L A M P I R A N

Lampiran 1. Determinasi tanaman

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
TANAMAN OBAT DAN OBAT TRADISIONAL
Jalan Lawu No.11 Tawangmangu, Karanganyar, Jawa Tengah 57792
Telepon (0271) 697 010 Faksimile (0271) 697 451
Laman b2p2toot.litbang.kemkes.go.id Surat Elektronik b2p2toot@litbang.kemkes.go.id

Nomor : KM.04.02/2/397/2022 27 Januari 2022
Lampiran : -
Hal : Keterangan Determinasi

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
Jalan Let. Jend. Sutoyo Solo 57127

Merujuk surat Saudara nomor: 579/H6 – 04/20.12.2021 tanggal 20 Desember 2021 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Ririn Rahayu
Nama Sampel : Asparagus
Sampel : Segar
Spesies : *Asparagus officinalis* L.
Sinonim : *Asparagus officinalis* subsp. *prostratus* (Dumort.) Corb.
Familia : Asparagaceae
Penanggung Jawab : Isna Jati Aslyah, M.Sc.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

Kepala Balai Besar Penelitian
dan Pengembangan Tanaman Obat
dan Obat Tradisional
Tawangmangu,

Akhmad Saikhu, S.K.M., M.Sc.PH.

Tembusan :
-

Dokumen ini ditandatangani secara elektronik melalui Aplikasi TNDE menggunakan sertifikat elektronik yang diterbitkan oleh BSrE. (1/2)

Lampiran 2. *Certificate of Analysis* (CoA) Etanol PA

SIGMA-ALDRICH

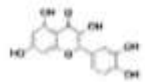
sigma-aldrich.com

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:
Quercetin – ≥95% (HPLC), solid

Product Number:	Q4951
Batch Number:	SLCC9071
Brand:	SIGMA
CAS Number:	117-39-5
Formula:	C15H10O7
Formula Weight:	302.24 g/mol
Quality Release Date:	25 JUN 2019



Test	Specification	Result
Appearance (Color) Yellow	Conforms	Conforms
Appearance (Form)	Powder	Powder
1H NMR Spectrum	Conforms to Structure	Conforms
Loss on Drying	≤ 4 %	1 %
Purity (HPLC)	≥ 95 %	99 %

Carolyn Baird, 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

Lampiran 3. ***Certificate of Analysis*** **(CoA) DPPH**

PT. SMART-LAB INDONESIA
MANUFACTURER OF ANALYTICAL REAGENTS

CERTIFICATE OF ANALYSIS

Product Name	: 2,2-Diphenyl-1-Picrylhydrazyl (Free radical)	Molecular Weight	: 394.32 g/mol
Catalog No.	: A 2095	Batch No.	: 221220001
Grade	: Analytical Reagent	Manufacturing Date	: December 22,2020
Formula	: $C_{18}H_{12}N_5O_6$	Expire Date	: December , 2025
Cas No	: 1898-66-4		

NO	ITEM TEST	UNITS	SPECIFICATION	RESULT
1.	Appearance	–	Purple black or green powder	Conform
2.	Assay	wt %	min 85.0	86.33
3.	Melting point	°C	125 – 145	127.7

Result : The above product corresponds to AR Grade

Reference or standard of product specification to Analar standard specification

PT. SMART LAB INDONESIA

SUDIRO S.Si
Head QC

Ruko Boulevard Taman Tekno Blok E No. 10 - 11 BSD Delta X Depang Tangerang - Indonesia
Telp : (62-21) 7588 0205, Fax : (62-21) 7588 0198 Website: www.smartlab.co.id Email : sales@smartlab.co.id

Lampiran 4. Perhitungan bobot kering terhadap bobot basah asparagus

Sampel	Bobot basah (g)	Bobot kering (g)	Rendemen (%)
asparagus	4000	320	8

Perhitungan persentase bobot kering terhadap bobot basah :

$$\frac{320g}{4000g}\ x\ 100\% = 8\%$$

Lampiran 5. Perhitungan rendemen serbuk asparagus

Sampel	Bobot kering (g)	Bobot serbuk (g)	Rendemen (%)
Asparagus	320	200	62,5 %

Perhitungan persentase rendemen serbuk :

$$\frac{200g}{320g}\ x\ 100\% = 62{,}5\%$$

Lampiran 6. Perhitungan persentase kadar air (destilasi) serbuk asparagus

Replikasi	Berat serbuk (g)	Volume air (ml)	Kadar air (% b/v)
1	10	0,8	8%
2	10	0,7	7%
3	10	0,8	8%
Rata – rata ± SD			7,67 ± 0,57

Perhitungan kadar air

Replikasi 1

$$\text{Kadar air} = \frac{\text{volume air}}{\text{berat serbuk}}\ x\ 100\%$$
$$= \frac{0{,}8\ \text{ml}}{10\ \text{g}}\ x\ 100\%$$
$$= 8\ \%$$

Replikasi 2

$$\text{Kadar air} = \frac{\text{volume air}}{\text{berat serbuk}}\ x\ 100\%$$
$$= \frac{0{,}7\ \text{ml}}{10\ \text{g}}\ x\ 100\%$$
$$= 7\ \%$$

Replikasi 3

$$\text{Kadar air} = \frac{\text{volume air}}{\text{berat serbuk}}\ x\ 100\%$$
$$= \frac{0{,}8\ \text{ml}}{10\ \text{g}}\ x\ 100\%$$
$$= 8\ \%$$

Lampiran 7. Perhitungan persentase rendemen ekstrak asparagus

Sampel	Bobot serbuk (g)	Bobot ekstrak (g)	% rendemen
Asparagus	200	42	21%

Perhitungan persentase rendemen serbuk :

$$\frac{42g}{200g}\ x\ 100\% = 21\%$$

Lampiran 8. Perhitungan persentase kadar air ekstrak asparagus

Replikasi	Berat crush kosong	Berat crush + ekstrak	Berat ekstrak awal	Berat crush + ekstrak (setelah di oven 5 jam)	Berat crush + ekstrak (setelah di oven 1 jam)	Berat ekstrak setelah dioven	Kadar air (%)
I	14,7509	16,7538	2,0029	16,5917	16,5237	1,7728	1,37
II	13,7424	15,7463	2,0039	15,5780	15,5150	1,7726	1,46
III	14,5429	16,5496	2,0067	16,3837	16,3343	1,7914	1,30
Rata – rata ± SD							1,37± 0,08

Perhitungan persentase kadar air ekstrak asparagus metode gravimetri

$$\text{Kadar air} = \frac{\text{Bobot sampel sebelum dikeringkan-Bobot sampel setelah dikeringkan}}{\text{Bobot sampel sebelum dikeringkan}}\ \text{X } 100\%$$

$$\text{Replikasi 1} = \frac{16,7538-16,5237}{16,7538}\ \text{x } 100\ \% = 1,37\ \%$$

$$\text{Replikasi 2} = \frac{15,7463-15,5150}{15,7463}\ \text{x } 100\ \% = 1,46\%$$

$$\text{Replikasi 2} = \frac{16,5496-16,3343}{16,5496}\ \text{x } 100\ \% = 1,30\%$$

Lampiran 9. Proses pembuatan simplisia

Lampiran 10. Uji fitokimia

Lampiran 11. Kadar lembab serbuk

Lampiran 12. Kadar air serbuk

Lampiran penentuan kadar air ekstrak

Crus kosong	ekstrak	5 jam	1 jam

Lampiran 13. Uji penentuan nilai SPF

Alat sonikasi

Lampiran 14. Pengujian antioksidan

larutan DPPH

Larutan induk ekstrak

Pengujian antioksidan ekstrak

Etanol PA

Alat spektromotometer UV-VIS

Pengujian Kuersetin

Lampiran 15. Operating time (kuersetin)

Kinetics Data Print Report

10/19/2021 01:40:58 PM

Time (Minute)	RawData ...
0.000	0.739
1.000	0.726
2.000	0.718
3.000	0.713
4.000	0.709
5.000	0.706
6.000	0.703
7.000	0.701
8.000	0.699
9.000	0.698
10.000	0.696
11.000	0.695
12.000	0.694
13.000	0.692
14.000	0.691
15.000	0.690
16.000	0.689
17.000	0.688
18.000	0.687
19.000	0.686
20.000	0.685
21.000	0.685
22.000	0.684
23.000	0.683
24.000	0.682
25.000	0.681
26.000	0.681
27.000	0.680
28.000	0.679
29.000	0.679
30.000	0.678
31.000	0.677
32.000	0.677
33.000	0.676
34.000	0.676
35.000	0.675
36.000	0.675
37.000	0.674
38.000	0.674
39.000	0.673
40.000	0.672
41.000	0.672
42.000	0.671
43.000	0.671
44.000	0.671
45.000	0.670
46.000	0.669
47.000	0.669
48.000	0.669
49.000	0.668
50.000	0.668

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Dipindai dengan CamScanner

Time (Minute)	RawData ...
51.000	0.667
52.000	0.667
53.000	0.666
54.000	0.666
55.000	0.666
56.000	0.665
57.000	0.665
58.000	0.665
59.000	0.664
60.000	0.664

Lampiran 16. Operating Time (ekstrak etanol asparagus)

Kinetics Data Print Report

01/03/2022 02 02 55 PM

Time (Minute)	RawData ...
0 000	0 760
1 000	0 743
2 000	0 732
3 000	0 723
4 000	0 715
5 000	0 708
6 000	0 701
7 000	0 695
8 000	0 691
9 000	0 684
10 000	0 679
11 000	0 674
12 000	0 670
13 000	0 665
14 000	0 662
15 000	0 657
16 000	0 654
17 000	0 650
18 000	0 647
19 000	0 643
20 000	0 640
21 000	0 637
22 000	0 634
23 000	0 631
24 000	0 628
25 000	0 625
26 000	0 623
27 000	0 620
28 000	0 618
29 000	0 615
30 000	0 613
31 000	0 611
32 000	0 608
33 000	0 606
34 000	0 605
35 000	0 602
36 000	0 600
37 000	0 599
38 000	0 597
39 000	0 595
40 000	0 593
41 000	0 591
42 000	0 590
43 000	0 588
44 000	0 586
45 000	0 585
46 000	0 583
47 000	0 582
48 000	0 580
49 000	0 579
50 000	0 578

Kinetics Data Print Report

01/03/2022 02:02:56 PM

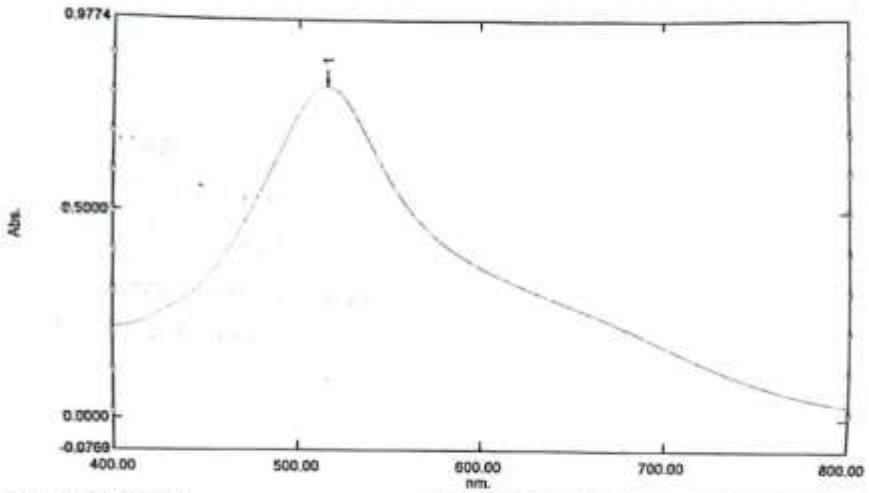
Time (Minute)	RawData ...
51.000	0.576
52.000	0.575
53.000	0.573
54.000	0.572
55.000	0.571
56.000	0.569
57.000	0.568
58.000	0.567
59.000	0.566
60.000	0.565

Lampiran 17. Lamda maximum larutan DPPH

Spectrum Peak Pick Report

10/18/2021 01:11:52 PM

Data Set: File_211018_131112 - RawData



No.	P/V	Wavelength	Abs.	Description
1		516.00	0.8106	

[Measurement Properties]
Wavelength Range (nm.): 400.00 to 800.00
Scan Speed: Fast
Sampling interval: [illegible]
Auto Sampling Interval: Disabled
Scan Mode: Single

[Instrument Properties]
Instrument Type: UV-1800 Series
Measuring Mode: Absorbance
[illegible]
Light Source Change Wavelength: 340.0 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: None

[Operation]
Threshold: [illegible]
Points: 4
InterPolate: Disabled
Average: Disabled

[Sample Preparation Properties]
Weight:
Volume:
Dilution:
Path Length:
Additional Information:

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Dipindai dengan CamScanner

Lampiran 18. Lamda Maximum Kontrol Positif

Spectrum Data Print Report

Wavelength nm.	RawData ...	RawData ...	RawData ...	RawData ...
290.00	4.0000	0.6647	0.6770	0.6726
295.00	3.8433	0.7138	0.7249	0.7198
300.00	4.0000	0.7418	0.7542	0.7494
305.00	4.0000	0.7577	0.7695	0.7653
310.00	3.5337	0.7635	0.7732	0.7683
315.00	3.8448	0.7065	0.7179	0.7116
320.00	4.0000	0.5954	0.6050	0.5994

Lampiran 19. Lamda Maximum Ekstrak 1%

Spectrum Data Print Report

12/29/2021

Wavelength nm.	RawData ...	RawData ...	RawData ...	RawData ...
290.00	0.5820	0.6206	0.5940	0.5772
295.00	0.5550	0.5968	0.5663	0.5506
300.00	0.5470	0.5896	0.5575	0.5417
305.00	0.5467	0.5906	0.5579	0.5426
310.00	0.5575	0.6019	0.5692	0.5528
315.00	0.5681	0.6080	0.5800	0.5625
320.00	0.5840	0.6157	0.5948	0.5779

Ekstrak 1%

Lampiran 20. Lamda Maximum Ekstrak 1,5%

Spectrum Data Print Report 1,5%

01/07/2022 11:18:46 AM

Wavelength nm.	RawData ...	RawData ...	RawData ...
320.00	0.3894	0.3840	0.3829
315.00	0.3812	0.3764	0.3757
310.00	0.3566	0.3717	0.3718
305.00	0.3519	0.3666	0.3671
300.00	0.3537	0.3682	0.3696
295.00	0.3605	0.3761	0.3769
290.00	0.3784	0.3946	0.3957

Ekstrak

Lampiran 21. Lamda maximum Ekstrak 2%

Spectrum Data Print Report

2% Ekstrak

Wavelength nm.	RawData ...	RawData ...	RawData ...
290.00	0.4406	0.4234	0.4383
295.00	0.4329	0.4170	0.4305
300.00	0.4324	0.4165	0.4302
305.00	0.4360	0.4207	0.4347
310.00	0.4483	0.4342	0.4491
315.00	0.4578	0.4446	0.4606
320.00	0.4709	0.4607	0.4781

Lampiran 22. Perhitungan pembuatan larutan ekstrak 1%; 1,5%; 2%

Larutan ekstrak 1%

1% (1 gram/100ml) → (0,1 gram/10ml)

1,5% (1,5 gram/100ml) → (0,15 gram/10ml)

2% (2 gram/100ml) → (0,2 gram/10ml)

Lampiran 23. Nilai CF

Replikasi 1

KONTROL POSITIF							
λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.6647	0.0099705	4.042232	0.7421643	10	30
295	0.0817	0.7138	0.0583175				
300	0.2874	0.7418	0.2131933				
305	0.3278	0.7577	0.2483741				
310	0.1864	0.7635	0.1423164				
315	0.0839	0.7065	0.0592754				
320	0.0180	0.5954	0.0107172				
			0.7421643				

Replikasi 2

KONTROL POSITIF							
λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.6770	0.010155	3.980761	0.7536248	10	30
295	0.0817	0.7249	0.0592243				
300	0.2874	0.7542	0.2167571				
305	0.3278	0.7695	0.2522421				
310	0.1864	0.7732	0.1441245				
315	0.0839	0.7179	0.0602318				
320	0.0180	0.6050	0.01089				
			0.7536248				

Replikasi 3

KONTROL POSITIF							
λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.6726	0.010089	4.00618	0.7488431	10	30
295	0.0817	0.7198	0.0588077				
300	0.2874	0.7494	0.2153776				
305	0.3278	0.7653	0.2508653				
310	0.1864	0.7683	0.1432111				
315	0.0839	0.7116	0.0597032				
320	0.0180	0.5994	0.0107892				
			0.7488431				

Lampiran 24. Nilai SPF ekstrak Asparagus 1%

Replikasi 1

	EKSTRAK 1 %							
	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 1	290	0.0150	0.5820	0.00873	4	0.55281307	25	55.28
	295	0.0817	0.5550	0.0453435				
	300	0.2874	0.5478	0.15743772				
	305	0.3278	0.5467	0.17920826				
	310	0.1864	0.5575	0.103918				
	315	0.0839	0.5681	0.04766359				
	320	0.0180	0.5840	0.010512				
				0.55281307				

Replikasi 2

	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 2	290	0.0150	0.5940	0.00891	4	0.56374911	25	56.51
	295	0.0817	0.5663	0.04626671				
	300	0.2874	0.5575	0.1602255				
	305	0.3278	0.5579	0.18287962				
	310	0.1864	0.5692	0.10609888				
	315	0.0839	0.5800	0.048662				
	320	0.0180	0.5948	0.0107064				
				0.56374911				

Replikasi 3

	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 3	290	0.0150	0.5772	0.008658	4	0.54782875	25	54.91
	295	0.0817	0.5506	0.04498402				
	300	0.2874	0.5417	0.15568458				
	305	0.3278	0.5426	0.17786428				
	310	0.1864	0.5528	0.10304192				
	315	0.0839	0.5625	0.04719375				
	320	0.0180	0.5779	0.0104022				
				0.54782875				

Lampiran 25. Nilai SPF konsntrasi 1,5%

EKSTRAK 1.5 %

	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 1	290	0.0150	0.3694	0.005541	4	0.35587753	50	77.34
	295	0.0817	0.3612	0.02951004				
	300	0.2874	0.3566	0.10248684				
	305	0.3278	0.3519	0.11535282				
	310	0.1864	0.3537	0.06592968				
	315	0.0839	0.3605	0.03024595				
	320	0.0180	0.3784	0.0068112				
				0.35587753				

	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 2	290	0.0150	0.3840	0.00576	4	0.37080001	50	74.34
	295	0.0817	0.3764	0.03075188				
	300	0.2874	0.3717	0.10682658				
	305	0.3278	0.3666	0.12017148				
	310	0.1864	0.3682	0.06863248				
	315	0.0839	0.3761	0.03155479				
	320	0.0180	0.3946	0.0071028				
				0.37080001				

	λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
REPLIKASI 3	290	0.0150	0.3829	0.0057435	4	0.37126684	50	74.43
	295	0.0817	0.3757	0.03069469				
	300	0.2874	0.3718	0.10685532				
	305	0.3278	0.3671	0.12033538				
	310	0.1864	0.3696	0.06889344				
	315	0.0839	0.3769	0.03162191				
	320	0.0180	0.3957	0.0071226				
				0.37126684				

Lampiran 26. Nilai SPF konsntrasi 2%

EKSTRAK 2%

REPLIKASI 1

λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.4406	0.006609	4	0.43961823	50	88.13
295	0.0817	0.4329	0.03536793				
300	0.2874	0.4324	0.12427176				
305	0.3278	0.4360	0.1429208				
310	0.1864	0.4483	0.08356312				
315	0.0839	0.4578	0.03840942				
320	0.0180	0.4709	0.0084762				
			0.43961823				

REPLIKASI 2

λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.4234	0.006351	4	0.42455688	50	85.11
295	0.0817	0.4170	0.0340689				
300	0.2874	0.4165	0.1197021				
305	0.3278	0.4207	0.13790546				
310	0.1864	0.4342	0.08093488				
315	0.0839	0.4446	0.03730194				
320	0.0180	0.4607	0.0082926				
			0.42455688				

REPLIKASI 3

λ	EE x I	Abs	EE x I x Abs	CF	∑ EE x I x Abs	FP	SPF
290	0.0150	0.4383	0.0065745	4	0.43972793	50	88.15
295	0.0817	0.4305	0.03517185				
300	0.2874	0.4302	0.12363948				
305	0.3278	0.4374	0.14337972				
310	0.1864	0.4491	0.08371224				
315	0.0839	0.4606	0.03864434				
320	0.0180	0.4781	0.0086058				
			0.43972793				

Lampiran 27. Analisis nilai SPF

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	nilai_SPF_ekstrak	Statistic	df	Sig.	Statistic	df	Sig.
nilai_SPF	konsentrasi 1%	.301	3	.	.912	3	.425
	konsentrasi 1,5%	.376	3	.	.772	3	.049
	konsentrasi 2%	.383	3	.	.755	3	.011

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
nilai_SPF	Based on Mean	1.965	2	6	.221
	Based on Median	.113	2	6	.895
	Based on Median and with adjusted df	.113	2	4.513	.896
	Based on trimmed mean	1.567	2	6	.283

Lampiran 28. Larutan stok ekstrak 50mg/50ml (1000 ppm)

Pengenceran (60, 70, 80, 90, 100 ppm)

$V_1 . C_1 = V_2 . C_2$

- 60 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 1000 \text{ ppm} = 10 \text{ ml} . 60 \text{ ppm}$

  $V_1 = \frac{600}{1000}$

  $V_1 = 0{,}6 \text{ ml}$

- 70 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 1000 \text{ ppm} = 10 \text{ ml} . 70 \text{ ppm}$

  $V_1 = \frac{700}{1000}$

  $V_1 = 0{,}7 \text{ ml}$

- 80 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 1000 \text{ ppm} = 10 \text{ ml} . 80 \text{ ppm}$

  $V_1 = \frac{800}{1000}$

  $V_1 = 0{,}8 \text{ ml}$

- 90 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 1000 \text{ ppm} = 10 \text{ ml} . 90 \text{ ppm}$

  $V_1 = \frac{900}{1000}$

  $V_1 = 0{,}9 \text{ ml}$

- 100 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 1000 \text{ ppm} = 10 \text{ ml} . 100 \text{ ppm}$

  $V_1 = \frac{1000}{1000}$

  $V_1 = 1 \text{ ml}$

Lampiran 29. Penentuan nilai IC_{50} ekstrak asparagus

Abs DPPH (0.890)

Replikasi 1

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
60	0.696	21.7978	113.47
70	0.621	29.1011	
80	0.575	34.2697	
90	0.557	37.4157	
100	0.509	42.8090	

A:	-5.84269663
B:	0.492134831
r:	0.977951475

Replikasi 2

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
60	0.710	20.2247	112.86
70	0.614	27.6404	
80	0.582	34.6067	
90	0.550	38.2022	
100	0.515	42.1348	

A:	-7.57303371
B:	0.51011236
r:	0.964065215

Replikasi 3

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
60	0.698	21.5730	111.11
70	0.610	31.4607	
80	0.586	34.1573	
90	0.551	38.0899	
100	0.497	44.1573	

A:	-7.5505618
B:	0.517977528
r:	0.977599283

RATA-RATA IC_{50}
112.48

Lampiran 30. Larutan stok kuersetin 10mg/100ml (100 ppm)

Pengenceran (2, 4, 6, 8, 10 ppm)

$V_1 . C_1 = V_2 . C_2$

- 2 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 100 \text{ ppm} = 10 \text{ ml} . 2 \text{ ppm}$

  $V_1 = \frac{20}{100}$

  $V_1 = 0{,}2 \text{ ml}$

- 4 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 100 \text{ ppm} = 10 \text{ ml} . 4 \text{ ppm}$

  $V_1 = \frac{40}{100}$

  $V_1 = 0{,}4 \text{ ml}$

- 6 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 100 \text{ ppm} = 10 \text{ ml} . 6 \text{ ppm}$

  $V_1 = \frac{60}{100}$

  $V_1 = 0{,}6 \text{ ml}$

- 8 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 100 \text{ ppm} = 10 \text{ ml} . 8 \text{ ppm}$

  $V_1 = \frac{80}{100}$

  $V_1 = 0{,}8 \text{ ml}$

- 10 ppm

  $V_1 . C_1 = V_2 . C_2$

  $V_1 . 100 \text{ ppm} = 10 \text{ ml} . 10 \text{ ppm}$

  $V_1 = \frac{100}{100}$

  $V_1 = 1 \text{ ml}$

Lampiran 31. Penentuan nilai IC50 kuersetin

Abs dpph (0.831)

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
2	0.704	15.2828	7.06
4	0.616	25.8724	
6	0.460	44.6450	
8	0.343	58.7244	
10	0.262	68.4717	

A:	0.830325
B:	6.961492
r:	0.994609

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
2	0.632	23.9471	5.50
4	0.499	39.9519	
6	0.380	54.2720	
8	0.241	70.9988	
10	0.180	78.3394	

A:	11.55235
B:	6.991576
r:	0.993557

Konsentrasi	Absorbansi	Inhibisi	IC50 (ppm)
2	0.603	27.4368	5.55
4	0.517	37.7858	
6	0.386	53.5499	
8	0.267	67.8700	
10	0.183	77.9783	

A:	13.57401
B:	6.558363
r:	0.997172

Lampiran 32. Analisis data aktivitas antioksidan

Tests of Normality

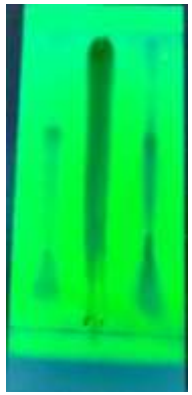
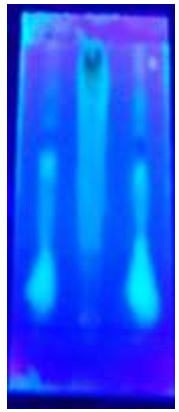
		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Nilai_IC50_ekstrak	Statistic	df	Sig.	Statistic	df	Sig.
IC50	Ekstrak Asparagus	.288	3	.	.928	3	.481
	Kuersetin	.375	3	.	.774	3	.054

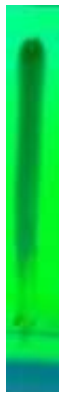
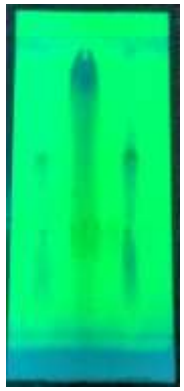
a. Lilliefors Significance Correction

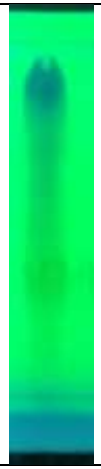
Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IC50	Based on Mean	.475	1	4	.529
	Based on Median	.140	1	4	.727
	Based on Median and with adjusted df	.140	1	3.995	.727
	Based on trimmed mean	.433	1	4	.547

Lampiran 33. Hasil Uji KLT

Warna hasil uji								
Uji	Rf	Sinar tampak	UV 254	UV 366 sebelum disemprot	UV 366 sesudah disemprot	Sinar tampak	pustaka	ket
Ekstrak (flavonoid)	A1 (0,62) A2 (0,65)						(Marliana, 2005)	A1 & A2 (+)

Quersetin	B (0,84)						(Marliana, 2005)	B (+)
Ekstrak (tannin)	A1 (0,65) A2 (0,67)						(Lidyawati, 2006)	A1 & A2 (+)

Baku tannin	C (0,87)						(Lidyawati, 2006)	C (+)

Perhitungan nilai Retention factor
Rumus Rf : a / b
a : jarak tempuh senyawa
b : jarak tempuh eluen / fase gerak
- Nilai Rf golongan senyawa flavonoid
Rf A1 (kuning pucat) : (a) / (b) : 3,4 / 5,5 : 0,61
Rf A2 (hijau kuning): (a) / (b) : 3,6 / 5,5 : 0,65
Rf baku B : (a) / (b) : 4,9 / 5,5 : 0,89
- Nilai Rf golongan senyawa flavonoid
Rf A1 (kuning pucat) : (a) / (b) : 3,7 / 5,5 : 0,67
Rf A2 (hijau kuning): (a) / (b) : 3,6 / 5,5 : 0,65
Rf baku B : (a) / (b) : 5,1 / 5,5 : 0,92