH	Blanko	1.112 1.092 1.091	1.098		
2	Fraksi N	25	0.912 0.924 0.860	0.898	18.21	110.33
		50	0.810 0.809 0.769	0.796	27.50	
		75	0.721 0.704 0.681	0.702	36.06	
		100	0.594 0.599 0.564	0.753	46.72	
		125	0.494 0.481 0.495	0.718	55.37	

Persentase inhibisi radikal bebas fraksi N

Konsentrasi $= \frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

Konsentrasi 25 ppm = $\frac{1.098-0.898}{1.098}\ x\ 100\%$ = 18.21 %

Konsentrasi 50 ppm = $\frac{1.098-0.796}{1.098}\ x\ 100\%$ = 27.50 %

Konsentrasi 75 ppm = $\frac{1.098-0.702}{1.098}\ x\ 100\%$ = 36.06 %

Konsentrasi 100 ppm = $\frac{1.098-0.585}{1.098}\ x\ 100\%$ = 46.72 %

Konsentrasi 125 ppm = $\frac{1.098-0.49}{1.098}\ x\ 100\%$ = 55.37 %

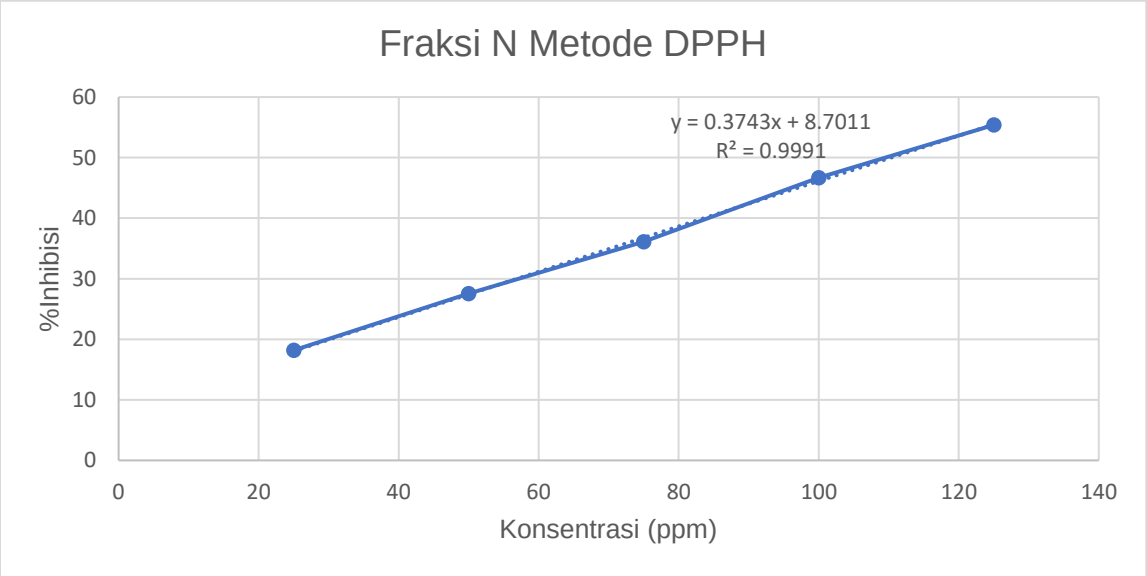
Perhitungan IC50

Y = ax+b

Y = 0.3743x+8.7011

50 = 0.3743x+8.7011

X = 110.33



Gambar 5. Grafik fraksi N metode DPPH

Tabel 8. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode DPPH Fraksi O

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko DPPH	Blanko	1.087 1.087 1.075	1.083		
2	Faksi O	25	0.955 0.976 0.956	0.962	11.17	120.56

50	0.819 0.817 0.816	0.817	24.56
75	0.729 0.720 0.755	0.734	32.22
100	0.636 0.638 0.608	0.627	42.10
125	0.556 0.521 0.510	0.529	51.15

Persentase inhibisi radikal bebas fraksi O

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

Konsentrasi 25 ppm = $\frac{1.083-0.962}{1.083}\ x\ 100\%$ = 11.17 %

Konsentrasi 50 ppm = $\frac{1.083-0.817}{1.083}\ x\ 100\%$ = 24.56 %

Konsentrasi 75 ppm = $\frac{1.083-0.734}{1.083}\ x\ 100\%$ = 32.22 %

Konsentrasi 100 ppm = $\frac{1.083-0.627}{1.083}\ x\ 100\%$ = 42.10 %

Konsentrasi 125 ppm = $\frac{1.083-0.529}{1.083}\ x\ 100\%$ = 51.15 %

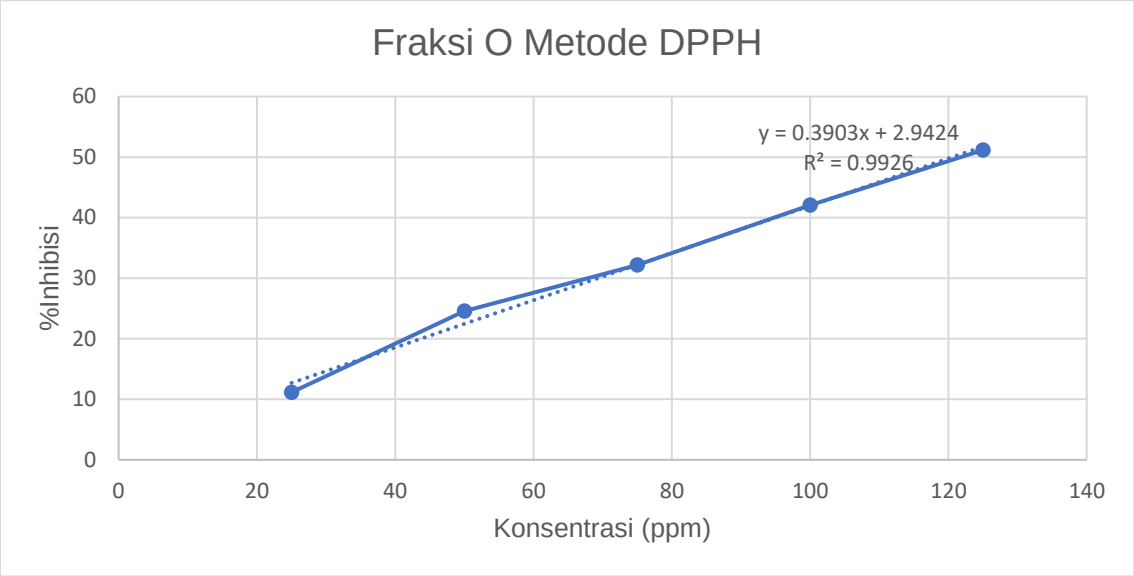
Perhitungan IC50

Y = ax+b

Y = 0.3903x+2.9424

50 = 0.3903x+2.9424

X = 120.56



Gambar 6. Grafik fraksi O metode DPPH

2.2 perhitungan ABTS

Tabel 9. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* Asam Askorbat metode ABTS

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas
1	Blanko ABTS	Blanko	0.846 0.882 0.883	0.870	
2	Asam askorbat	0.5	0.82 0.815 0.793	0.809	12.79
		1	0.744 0.73 0.729	0.734	20.68
		1.5	0.625 0.642 0.653	0.64	26.84
		2	0.551 0.563 0.557	0.557	36
		2.5	0.494 0.493 0.492	0.493	43.35

Persentase inhibisi radikal bebas asam askorbat

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

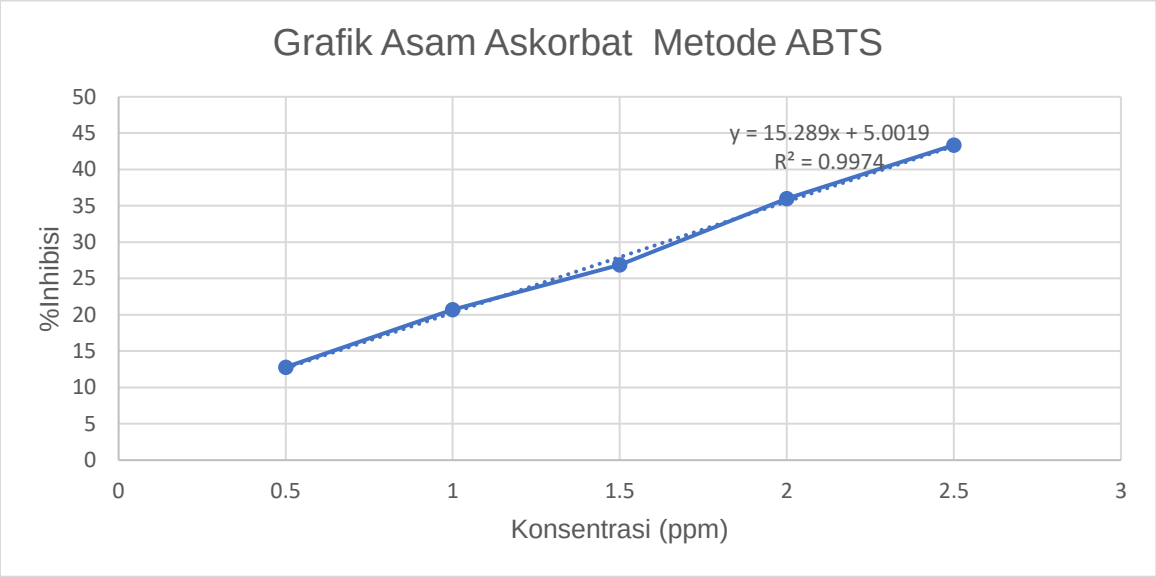
Konsentrasi 1 ppm = $\frac{0.870-0.809}{0.870}\ x\ 100\%$ = 12.79 %

Konsentrasi 2 ppm = $\frac{0.870-0.734}{0.870}\ x\ 100\%$= 20.68 %

Konsentrasi 3 ppm = $\frac{0.870-0.64}{0.870}\ x\ 100\%$ = 26.84 %

Konsentrasi 4 ppm = $\frac{0.870-0.557}{0.870}\ x\ 100\%$= 36 %

Konsentrasi 5 ppm = $\frac{0.870-0.493}{0.870}\ x\ 100\%$= 43.35 %



Gambar 7. Grafik asam askorbat metode ABTS

Tabel 10. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode ABTS Fraksi D

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko ABTS	Blanko	0.950 1.000 1.001	0.983		
2	Fraksi D	20 ppm	0.740 0.734 0.708	0.727	26.04	36.50
		30 ppm	0.542 0.536 0.534	0.537	45.37	
		40 ppm	0.429 0.424 0.425	0.426	56.66	
		50 ppm	0.346 0.348 0.313	0.335	65.92	
		60 ppm	0.235 0.224 0.201	0.22	77.61	

Persentase inhibisi radikal bebas fraksi D

Konsentrasi =$\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

Konsentrasi 20 ppm = $\frac{0.983-0,727}{0.983}$ x 100% = 26.04 %

Konsentrasi 30 ppm = $\frac{0.983-0.537}{0.983}$ x 100%= 45.37 %

Konsentrasi 40 ppm = $\frac{0.983-0.426}{0.983}$ x 100% = 56.66 %

Konsentrasi 50 ppm = $\frac{0.983-0.335}{0.983}$ x 100% = 65.92 %

Konsentrasi 60 ppm = $\frac{0.983-0.22}{0.983}$ x 100% = 77.61%

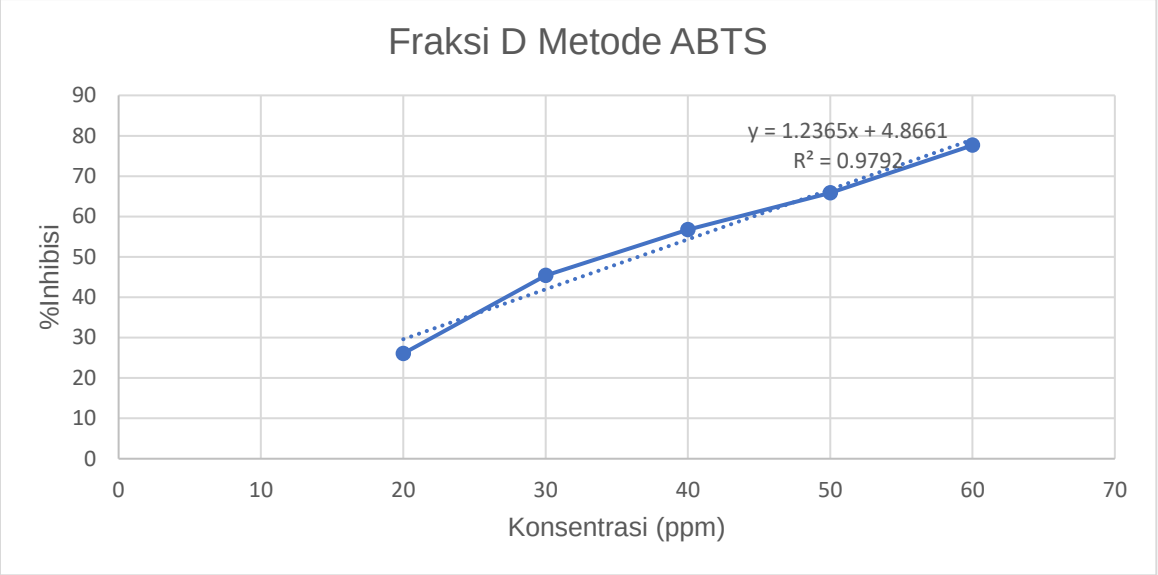
Perhitungan IC50

Y = ax+b

Y = 1.2365x+4.8661

50 = 36.50133441

X = 36.50



Gambar 8. Grafik fraksi D metode ABTS

Tabel 11. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode ABTS Fraksi N

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas
1	Blanko ABTS	Blanko	0.950 1.000 1.001	0.983	
2	Fraksi N	20 ppm	0.862 0.881 0.892	0.878	10.68
		30 ppm	0.756 0.764 0.757	0.759	22.78

	40 ppm	0.691 0.690 0.690	0.690	29.80
	50 ppm	0.638 0.636 0.636	0.636	35.30
	60 ppm	0.568 0.580 0.550	0.566	42.40

Persentase inhibisi radikal bebas fraksi N

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

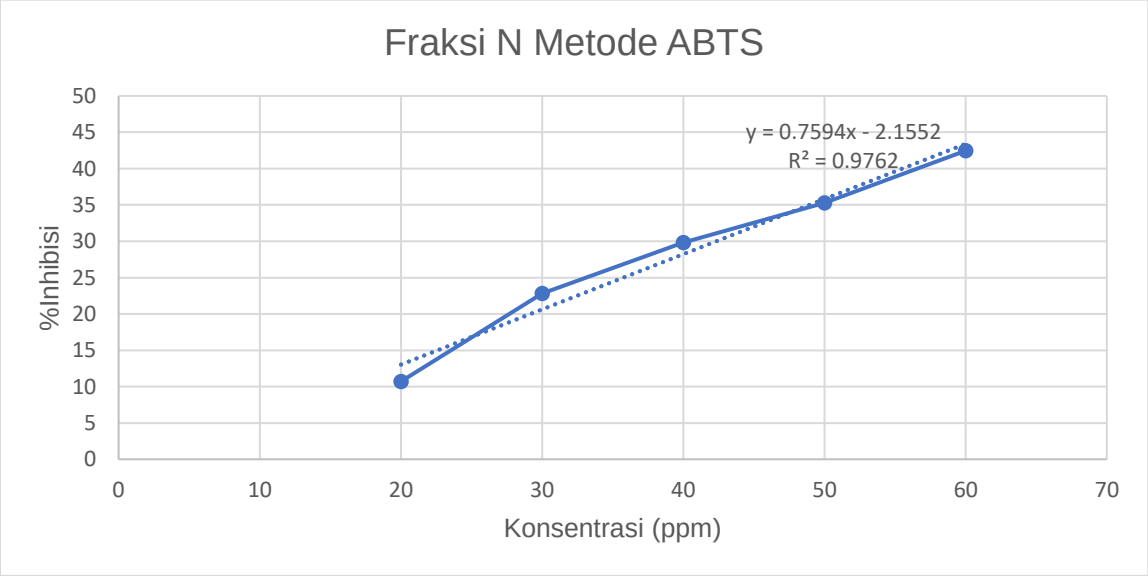
Konsentrasi 20 ppm = $\frac{0.983-0.878}{0.983}\ x\ 100\%$ = 10.68 %

Konsentrasi 30 ppm = $\frac{0.983-0.759}{0.983}\ x\ 100\%$= 22.78 %

Konsentrasi 40 ppm = $\frac{0.983-0.690}{0.983}\ x\ 100\%$ = 29.80 %

Konsentrasi 50 ppm = $\frac{0.983-0.636}{0.983}\ x\ 100\%$ = 35.30 %

Konsentrasi 60 ppm = $\frac{0.983-0.566}{0.983}\ x\ 100\%$ = 42.42 %



Gambar 9. Grafik fraksi N metode ABTS

Tabel 12. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode ABTS Fraksi O

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas
1	Blanko ABTS	Blanko	0.950 1.000 1.001	0.983	

		20 ppm	0.926 0.918 0.896	0.913	7.12
		30 ppm	0.837 0.827 0.807	0.823	16.27
2	Fraksi O	40 ppm	0.781 0.773 0.777	0.777	20.95
		50 ppm	0.700 0.698 0.699	0.699	28.89
		60 ppm	0.639 0.628 0.613	0.626	36.31

Persentase inhibisi radikal bebas fraksi O

Konsentrasi = $\frac{(rata-rata\ serapan\ blanko)-(rata-rata\ serapan\ sampel)}{rata-rata\ serapan\ blanko}\ x\ 100\ \%$

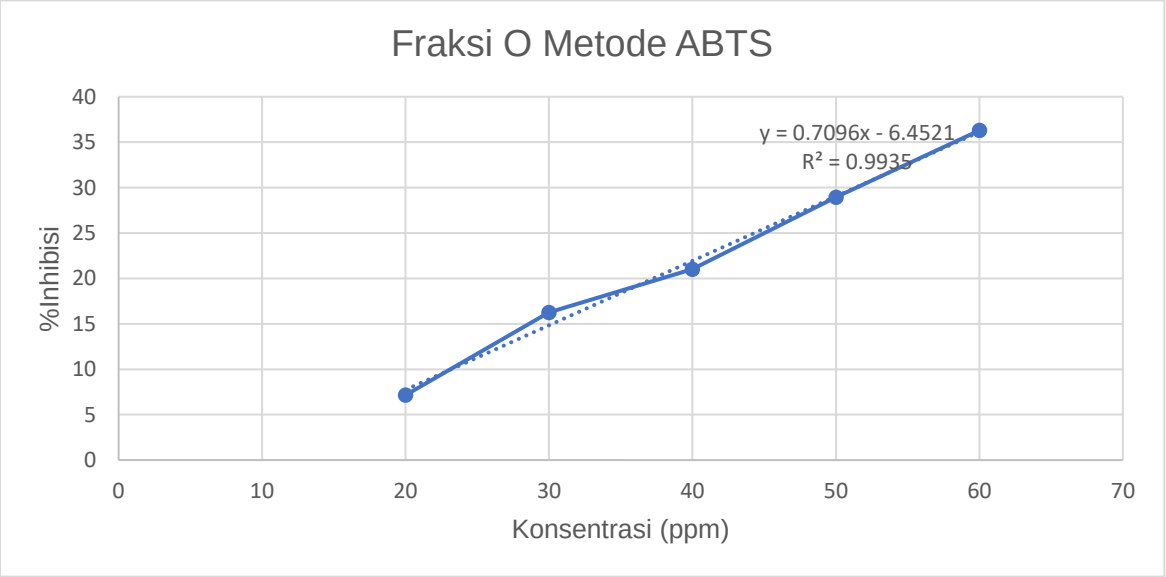
Konsentrasi 20 ppm = $\frac{0.983-0,913}{0.983}\ x\ 100\%$ = 7.12 %

Konsentrasi 30 ppm = $\frac{0.983-0.823}{0.983}\ x\ 100\%$= 16.27 %

Konsentrasi 40 ppm = $\frac{0.983-0.777}{0.983}\ x\ 100\%$ = 20.95 %

Konsentrasi 50 ppm = $\frac{0.983-0.699}{0.983}\ x\ 100\%$ = 28.89 %

Konsentrasi 60 ppm = $\frac{0.983-0.626}{0.983}\ x\ 100\%$ = 36,31 %



Gambar 10. Grafik fraksi O metode ABTS

Tabel 13. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* Asam Askorbat metode FRAP

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko FRAP	Blanko	0.127	0.127		
2	Asam askorbat	10	0.136	0.809	6.61	36.57
		30	0.286	0.734	55.59	
		50	0.564	0.64	77.48	
		70	0.986	0.557	87.11	
		90	1.179	0.493	89.22	

Persentase inhibisi radikal bebas asam askorbat

Konsentrasi = $\frac{(rata-rata\ serapan\ sampel)-(rata-rata\ serapan\ blanko)}{rata-rata\ serapan\ sampel}\ x\ 100\ \%$

Konsentrasi 1 ppm = $\frac{0.136-0.127}{0.136}\ x\ 100\%$ = 6.61 %

Konsentrasi 2 ppm = $\frac{0.286-0.127}{0.286}\ x\ 100\%$= 55.59 %

Konsentrasi 3 ppm = $\frac{0.564-0.127}{0.564}\ x\ 100\%$ = 77.48 %

Konsentrasi 4 ppm = $\frac{0.984-0.127}{0.984}\ x\ 100\%$= 87.11 %

Konsentrasi 5 ppm = $\frac{1.179-0.127}{1.179}\ x\ 100\%$= 89.22 %

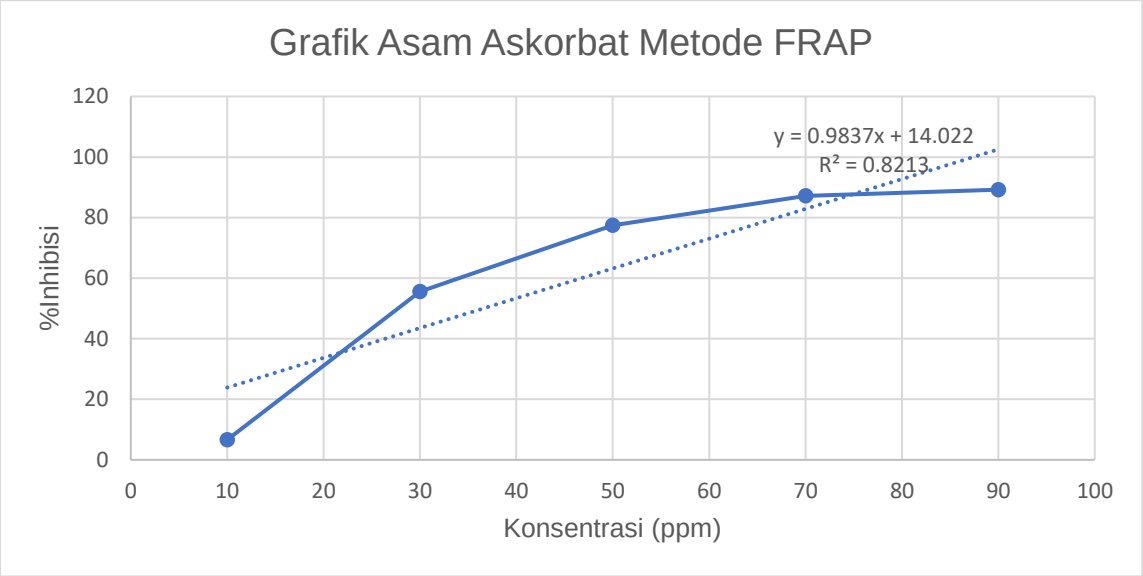
Perhitungan IC50

Y = ax+b

Y = 0.9837x+14.022

50 = 0.9837x+14.022

X = 36.57



Gambar 11. Grafik asam askorbat metode FRAP

Tabel 14. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode FRAP fraksi D

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko FRAP	Blanko	0.197	0.197		
2	FRAP	300 ppm	0.378 0.396 0.398	0.390	49.57	80.33
		600 ppm	0.673 0.693 0.673	0.679	71.01	
		900 ppm	0.995 0.974 0.97	0.979	79.89	
		1200 ppm	1.347 1.372 1.396	1.371	86.63	
		1500 ppm	1.565 1.579 1.59	1.578	87.51	

Persentase inhibisi radikal bebas Fraksi D

Konsentrasi = $\frac{(rata-rata\ serapan\ sampel)-(rata-rata\ serapan\ blanko)}{rata-rata\ serapan\ sampel}\ x\ 100\ \%$

Konsentrasi 300 ppm = $\frac{0.390-0.197}{0.197}\ x\ 100\%$ = 49.57 %

Konsentrasi 600 ppm = $\frac{0.679-0.197}{0.197}\ x\ 100\%$= 71.01 %

Konsentrasi 900 ppm = $\frac{0.979-0.197}{0.197}\ x\ 100\%$ = 79.89 %

Konsentrasi 1200 ppm = $\frac{1.371-0.197}{0.197}$ x 100% = 86.63 %

Konsentrasi 1500 ppm = $\frac{1.578-0.197}{0.197}$ x 100%= 87.51 %

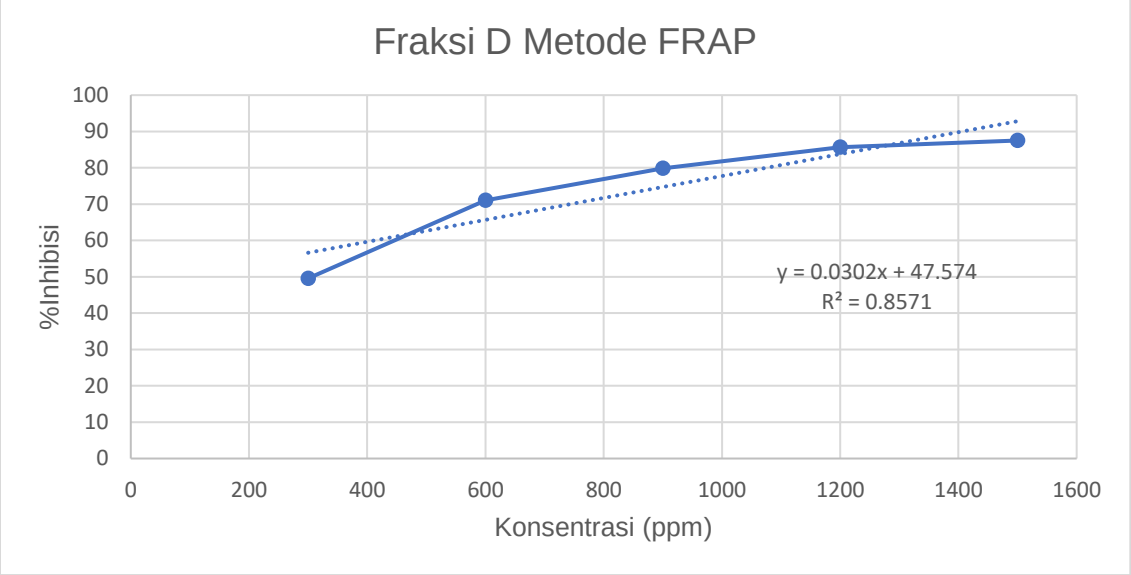
Perhitungan IC50

Y = ax+b

Y = 0.0302x+47.574

50 = 0.0302x+47.574

X = 80.33



Gambar 12. Grafik fraksi D metode ABTS

Tabel 15. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode FRAP fraksi N

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko FRAP	Blanko	0.117	0.117		
2	Fraksi N	300 ppm	0.161 0.171 0.176	0.169	30.90	442.641
		600 ppm	0.342 0.35 0.364	0.352	66.76	
		900 ppm	0.568 0.592 0.594	0.584	79.98	
		1200 ppm	0.802 0.803 0.84	0.815	85.64	

	1500 ppm	0.947 0.957 0.989	0.964	87.86

Persentase inhibisi radikal bebas fraksi N

Konsentrasi = $\frac{(rata-rata\ serapan\ sampel)-(rata-rata\ serapan\ blanko)}{rata-rata\ serapan\ sampel}\ x\ 100\ \%$

Konsentrasi 20 ppm = $\frac{0.169-0,117}{0.169}\ x\ 100\%$ = 30.90 %

Konsentrasi 30 ppm = $\frac{0.352-0.117}{0.352}\ x\ 100\%$= 66.76 %

Konsentrasi 40 ppm = $\frac{0.584-0,117}{0.584}\ x\ 100\%$ = 79.98 %

Konsentrasi 50 ppm = $\frac{0.815-0,117}{0.815}\ x\ 100\%$ = 85.64 %

Konsentrasi 60 ppm = $\frac{0.964-0,117}{0.964}\ x\ 100\%$ = 87.86 %

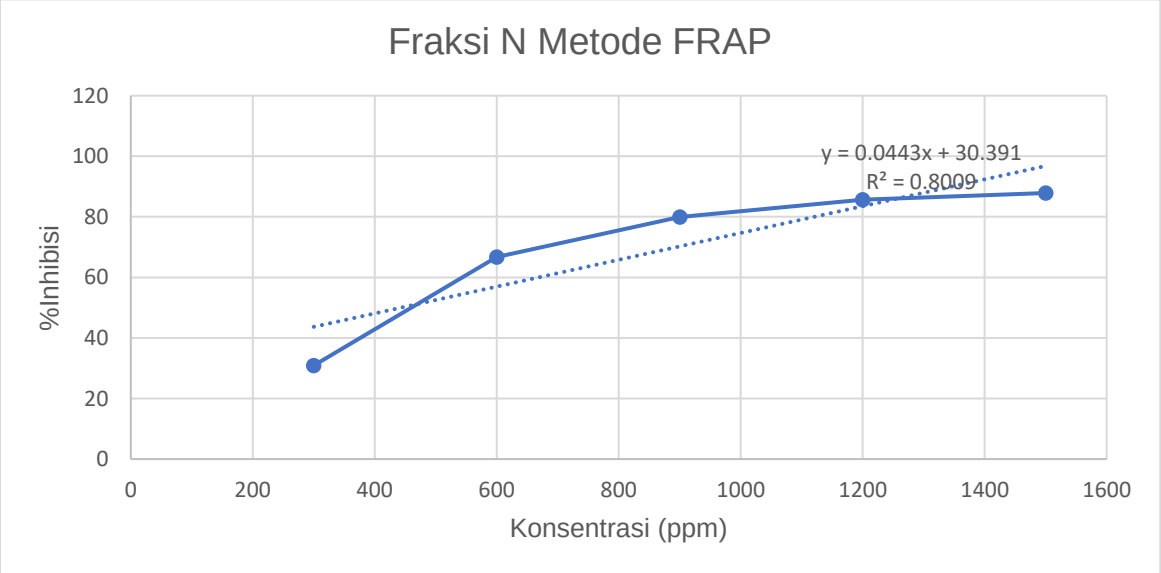
Perhitungan IC50

Y = ax+b

Y = 0.0443x+30.391

50 = 0.0443x+30.391

X = 442.64



Gambar 13. Grafik fraksi N metode FRAP

Tabel 16. Hasil Pengukuran Aktivitas Antioksidan *K. hospita* metode FRAP fraksi O

No	Zat uji	Konsentrasi (ppm)	Serapan	Rata-rata serapan	% inhibisi radikal bebas	IC50
1	Blanko FRAP	Blanko	0.218	0.218		
2	FRAP	300 ppm	0.338 0.339 0.331	0.336	35.11	686.644
		600 ppm	0.421 0.42 0.421	0.420	48.17	
		900 ppm	0.543 0.568 0.574	0.561	61.18	
		1200 ppm	0.641 0.654 0.654	0.649	66.44	
		1500 ppm	0.763 0.773 0.769	0.768	71.62	

Persentase inhibisi radikal bebas Fraksi O

Konsentrasi $=\frac{(rata-rata\ serapan\ sampel)-(rata-rata\ serapan\ blanko)}{rata-rata\ serapan\ sampel}\ x\ 100\ \%$

Konsentrasi 300 ppm = $\frac{0.336-0.218}{0.336}\ x\ 100\%$ = 35.11 %

Konsentrasi 600 ppm = $\frac{0.420-0.218}{0.420}\ x\ 100\%$= 48.17 %

Konsentrasi 900 ppm = $\frac{0.561-0.218}{0.561}\ x\ 100\%$ = 61.18 %

Konsentrasi 1200 ppm = $\frac{0.649-0.218}{0.649}\ x\ 100\%$ = 66.44 %

Konsentrasi 1500 ppm = $\frac{0.768-0.218}{0.768}\ x\ 100\%$ = 71.62 %

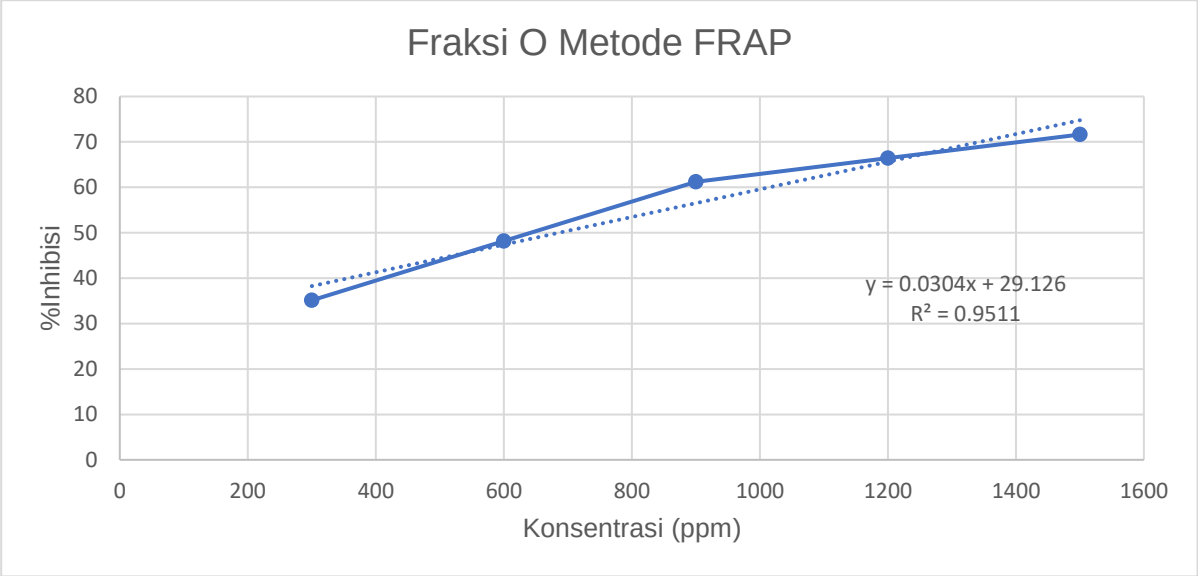
Perhitungan IC50

Y = ax+b

Y = 0.0304x+29.126

50 = 0.0304x+29.126

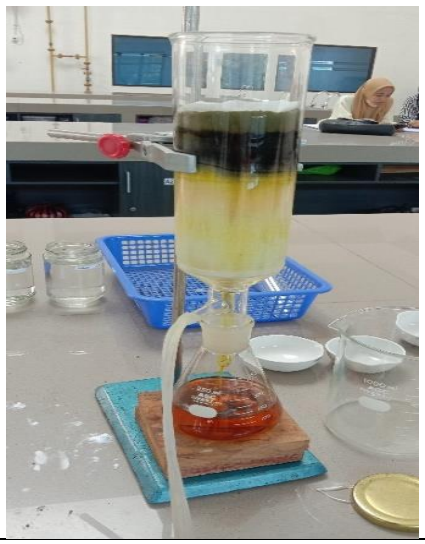
X = 686.644



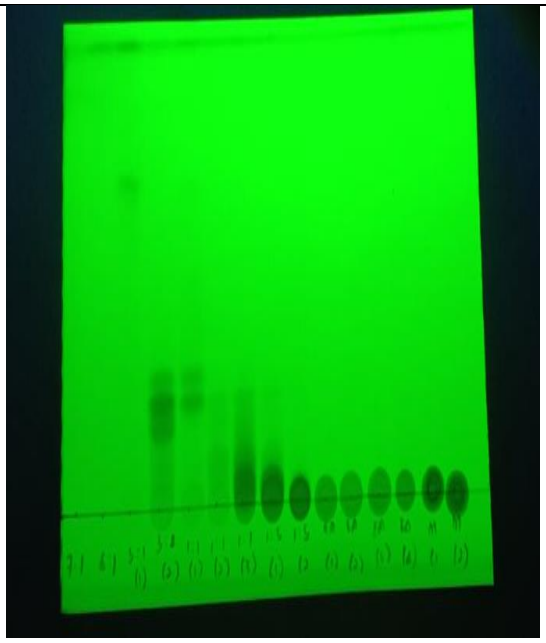
Gambar 14. Grafik fraksi O metode FRAP

Lampiran 3. Foto peneltian

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>Gambar 15 : pengambilan sampel daun paliasa (kleinhovia hospita L)</td><td>Gambar 16 : proses pengeringan daun paliasa</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Gambar 17 : sampel yang telah kering</td><td>Gambar 18 : perendaman sampel metode maserasi</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Gambar 19 : proses penyaringan</td><td>Gambar 20 : proses rotarievaporator</td></tr>
</table>

	
Gambar 21 : proses partisi	Gambar 22 : rotavapor partisi
	
Gambar 23 : proses fraksinasi	Gambar 24 : hasil fraksinasi

Gambar 25 : penotolan fraksi

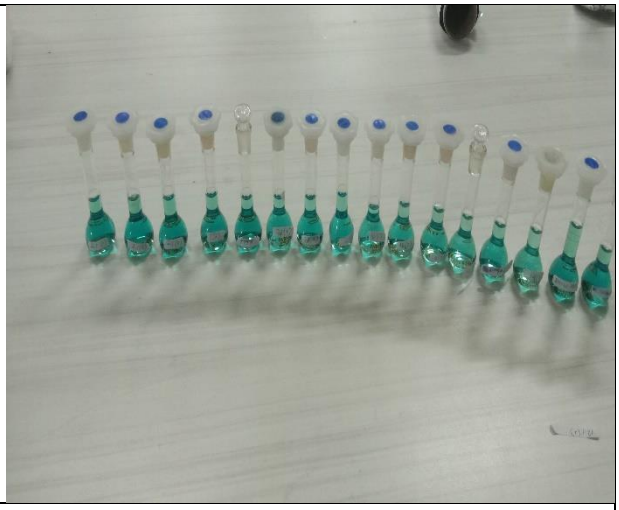


Gambar. 26 lempeng klt seelum di semprot DPPH diawah sinar UV 366 nm

Gambar 27 : penyemprotan pada klt menggunakan DPPH

Gambar. 28 Hasil setelah di semprot DPPH

Gambar 29 : hasil pengujian aktivitas antioksidan metode DPPH



Gambar 30 : hasil pengujian aktivitas antioksidan metode DPPH

Gambar 31 : hasil pengujian aktivitas antioksidan metode DPPH