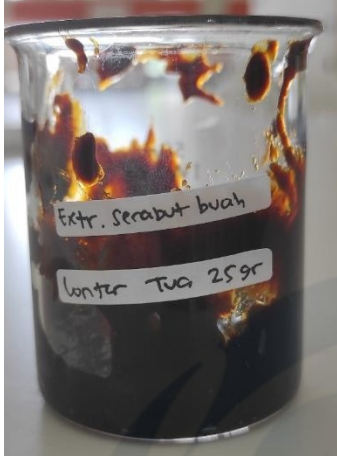

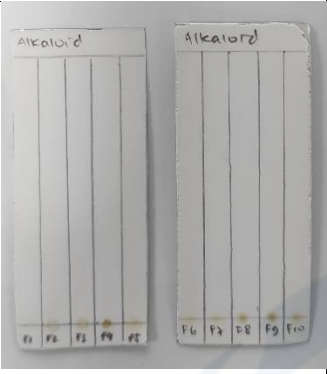
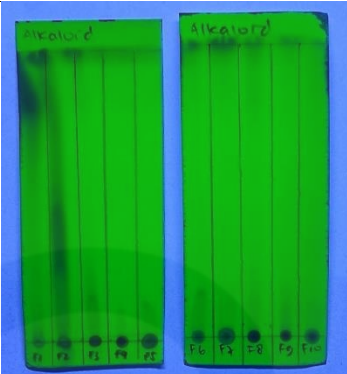
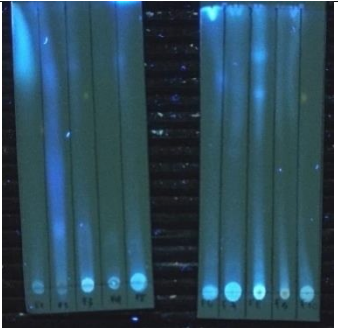


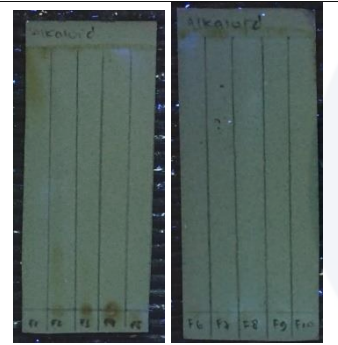
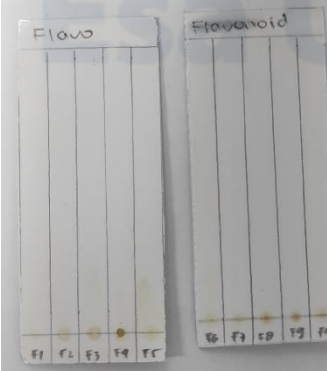
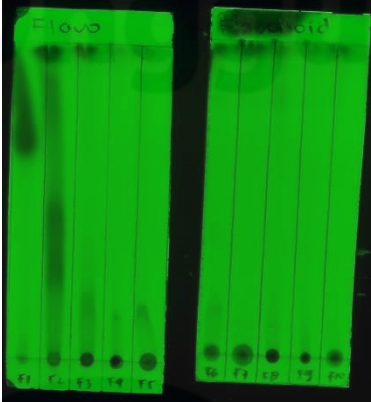
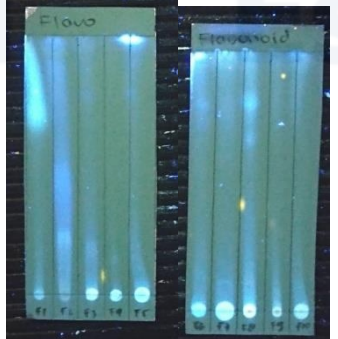



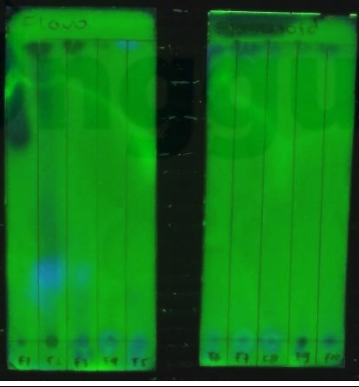
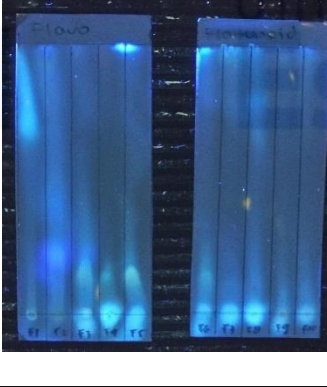

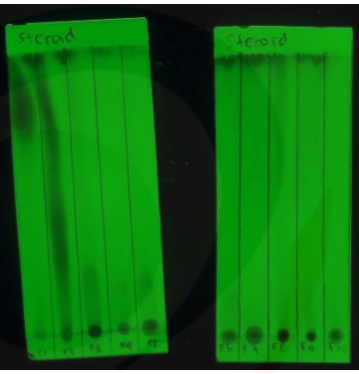
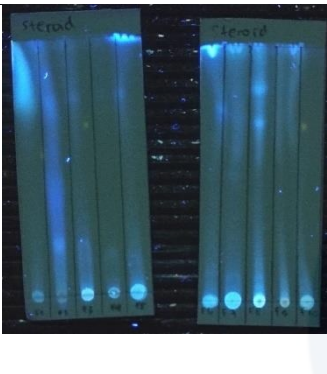

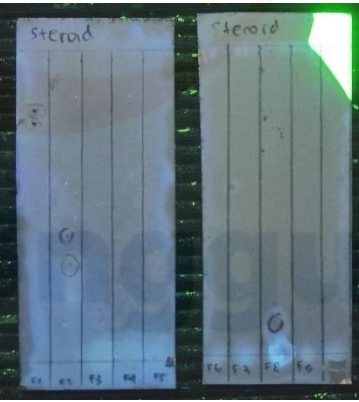
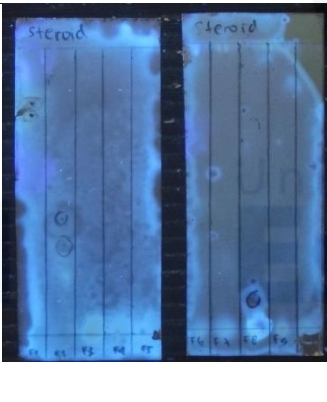
LAMPIRAN


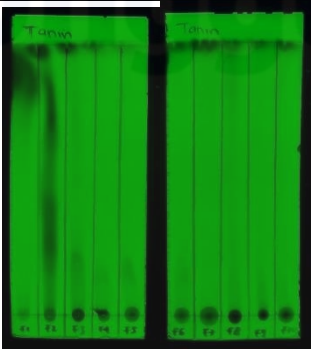


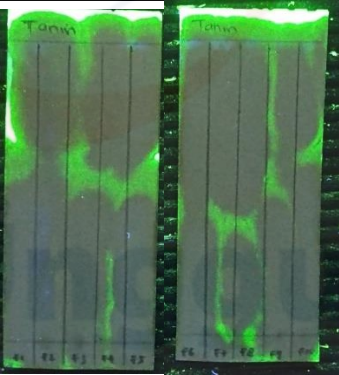
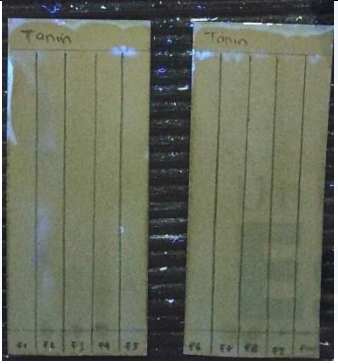
Lampiran 1. Proses fraksinasi dengan metode kromatografi kolom

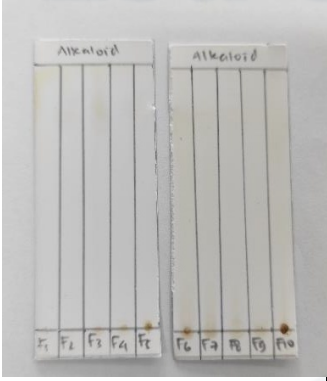
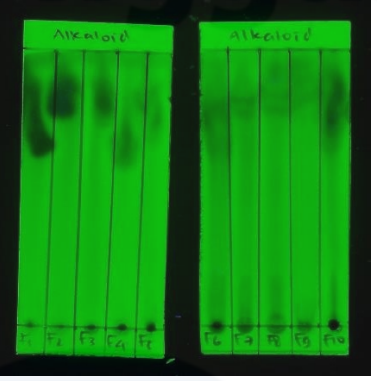
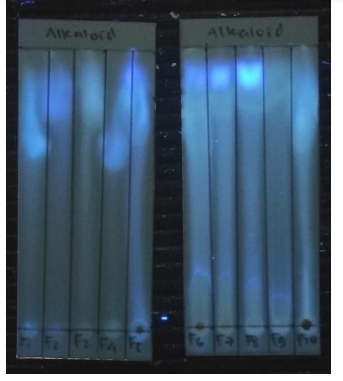
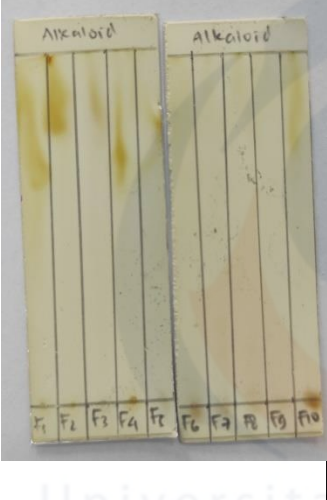
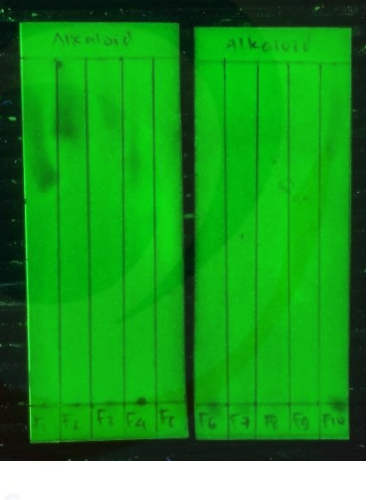
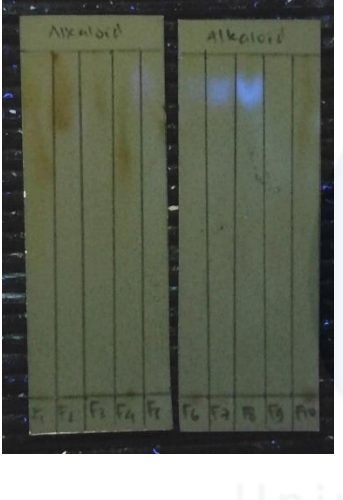
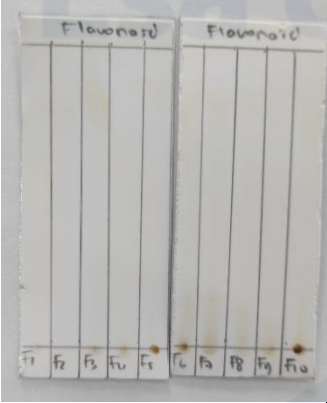
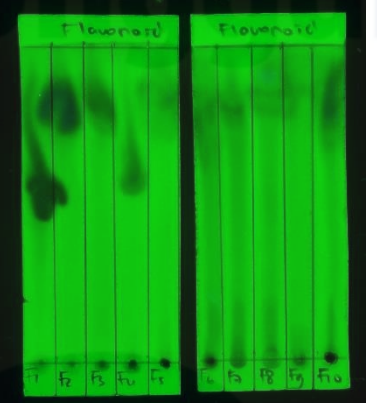

Gambar	Keterangan
	Ekstrak etanol 96% mesocarp buah lontar tua sebanyak 25 gram
	Fraksinasi dengan metode kromatografi kolom


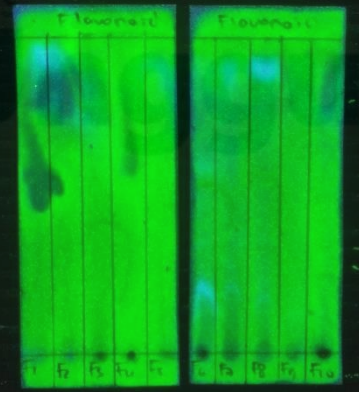
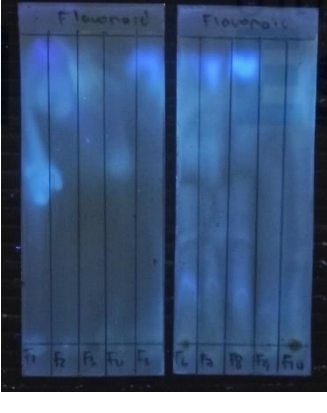
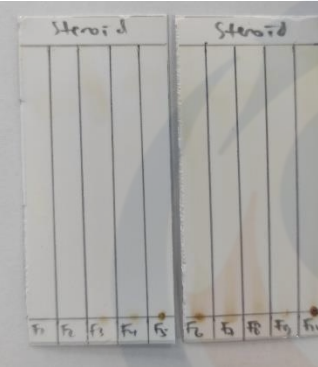
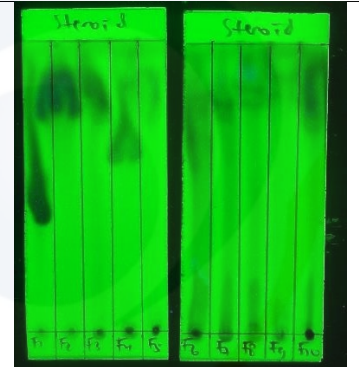


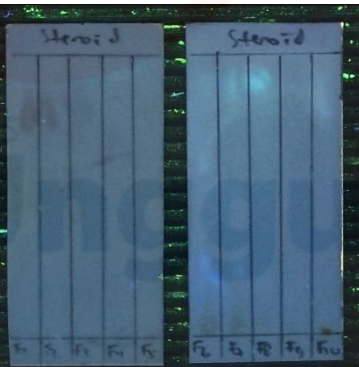
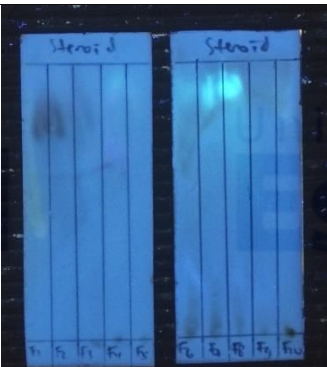
Lampiran 2. Skrining fitokimia fraksi ekstrak etanol 96% mesocarp buah lontar tua


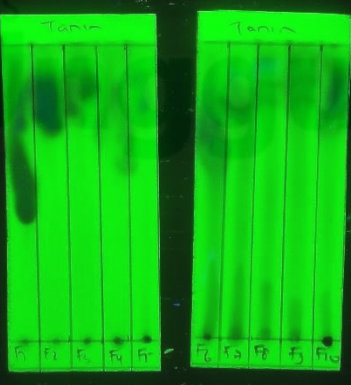
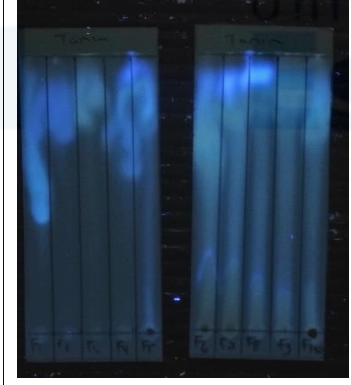


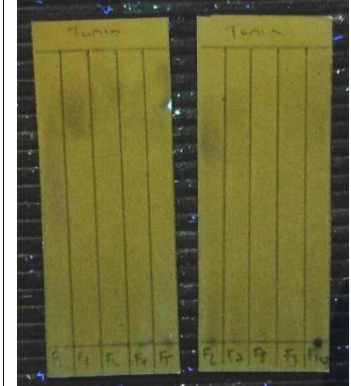
Eluen kloroform : etil asetat (1:9)			
Identifikasi Senyawa Alkaloid			
Keterangan	Visualisasi	254 nm	366 nm
Sebelum disemprot pereaksi Wagner			
Setelah disemprot pereaksi Wagner			
Identifikasi Senyawa Flavonoid			
Keterangan	Visualisasi	254 nm	366 nm
Sebelum disemprot pereaksi AlCl ₃			

<p>Setelah disemprot $AlCl_3$</p>			
<p>Identifikasi Senyawa Steroid/Triterpenoid</p>			
<p>Keterangan</p>	<p>Visualisasi</p>	<p>254 nm</p>	<p>366 nm</p>
<p>Sebelum disemprot reaksi Lieberman-Burchard -</p>			
<p>Setelah disemprot reaksi Lieberman-Burchard -</p>			

Identifikasi Senyawa Tanin			
Keterangan	Visualisasi	254 nm	366 nm
Sebelum disemprot FeCl_3			
Setelah disemprot FeCl_3			

Eluen etil asetat : metanol (1:9)			
Identifikasi Senyawa Alkaloid			
Keterangan	Visualisasi	254 nm	366 nm
Sebelum disemprot pereaksi Wagner			
Setelah disemprot pereaksi Wagner			
Identifikasi Senyawa Flavonoid			
Keterangan	Visualisasi	254 nm	366 nm
Sebelum disemprot pereaksi AlCl ₃			

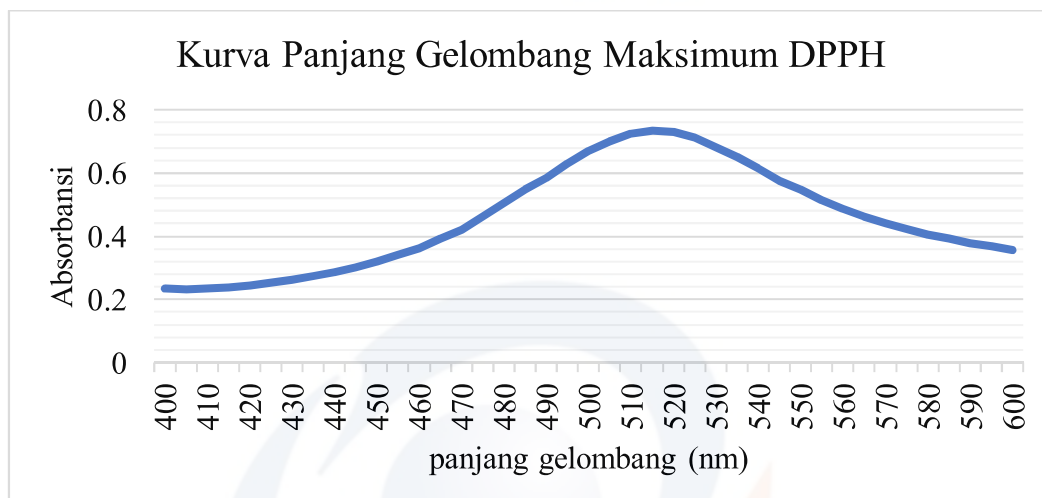
<p>Setelah disemprot $AlCl_3$</p>			
<p>Identifikasi Senyawa Steroid/Triterpenoid</p>			
<p>Keterangan</p>	<p>Visualisasi</p>	<p>254 nm</p>	<p>366 nm</p>
<p>Sebelum disemprot reaksi Lieberman-Burchard -</p>			
<p>Setelah disemprot reaksi Lieberman-Burchard -</p>			
<p>Identifikasi Senyawa Tanin</p>			
<p>Keterangan</p>	<p>Visualisasi</p>	<p>254 nm</p>	<p>366 nm</p>

<p>Sebelum disemprot FeCl_3</p>			
<p>Setelah disemprot FeCl_3</p>			

Lampiran 3. Hasil optimasi DPPH

Data optimasi panjang gelombang DPPH

Panjang gelombang (nm)	Absorbansi	Panjang gelombang (nm)	Absorbansi
400	0,2337	505	0,7012
405	0,2321	510	0,7243
410	0,2336	515	0,7340
415	0,2381	520	0,7307
420	0,2444	525	0,7114
425	0,2526	530	0,6830
430	0,2607	535	0,6524
435	0,2730	540	0,6148
440	0,2851	545	0,5763
445	0,3006	550	0,5481
450	0,3198	555	0,5155
455	0,3407	560	0,4879
460	0,3634	565	0,4631
465	0,3920	570	0,4408
470	0,4195	575	0,4225
475	0,4619	580	0,4058
480	0,5063	585	0,3920
485	0,5464	590	0,3784
490	0,5841	595	0,3676
495	0,6292	600	0,3573
500	0,6693		



Data optimasi waktu inkubasi DPPH

Waktu Inkubasi (menit)	Absorbansi
15	0,4510
30	0,5590
45	0,5506
60	0,4119

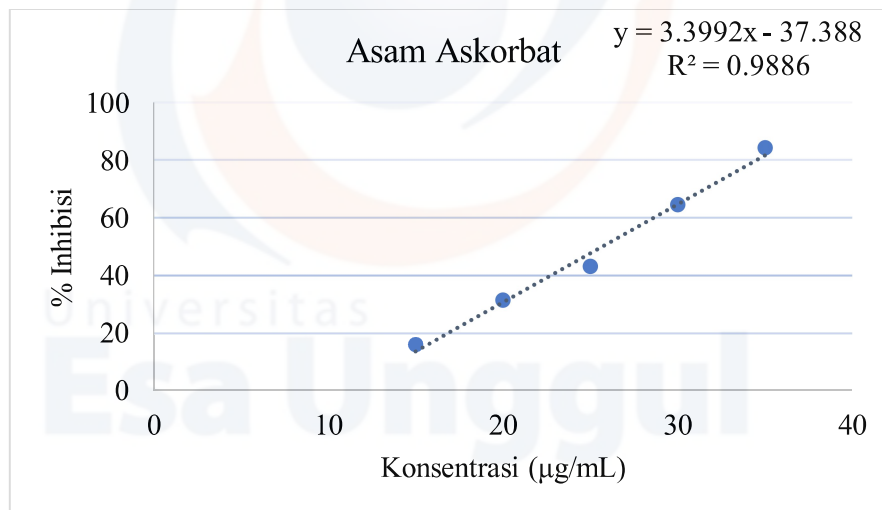
Data optimasi volume pipet

Konsentrasi DPPH ($\mu\text{g/mL}$)	Volume Pipet Metanol (μL)	Volume pipet DPPH (μL)	Total Volume Sumuran/Well (μL)	Absorbansi
50	20	180	200	0,5049
	50	150	200	0,5378
	80	120	200	0,7833

Lampiran 4. Aktivitas antioksidan asam askorbat dengan metode DPPH

Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC_{50} ($\mu\text{g/mL}$)
		1x	2x	3x	
15	0,7356	0,6219	0,6178	0,6213	25,7080
20		0,5049	0,5029	0,5128	
25		0,4152	0,4181	0,4287	
30		0,2608	0,2541	0,2723	
35		0,1194	0,1171	0,1158	

Konsentrasi ($\mu\text{g/mL}$)	%Inhibisi			Rata2 %Inhibisi	SD	CV
	1x	2x	3x			
15	15,4606	16,018	15,5422	15,6736	0,246	1,568
20	31,3653	31,637	30,2914	31,0979	0,581	1,868
25	43,5588	43,165	41,7237	42,8157	0,789	1,842
30	64,5476	65,458	62,9843	64,3301	1,022	1,588
35	83,7691	84,082	84,2585	84,0364	0,202	0,241



Lampiran 5. Hasil aktivitas antioksidan fraksi dengan metode DPPH

Fraksi 2						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	1,2456	0,7468	0,7489	0,7346	1503,36	
2000		0,5293	0,5485	0,5232		
3000		0,3451	0,3416	0,3612		
4000		0,2701	0,2729	0,2911		
5000		0,1793	0,1956	0,1865		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	40,0450	39,8764	41,0244	40,3152	0,6199	0,0154
2000	57,5064	55,9650	57,9961	57,1559	1,0600	0,0185
3000	72,2945	72,5755	71,0019	71,9573	0,8392	0,0117
4000	78,3157	78,0909	76,6297	77,6788	0,9154	0,0118
5000	85,6053	84,2967	85,0273	84,9765	0,6558	0,0077

Fraksi 3						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	1,2456	0,8237	0,8367	0,8279	2282,09	
2000		0,6540	0,6474	0,6417		
3000		0,5261	0,5018	0,5035		
4000		0,3625	0,3638	0,3606		
5000		0,2578	0,2622	0,2567		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	33,8712	32,8276	33,5340	33,4109	0,5326	0,0159
2000	47,4952	48,0250	48,4827	48,0010	0,4942	0,0103
3000	57,7633	59,7142	59,5777	59,0184	1,0891	0,0185
4000	70,8976	70,7932	71,0501	70,9136	0,1292	0,0018
5000	79,3031	78,9499	79,3915	79,2148	0,2336	0,0029

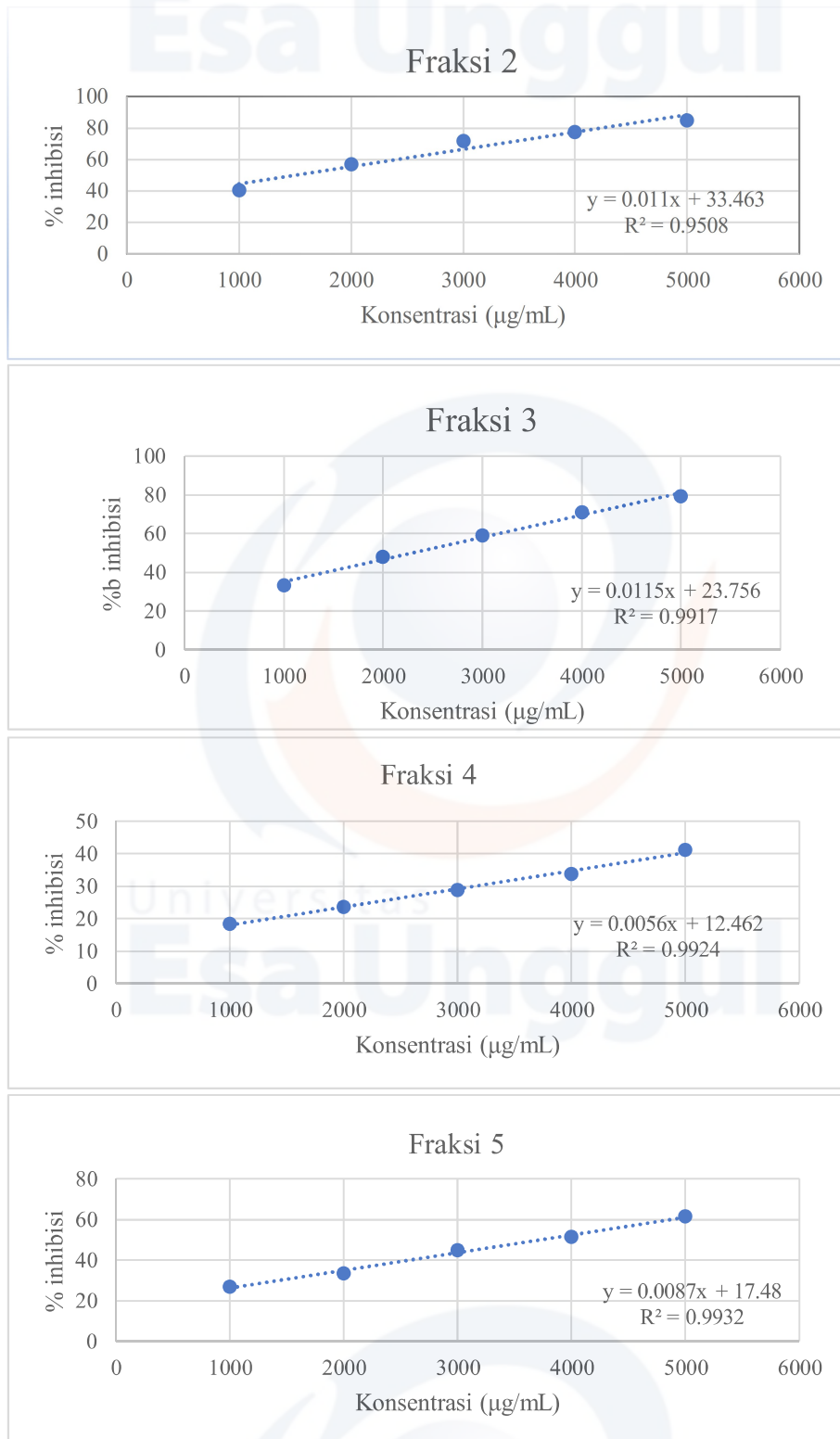
Fraksi 4						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	1,2456	1,0294	1,0163	1,0011	6703,21	
2000		0,9498	0,9575	0,9472		
3000		0,8923	0,8831	0,8845		
4000		0,8172	0,8350	0,8261		
5000		0,7352	0,7187	0,7404		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	17,3571	18,4088	19,6291	18,4650	1,1370	0,0616
2000	23,7476	23,1294	23,9563	23,6111	0,4300	0,0182
3000	28,3638	29,1024	28,9900	28,8188	0,3980	0,0138
4000	34,3931	32,9640	33,6785	33,6785	0,7145	0,0212
5000	40,9762	42,3009	40,5588	41,2786	0,9096	0,0220

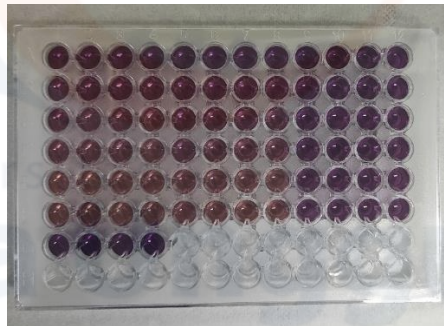
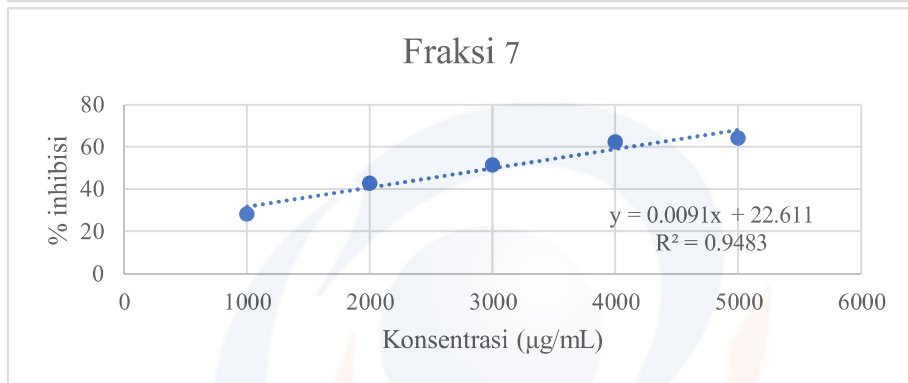
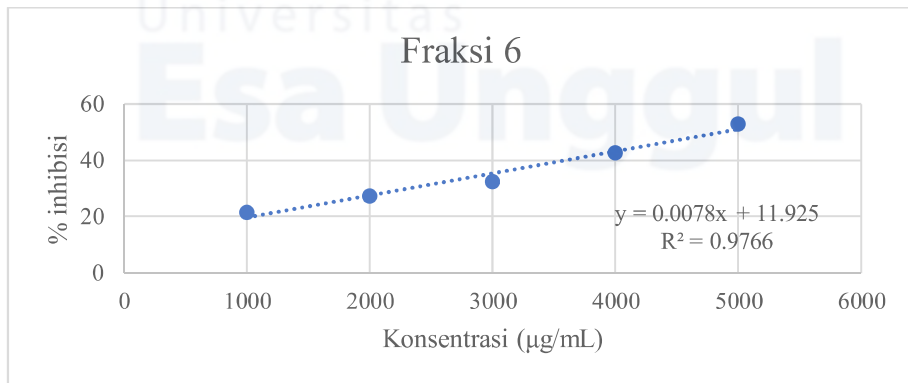
Fraksi 5						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,8107	0,5790	0,5971	0,5999	3737,93	
2000		0,5352	0,5449	0,5413		
3000		0,4317	0,4570	0,4554		
4000		0,3876	0,3882	0,4040		
5000		0,2982	0,3114	0,3288		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	28,5802	26,3476	26,0022	26,9767	1,3994	0,0519
2000	33,9830	32,7865	33,2305	33,3333	0,6048	0,0181
3000	46,7497	43,6290	43,8263	44,7350	1,7476	0,0391
4000	52,1895	52,1155	50,1665	51,4905	1,1472	0,0223
5000	63,2170	61,5888	59,4425	61,4161	1,8932	0,0308

Fraksi 6						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,8107	0,6317	0,6371	0,6398	4881,41	
2000		0,5846	0,5893	0,5958		
3000		0,5488	0,5378	0,5524		
4000		0,4767	0,4726	0,4429		
5000		0,3816	0,3869	0,3771		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	22,0797	21,4136	21,0805	21,5246	0,5087	0,0236
2000	27,8895	27,3097	26,5080	27,2357	0,6937	0,0255
3000	32,3054	33,6623	31,8614	32,6097	0,9382	0,0288
4000	41,1990	41,7047	45,3682	42,7573	2,2752	0,0532
5000	52,9296	52,2758	53,4846	52,8967	0,6051	0,0114

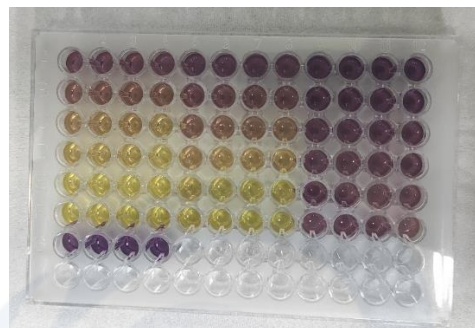
Fraksi 7						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,8107	0,5826	0,5901	0,5667	3009,78	
2000		0,4618	0,4609	0,4672		
3000		0,3932	0,3943	0,3932		
4000		0,3111	0,3053	0,2962		
5000		0,2893	0,2952	0,2884		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	28,1362	27,2111	30,0974	28,4816	1,4739	0,0517
2000	43,0369	43,1479	42,3708	42,8519	0,4203	0,0098
3000	51,4987	51,3630	51,4987	51,4535	0,0783	0,0015
4000	61,6258	62,3412	63,4637	62,4769	0,9264	0,0148
5000	64,3148	63,5870	64,4258	64,1092	0,4556	0,0071

Lampiran 6. Kurva kalibrasi fraksi dengan metode DPPH





Uji DPPH sebelum inkubasi 30 menit

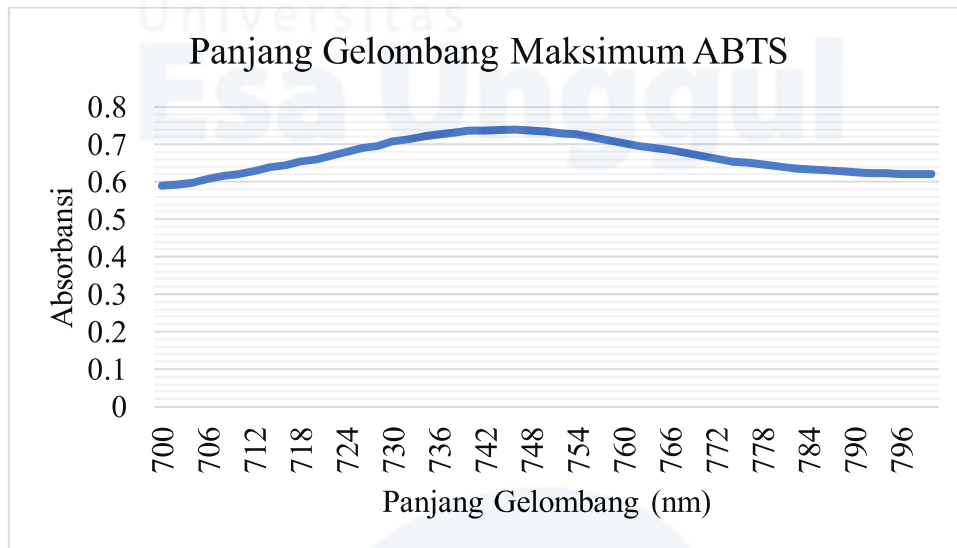


Uji DPPH setelah inkubasi 30 menit

Lampiran 7. Hasil optimasi ABTS

Data optimasi panjang gelombang

Panjang gelombang (nm)	Absorbansi	Panjang gelombang (nm)	Absorbansi
700	0,5897	752	0,7298
702	0,5929	754	0,7256
704	0,5985	756	0,7198
706	0,6071	758	0,7111
708	0,6155	760	0,7041
710	0,6216	762	0,6959
712	0,6282	764	0,6897
714	0,6388	766	0,6847
716	0,6445	768	0,6776
718	0,6534	770	0,6691
720	0,6607	772	0,6625
722	0,6695	774	0,6556
724	0,6802	776	0,6507
726	0,6908	778	0,6456
728	0,6963	780	0,6408
730	0,7082	782	0,6368
732	0,7131	784	0,6335
734	0,7211	786	0,6305
736	0,7255	788	0,6276
738	0,7316	790	0,6257
740	0,7355	792	0,6242
742	0,7377	794	0,6231
744	0,7391	796	0,6224
746	0,7389	798	0,6220
748	0,7371	800	0,6221
750	0,7350		



Data optimasi waktu Inkubasi

Waktu Inkubasi (menit)	Absorbansi
0	0,1142
5	0,0812
10	0,0523
15	0,0519

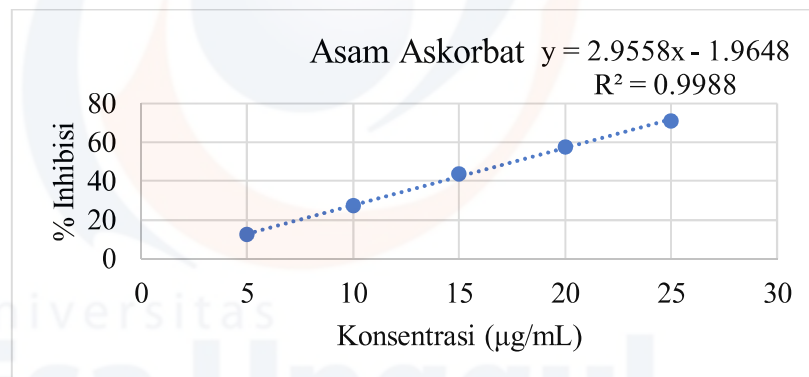
Data optimasi volume pipet

Konsentrasi ABTS	Volume Pipet Metanol (μL)	Volume pipet ABTS (μL)	Total Volume Sumuran (μL)	Absorbansi
ABTS ad etanol 10 ml	40	160	200	0,7391
	50	150	200	0,6906

Lampiran 8. Aktivitas antioksidan asam askorbat dengan metode ABTS

Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC_{50} ($\mu\text{g/mL}$)
		1x	2x	3x	
5	0,7585	0,6660	0,6655	0,6639	17,5806
10		0,5489	0,5491	0,5557	
15		0,4199	0,4276	0,4381	
20		0,3096	0,3273	0,3261	
25		0,2259	0,2172	0,2161	

Konsentrasi ($\mu\text{g/mL}$)	%Inhibisi			Rata2 %Inhibisi	SD	CV
	1x	2x	3x			
5	12,199	12,2649	12,4758	12,3132	0,1181	0,9590
10	27,6367	27,6103	26,7402	27,3291	0,4165	1,5241
15	44,6432	43,6281	42,2438	43,5050	0,9834	2,2604
20	59,1844	56,8509	57,0091	57,6815	1,0647	1,8458
25	70,2188	71,3658	71,5108	71,0318	0,5779	0,8136



Lampiran 9. Hasil aktivitas antioksidan fraksi dengan metode ABTS

Fraksi 2						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5896	0,3287	0,3392	0,3323	1483,85	
2000		0,2506	0,2645	0,2653		
3000		0,1996	0,1955	0,2071		
4000		0,1423	0,1442	0,1398		
5000		0,1082	0,1174	0,1039		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	44,2503	42,4695	43,6398	43,4532	0,9050	0,0208
2000	57,4966	55,1391	55,0034	55,8797	1,4019	0,0251
3000	66,1465	66,8419	64,8745	65,9543	0,9977	0,0151
4000	75,8650	75,5427	76,2890	75,8989	0,3743	0,0049
5000	81,6486	80,0882	82,3779	81,3716	1,1697	0,0144

Fraksi 3						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5896	0,4216	0,4263	0,4357	2295,48	
2000		0,2916	0,3198	0,3014		
3000		0,2154	0,2201	0,226		
4000		0,1376	0,1388	0,1403		
5000		0,0889	0,0702	0,0827		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	28,4939	27,6967	26,1024	27,4310	1,2177	0,0444
2000	50,5427	45,7598	48,8806	48,3944	2,4282	0,0502
3000	63,4668	62,6696	61,6689	62,6018	0,9008	0,0144
4000	76,6621	76,4586	76,2042	76,4417	0,2294	0,0030
5000	84,9220	88,0936	85,9735	86,3297	1,6155	0,0187

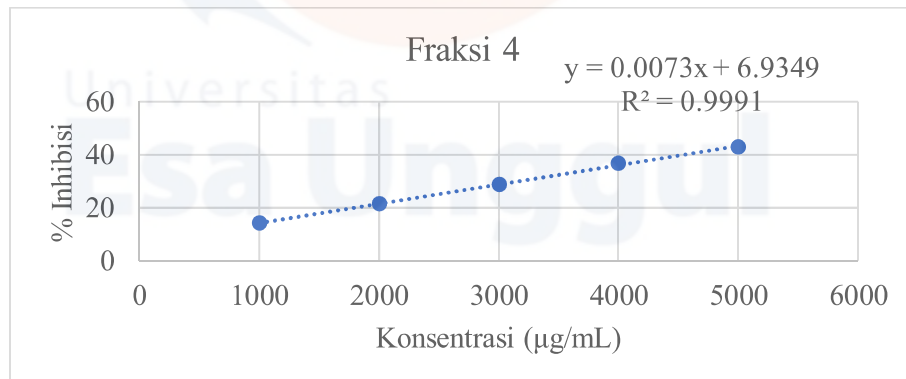
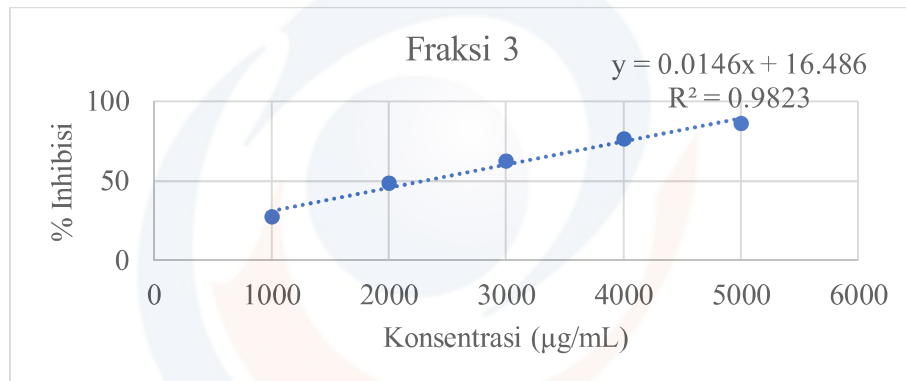
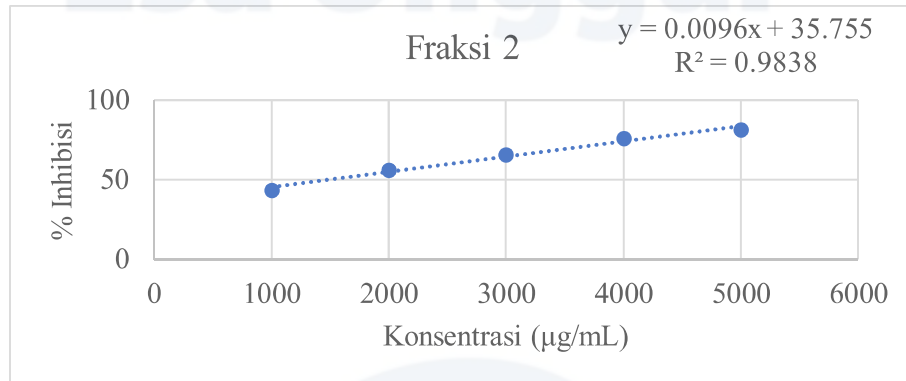
Fraksi 4						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5896	0,5162	0,5015	0,5008	5899,33	
2000		0,4639	0,4578	0,4684		
3000		0,4127	0,4226	0,4262		
4000		0,3701	0,3801	0,3712		
5000		0,3319	0,3458	0,3320		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	12,4491	14,9423	15,0611	14,1508	1,4749	0,1042
2000	21,3179	22,3541	20,5563	21,4094	0,9024	0,0421
3000	30,0034	28,3243	27,7137	28,6805	1,1857	0,0413
4000	37,2286	35,5326	37,0421	36,6011	0,9301	0,0254
5000	43,7076	41,3501	43,6906	42,9161	1,3563	0,0316

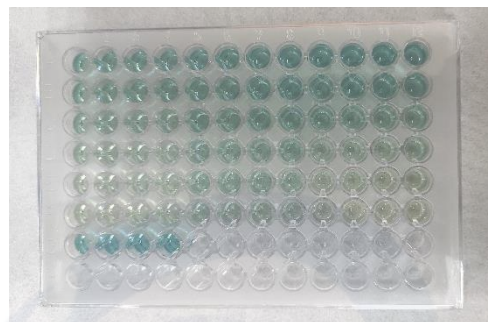
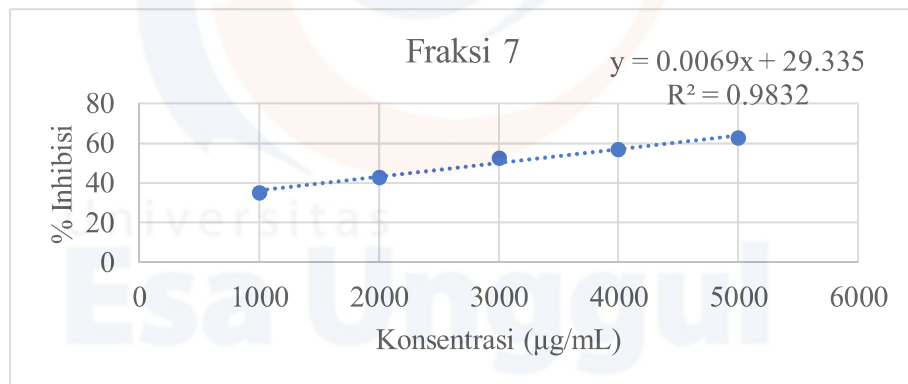
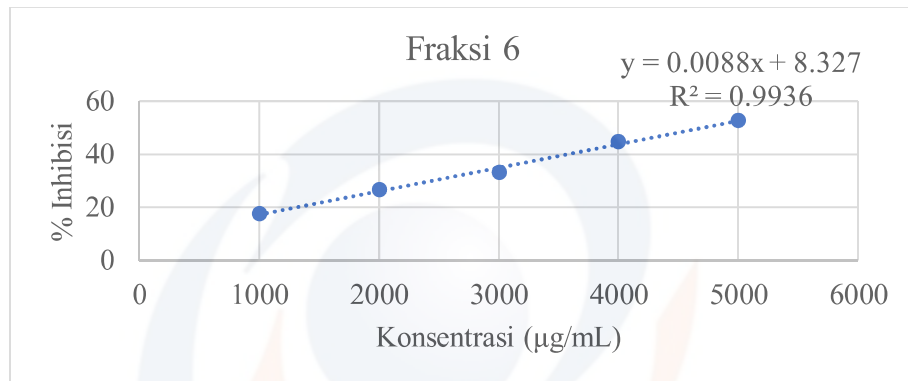
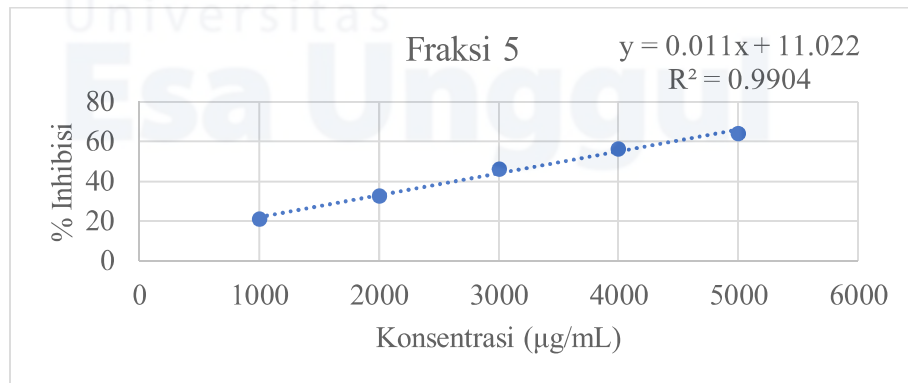
Fraksi 5						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5295	0,417	0,4122	0,4241	3543,45	
2000		0,3595	0,3501	0,3646		
3000		0,2900	0,2774	0,2871		
4000		0,2354	0,2233	0,2332		
5000		0,1854	0,1896	0,1951		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	21,2465	22,1530	19,9056	21,1017	1,1307	0,0536
2000	32,1058	33,8810	31,1426	32,3765	1,3891	0,0429
3000	45,2314	47,6110	45,7790	46,2071	1,2462	0,0270
4000	55,5430	57,8281	55,9585	56,4432	1,2173	0,0216
5000	64,9858	64,1926	63,1539	64,1108	0,9187	0,0143

Fraksi 6						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5295	0,4324	0,43962	0,4391	4692,65	
2000		0,3982	0,3844	0,3834		
3000		0,3533	0,3674	0,3447		
4000		0,2941	0,292	0,293		
5000		0,2466	0,2492	0,2563		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	18,3381	16,9745	17,0727	17,4618	0,7605	0,0436
2000	24,7970	27,4032	27,5921	26,5974	1,5621	0,0587
3000	33,2767	30,6138	34,9009	32,9304	2,1644	0,0657
4000	44,4570	44,8536	44,6648	44,6585	0,1984	0,0044
5000	53,4278	52,9367	51,5958	52,6534	0,9482	0,0180

Fraksi 7						
Konsentrasi ($\mu\text{g/mL}$)	Blanko	Absorbansi			IC ₅₀ ($\mu\text{g/mL}$)	
		1x	2x	3x		
1000	0,5295	0,3346	0,34306	0,3492	2994,93	
2000		0,3007	0,3126	0,2970		
3000		0,2575	0,2402	0,2573		
4000		0,2217	0,2234	0,2373		
5000		0,1922	0,2056	0,1944		
Konsentrasi ($\mu\text{g/mL}$)	% inhibisi			Rata-rata % inhibisi	SD	CV
	1x	2x	3x			
1000	36,8083	35,2106	34,0510	35,3566	1,3845	0,0392
2000	43,2106	40,9632	43,9093	42,6944	1,5394	0,0361
3000	51,3692	54,6365	51,4070	52,4709	1,8755	0,0357
4000	58,1303	57,8093	55,1841	57,0412	1,6163	0,0283
5000	63,7016	61,1709	63,2861	62,7195	1,3571	0,0216

Lampiran 10. Kurva kalibrasi fraksi dengan metode ABTS





Uji ABTS

Lampiran 11. Sertifikat analisis TLC Silika gel 60 F254



 Certificate of Analysis

 1.05554.0001 TLC Silica gel 60 F₂₅₄ 25 Aluminium sheets 20 x 20 cm
 Batch HX86932754

	Specifications		Batch values	
Specific surface area (according to BET; 5-Point measurement)	480 - 540	m ² /g	525	m ² /g
Pore volume (N ₂ -isotherm)	0.74 - 0.84	ml/g	0.77	ml/g
d 50 (laser diffraction, size distribution)	9.5 - 11.5	µm	10.9	µm
Layer thickness	175 - 225	µm	190	µm
Deviation of layer thickness per plate	≤ 30	µm	20	µm
	hRF-values		hRF-values	
A) Colour test				
Bleu VIF Organol	11 - 25		16	
Ceres black	34 - 48		39	
Ceres violet BRN	52 - 67		56	
Separation number	≥ 10.5		12.1	
	hRF-values		hRF-values	
B) Steroid test				
Hydrocortisone	25 - 37		29	
Reichstein S	37 - 49		42	
Methyltestosterone	42 - 54		47	

 Typical value determined on a conditioned sheet
 Eluent A) Toluene (45% rel.humidity)
 Eluent B) Ethyl acetate/Toluene (95/5 v/v; 20% rel.humidity)

 Date of release (DD.MM.YYYY) 20.07.2018
 Minimum shelf life (DD.MM.YYYY) 31.07.2028

 Tom Kupfer
 Responsible laboratory manager quality control

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Lampiran 12. Sertifikat analisis ABTS

Sigma-Aldrich

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name: 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt - $\geq 98\%$ (HPLC)

Product Number: A1888
 Batch Number: SLCH3887
 Brand: SIGMA
 CAS Number: 30931-67-0
 MDL Number: MFCD00010404
 Formula: C₁₈H₂₄N₆O₆S₄
 Formula Weight: 548.68 g/mol
 Storage Temperature: Store at 2 - 8 °C
 Quality Release Date: 17 SEP 2020
 Recommended Retest Date: SEP 2024



Test	Specification	Result
Appearance (Color)	Faint Green to Green and Light Green-Yellow to Dark Green-Yellow	Green-Yellow
Appearance (Form)	Powder	Powder
Solubility (Color)	Very Faint Green to Green to Green-Yellow	Green
Solubility (Turbidity)	Clear to Slightly Hazy	Clear
10 mg/mL, H ₂ O		
Suitability	Suitable	Suitable
Suitable as a reagent for peroxidase		
Water (by Karl Fischer)	$\leq 2\%$	2 %
Purity (HPLC)	$\geq 98\%$	100 %
¹³ C NMR Identity	Conforms to Structure	Conforms
Proton NMR Spectrum	Conforms to Structure	Conforms

Brian Dulle, Supervisor
 Quality Assurance
 St. Louis, Missouri US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Version Number: 1

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Lampiran 13. Sertifikat analisis kalium persulfat



Certificate of Analysis

1.05091.0000 Potassium peroxodisulfate for analysis EMSURE®
Batch K53123391

Batch Values

Assay (iodometric)	100.2	%
Chloride (Cl)	≤ 0.001	%
Heavy metals (as Pb)	≤ 0.003	%
Fe (Iron)	≤ 0.001	%
Mn (Manganese)	≤ 0.0001	%

Date of release (DD.MM.YYYY) 05.02.2021
Minimum shelf life (DD.MM.YYYY) 29.02.2024

Claudia Wiegand
Responsible laboratory manager quality control

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