

Lampiran 1. Determinasi Tanaman

	KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI UNIVERSITAS DIPONEGORO FAKULTAS SAINS DAN MATEMATIKA LABORATORIUM EKOLOGI DAN BIOSISTEMATIK DEPARTEMEN BIOLOGI Jl. Prof. H. Soedarto SH Tembalang Semarang, 024 7474754. 024 76480923
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SURAT KETERANGAN

Yang bertanda tangan dibawah ini, menyatakan bahwa mahasiswa sbb :

Nama	: Nouvia Gusty A.F
NIM	: 155010165
Fakultas / Prodi	: S1 FARMASI
Perguruan Tinggi	: UNIVERSITAS WAHID HASYIM SEMARANG
Judul Skripsi	: Korelasi Flavonoid Total Ekstrak Etanol 96 %, Etil Asetat, dan <i>n</i> -Heksan Daun Petai (<i>Parkia speciosa</i> Hassk.) Terhadap Aktivitas Antioksidan
Pembimbing	:

Telah melakukan determinasi / identifikasi sampel tumbuhan (satu jenis) di Laboratorium Ekologi dan Biosistemik Departemen Biologi Fakultas Sains dan Matematika Universitas Diponegoro. Hasil determinasi / identifikasi terlampir.

Demikian Surat Keterangan ini dibuat untuk dapat digunakan seperlunya.

Semarang, Januari 2019
Laboratorium Ekologi Dan Biosistemik
Kepala,


Dr. Mochamad Hadi, M.Si.
 NIP. 196001081987031002

Lampiran 1. Lanjutan



KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS DIPONEGORO
FAKULTAS SAINS DAN MATEMATIKA
LABORATORIUM EKOLOGI DAN BIOSISTEMATIKA DEPARTEMEN BIOLOGI
Jl. Prof. H. Soedarto SH Tembalang Semarang, 024 7474754. 024 76480923

HASIL DETERMINASI / IDENTIFIKASI

KLASIFIKASI

Kindom : Plantae (Tumbuh-tumbuhan)
 Sub Kingdom : Tracheobionta (Tumbuhan berpembuluh)
 Super Divisi : Spermatophyta (Tumbuhan yang menghasilkan biji)
 Divisi : Magnoliophyta (Tumbuhan berbunga)
 Class : Magnoliopsida (Dicotyledoneae)
 Ordo : Fabales
 Famili : Mimosaceae
 Genus : *Parkia*
 Species : *Parkia speciosa* Hassk. (Petai)

HASIL DETERMINASI / IDENTIFIKASI :

1b, 2b, 3b, 4b, 6b, 7b, 9b, 10b, 11b, 12b, 13b, 14a, 15b.....
 Golongan 9 : Tanaman dengan daun majemuk dan tersebar.
 197a, 198b, 200b, 201a..... Famili 58. Mimosaceae. 1a, 2b, 3b, 4a
 Genus 3. *Parkia* Spesies. *Parkia speciosa* Hassk. (Petai).

DESKRIPSI :

Pohon dengan kulit yang kerap kali coklat merah, tinggi 5-15 m. Daun menyirip rangkap, tangkai dengan 1 kelenjar yang tenggelam. Sirip 15-20 pasang, anak daun per sirip 15-46 pasang, tegak, dengan pangkal bertelinga dan membulat, ujung mempunyai tulang daun runcing dan tidak berarti, 4-10 kali 2-3 mm. Bunga dalam bongkol yang menggantung, bertangkai panjang, berbentuk penggada, berbilangan lima, yang terbawah tidak jelas kelaminnya dengan 10 staminodia, yang tengah jantan dengan 10 benangsari, yang tertinggi berkelamin dua dengan 10 benangsari dan bakal buah. Kelopak bertaju pendek,

Lampiran 1. Lanjutan

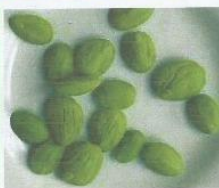


KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
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Jl. Prof. H. Soedarto SH Tembalang Semarang, 024 7474754. 024 76480923

tidak sama. Daun mahkota pada pangkalnya melekat dengan kelopak dan tabung benang sari. Tangkai sari putih dan putih kuning, bersatu sampai tinggi. Polongan menggantung, di atas tanda bekas mahkota, bertangkai, panjang 35-40 cm, bentuk pita dengan pangkal menyempit, lebar 3-5 cm, kerap kali terpuntir kuat, pada tempat biji melembung, dalam keadaan belum masak hijau kemudian hitam. Biji banyak, oval.

PUSTAKA :

- Backer and van den Brink (1968) Flora of Java, Vol. I – III, Wolters – Noordhoff NV – Groningen – The Netherlands.
- Cronquist, A. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press, New York.
- Van Steenis, 2003. Flora Untuk Sekolah di Indonesia. Terjemahan Moeso Surjowinoto. Cetakan ke 9. PT Pradnya Paramita, Jakarta



**Lampiran 2. Surat Keterangan Telah Melaksanakan Penelitian di Bagian
Biologi Farmasi Fakultas Farmasi Universitas Wahid Hasyim**



**UNIVERSITAS WAHID HASYIM
FAKULTAS FARMASI
BAGIAN BIOLOGI FARMASI**

Jl. Menoreh Tengah X / 22 Sampangan – Semarang 50236 Telp. (024) 8505680 – 8505681 fax. (024) 8505680

SURAT KETERANGAN

No.141/Lab. Biologi Farmasi/C.05/UWH/VIII/2018

Assalamu'alaikum Wr. Wb.

Yang bertandatangan di bawah ini, Kepala Bagian Biologi Farmasi Universitas Wahid Hasyim Semarang menerangkan bahwa:

Nama	: Nauvia Gusty A.F
NIM	: 155010165
Fakultas	: Farmasi

Telah melakukan pembuatan ekstrak daun petai dalam rangka penelitian dengan judul:
"Korelasi Kadar Flavonoid Total Ekstrak Daun Petai (*Parkia speciosa* Hassk.) Terhadap Aktivitas Antioksidan"

Demikian surat keterangan ini dibuat untuk dipergunakan semestinya.

Wassalamu'alaikum Wr. Wb.

Semarang, Agustus 2018
Ka. Bag Biologi Farmasi

Dewi Andini K.M., M.Farm., Apt.

**Lampiran 3. Surat Keterangan telah Melaksanakan Penelitian di Bagian
Kimia Farmasi Fakultas Farmasi Universitas Wahid Hasyim**

	UNIVERSITAS WAHID HASYIM FAKULTAS FARMASI BAGIAN KIMIA FARMASI Jl. Menoreh Tengah X / 22 Sampangan – Semarang 50236 Telp. (024) 8505680 – 8505681 fax. (024) 8505680
SURAT KETERANGAN No. 604/Lab. Kimia Farmasi/ C.05/UWH/I/ 2019	
Assalamu'alaikum Wr. Wb. Yang bertanda tangan dibawah ini, Kepala Bagian Kimia Farmasi Fakultas Farmasi Universitas Wahid Hasyim Semarang menerangkan bahwa :	
Nama	: Nouvia Gusty Auliyatul Faizah
NIM	: 155010165
Fak/ Univ/ Sekolah	: Farmasi / Universitas Wahid Hasyim Semarang
Telah melakukan Penelitian Aktivitas Antioksidan, Penetapan Kadar Flavonoid Total menggunakan Spektrofotometer di Laboratorium Kimia Analisa, Fakultas Farmasi Universitas Wahid Hasyim Semarang, dengan judul penelitian : “ Aktivitas Antioksidan, Penetapan Kadar Flavonoid Total Ekstrak Etanol, Etil Asetat dan n-Heksan Daun Petai (<i>Parkia speciosa</i> Hassk) ” Demikian surat keterangan ini dibuat untuk dipergunakan semestinya.	
Wassalamu'alaikum Wr. Wb.	
Semarang, Februari 2019 Ka Bag Kimia Farmasi   Maria Ulfah, M.Sc, Apt	

Lampiran 4. Perhitungan Susut Pengeringan dan Rendemen Ekstrak

a. Perhitungan Susut Pengeringan

$$\text{Susut Pengeringan} = \frac{\text{Bobot Awal} - \text{Bobot Akhir}}{\text{Bobot Awal}} \times 100 \%$$

$$\text{Susut Pengeringan} = \frac{6000 \text{ gram} - 2225 \text{ gram}}{6000 \text{ gram}} \times 100 \%$$

$$\text{Susut Pengeringan} = \frac{3775 \text{ gram}}{6000 \text{ gram}} \times 100 \%$$

$$\text{Susut Pengeringan} = 62 \%$$

b. Perhitungan Rendemen Ekstrak

$$\text{Rendemen Ekstrak} = \frac{\text{Bobot Ekstrak Kental}}{\text{Bobot Simplisia Kering}} \times 100 \%$$

$$\text{Rendemen Ekstrak Etanol } 96 \% = \frac{55 \text{ gram}}{200 \text{ gram}} \times 100 \% = 27,5 \%$$

$$\text{Rendemen Ekstrak Etil Asetat} = \frac{31 \text{ gram}}{100 \text{ gram}} \times 100 \% = 31 \%$$

$$\text{Rendemen Ekstrak } n\text{-Heksan} = \frac{23,5 \text{ gram}}{100 \text{ gram}} \times 100 \% = 23,5 \%$$

**Lampiran 5. Perhitungan Pembuatan Larutan Induk Ekstrak Etanol 96%,
Etil Asetat, dan *n*-Heksan Daun Petai**

a. Penimbangan ekstrak

1. Ekstrak etanol 96%

Keterangan	Penimbangan Ekstrak (mg)
Berat kaca arloji kosong	35595,3
Berat kaca arloji + zat	35620,7
Berat kaca arloji + sisa	35595,5
Berat Ekstrak Etanol	25,2

2. Ekstrak etil asetat

Keterangan	Penimbangan Ekstrak (mg)
Berat kaca arloji kosong	35833,7
Berat kaca arloji + zat	35858,9
Berat kaca arloji + sisa	35833,9
Berat Ekstrak Etil Asetat	25

3. Ekstrak *n*-heksan

Keterangan	Penimbangan Ekstrak (mg)
Berat kaca arloji kosong	35653,1
Berat kaca arloji + zat	35678,5
Berat kaca arloji + sisa	35653,4
Berat Ekstrak <i>n</i> -heksan	25,1

b. Pembuatan larutan induk ekstrak

1. Ekstrak Etanol 96 %

$$\text{Ekstrak } 504 \text{ ppm} = 25,2 \text{ mg/50 mL}$$

$$= 25.200 \text{ } \mu\text{g/50 mL}$$

Ekstrak etanol 96 % daun petai 25200 μg dilarutkan dalam etanol p.a.

50 mL, dalam labu takar.

Lampiran 5. Lanjutan

2. Ekstrak etil asetat

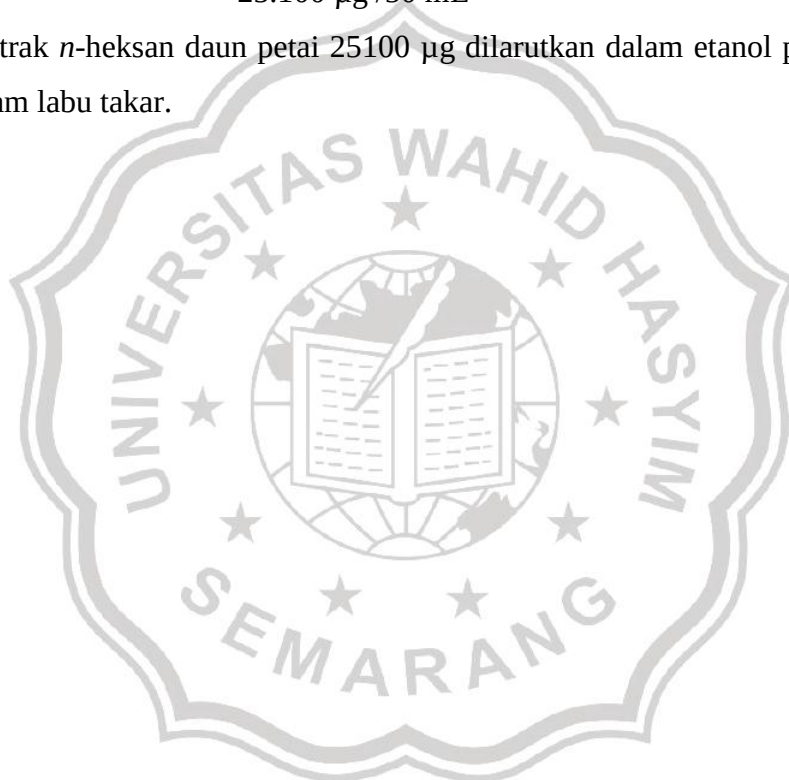
$$\begin{aligned}\text{Ekstrak 500 ppm} &= 25 \text{ mg/50 mL} \\ &= 25.000 \text{ }\mu\text{g/50 mL}\end{aligned}$$

Ekstrak etil asetat daun petai 25000 μg dilarutkan dalam etanol p.a 50 mL, dalam labu takar.

3. Ekstrak *n*-heksan

$$\begin{aligned}\text{Ekstrak 502 ppm} &= 25,1 \text{ mg/50 mL} \\ &= 25.100 \text{ }\mu\text{g/50 mL}\end{aligned}$$

Ekstrak *n*-heksan daun petai 25100 μg dilarutkan dalam etanol p.a. 50 mL, dalam labu takar.



Lampiran 6. Pembuatan Larutan Induk DPPH, Seri Konsentrasi Vitamin C, Ekstrak Etanol 96 %, Etil Asetat, dan *n*-Heksan Daun Petai

a. Pembuatan larutan induk DPPH 0,1 mM sebanyak 250 mL (Mr DPPH = 394,32 g/mol)

$$\text{Konsentrasi} = \frac{\text{Berat DPPH (gram)}}{\text{Mr}} \times \frac{1000}{\text{Volume pembuatan (ml)}}$$

$$\text{Konsentrasi} = \frac{9,858 \text{ gram}}{394,32 \text{ g/mol}} \times \frac{1000}{250 \text{ ml}}$$

$$\text{Konsentrasi} = 0,025 \times 4$$

$$\text{Konsentrasi} = 0,1 \text{ mM}$$

Sebanyak 9,858 mg ~ 10 mg DPPH dilarutkan dalam etanol p.a. ad 250 mL.

b. Pembuatan larutan induk vitamin C 196 ppm sebanyak 50 mL

$$\text{Vitamin C } 196 \text{ ppm} = 0,098 \text{ gram/50 mL}$$

$$= 9,8 \text{ mg/50 mL}$$

Serbuk vitamin C sebanyak 9,8 mg ~ 10 mg dilarutkan dalam aquadest ad 50 mL dalam labu takar

c. Penimbangan vitamin C

Keterangan	Penimbangan Vitamin C (mg)
Berat botol timbang kosong	15023,2
Berat botol timbang + zat	15033,2
Berat botol timbang + sisa	15023,4
Berat zat (vitamin C)	9,8

d. Pembuatan seri konsentrasi dari larutan induk vitamin C 196 ppm sebanyak 5 mL

$$1. \quad 1 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2$$

$$V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 1 \mu\text{g/mL}$$

$$V_1 = 0,025 \text{ mL} \sim 25 \mu\text{L}$$

$$2. \quad 2 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2$$

$$V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 2 \mu\text{g/mL}$$

$$V_1 = 0,051 \text{ mL} \sim 51 \mu\text{L}$$

Lampiran 6. Lanjutan

$$\begin{aligned}
 3. \quad & 3 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 3 \mu\text{g/mL} \\
 & V_1 = 0,076 \text{ mL} \sim 76 \mu\text{L} \\
 4. \quad & 4 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 4 \mu\text{g/mL} \\
 & V_1 = 0,102 \text{ mL} \sim 102 \mu\text{L} \\
 5. \quad & 5 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 5 \mu\text{g/mL} \\
 & V_1 = 0,127 \text{ mL} \sim 127 \mu\text{L} \\
 6. \quad & 6 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 6 \mu\text{g/mL} \\
 & V_1 = 0,153 \text{ mL} \sim 153 \mu\text{L} \\
 7. \quad & 7 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 7 \mu\text{g/mL} \\
 & V_1 = 0,178 \text{ mL} \sim 178 \mu\text{L} \\
 8. \quad & 8 \mu\text{g/mL} : V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 196 \mu\text{g/mL} = 5 \text{ mL} \times 8 \mu\text{g/mL} \\
 & V_1 = 0,204 \text{ mL} \sim 204 \mu\text{L}
 \end{aligned}$$

e. Pembuatan seri konsentrasi ekstrak etanol 96 %, etil asetat, dan *n*-heksan daun petai

1. Ekstrak etanol 96 %

$$\begin{aligned}
 20 \mu\text{g/mL} : \quad & V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 504 \text{ ppm} = 5 \text{ mL} \times 20 \text{ ppm} \\
 & V_1 = 0,198 \text{ mL} \sim 198 \mu\text{L} \\
 40 \mu\text{g/mL} : \quad & V_1 \times C_1 = V_2 \times C_2 \\
 & V_1 \times 504 \text{ ppm} = 5 \text{ mL} \times 40 \text{ ppm} \\
 & V_1 = 0,397 \text{ mL} \sim 397 \mu\text{L}
 \end{aligned}$$

Lampiran 6. Lanjutan

$$\begin{aligned}
 60 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 504 \text{ ppm} &= 5 \text{ mL} \times 60 \text{ ppm} \\
 V_1 &= 0,595 \text{ mL} \sim 595 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 80 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 504 \text{ ppm} &= 5 \text{ mL} \times 80 \text{ ppm} \\
 V_1 &= 0,794 \text{ mL} \sim 794 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 100 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 504 \text{ ppm} &= 5 \text{ mL} \times 100 \text{ ppm} \\
 V_1 &= 0,992 \text{ mL} \sim 992 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 120 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 504 \text{ ppm} &= 5 \text{ mL} \times 120 \text{ ppm} \\
 V_1 &= 1,190 \text{ mL} \sim 1190 \mu\text{L}
 \end{aligned}$$

2. Ekstrak Etil Asetat

$$\begin{aligned}
 20 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 20 \text{ ppm} \\
 V_1 &= 0,200 \text{ mL} \sim 200 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 40 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 40 \text{ ppm} \\
 V_1 &= 0,400 \text{ mL} \sim 400 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 60 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 60 \text{ ppm} \\
 V_1 &= 0,600 \text{ mL} \sim 600 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 80 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 80 \text{ ppm} \\
 V_1 &= 0,800 \text{ mL} \sim 800 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 100 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 100 \text{ ppm} \\
 V_1 &= 1,000 \text{ mL} \sim 1000 \mu\text{L}
 \end{aligned}$$

Lampiran 6. Lanjutan

$$\begin{aligned}
 120 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 500 \text{ ppm} &= 5 \text{ mL} \times 120 \text{ ppm} \\
 V_1 &= 1,200 \text{ mL} \sim 1200 \mu\text{L}
 \end{aligned}$$

3. Ekstrak *n*-heksan

$$\begin{aligned}
 20 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 20 \text{ ppm} \\
 V_1 &= 0,199 \text{ mL} \sim 199 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 40 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 40 \text{ ppm} \\
 V_1 &= 0,398 \text{ mL} \sim 398 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 60 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 60 \text{ ppm} \\
 V_1 &= 0,598 \text{ mL} \sim 598 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 80 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 80 \text{ ppm} \\
 V_1 &= 0,797 \text{ mL} \sim 797 \mu\text{L}
 \end{aligned}$$

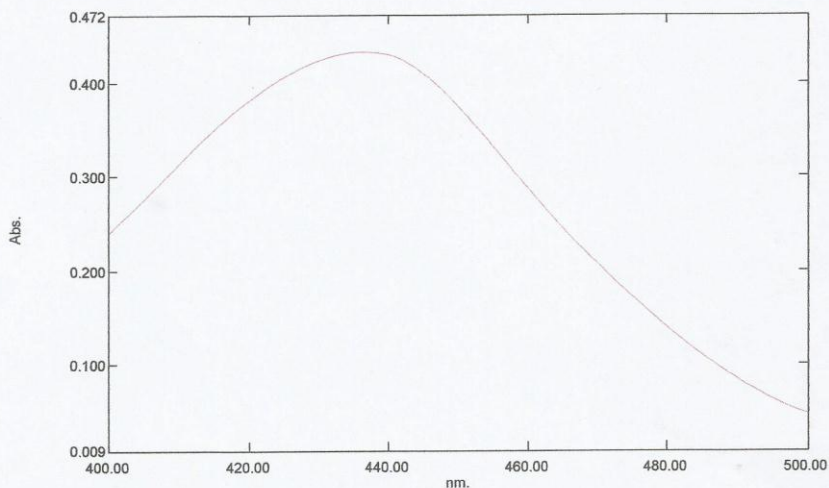
$$\begin{aligned}
 100 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 100 \text{ ppm} \\
 V_1 &= 0,996 \text{ mL} \sim 996 \mu\text{L}
 \end{aligned}$$

$$\begin{aligned}
 120 \mu\text{g/mL} : \quad V_1 \times C_1 &= V_2 \times C_2 \\
 V_1 \times 502 \text{ ppm} &= 5 \text{ mL} \times 120 \text{ ppm} \\
 V_1 &= 1,195 \text{ mL} \sim 1195 \mu\text{L}
 \end{aligned}$$

Lampiran 7. Penentuan Panjang Gelombang (λ) Maksimum Kuersetin**Spectrum Peak Pick Report**

05/18/2018 01:53:44 PM

Data Set: AMAPJG KUERSETIN - RawData



[Measurement Properties]
Wavelength Range (nm.): 400.00 to 500.00
Scan Speed: Fast
Sampling Interval: 0.2
Auto Sampling Interval: Disabled
Scan Mode: Single

No.	P/V	Wavelength	Abs.	Description
1		436.20	0.433	

[Instrument Properties]
Instrument Type: UV-1800 Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 340.0 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: 6-Cell
Number of cells: 4

[Operation]
Threshold: 0.0010000
Points: 4
InterPolate: Disabled
Average: Disabled

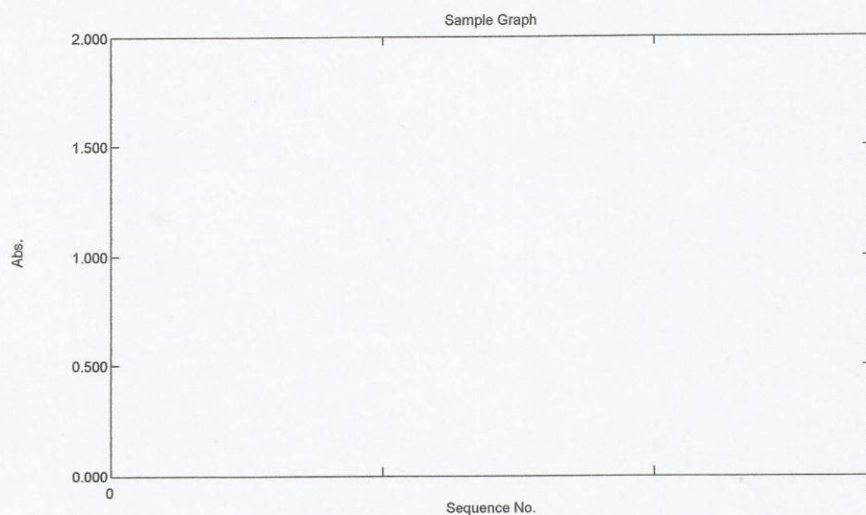
[Sample Preparation Properties]
Weight:
Volume:
Dilution:
Path Length:
Additional Information:

Lampiran 8. Penentuan *Operating Time* (OT) Kuersetin

Sample Table Report

05/18/2018 03:07:32 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\AMAOT.pho
Flave



Sample Table

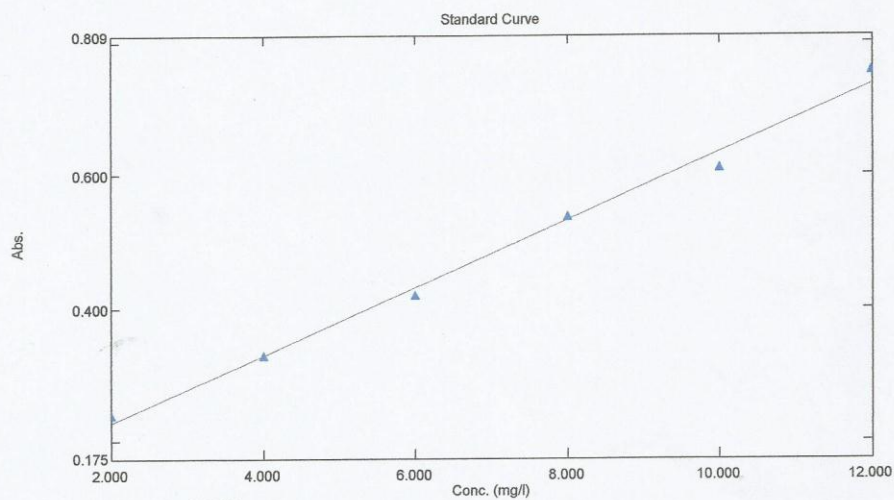
	Sample ID	Type	Ex	Conc	WL436.2	Comments
1	0.1	Unknown		*****	0.241	
2	5	Unknown		*****	0.245	
3	10	Unknown		*****	0.247	
4	15	Unknown		*****	0.248	
5	20	Unknown		*****	0.249	
6	25	Unknown		*****	0.252	
7	30	Unknown		*****	0.252	
8	35	Unknown		*****	0.252	
9	40	Unknown		*****	0.252	
10	45	Unknown		*****	0.254	
11	50	Unknown		*****	0.255	
12	55	Unknown		*****	0.256	
13	60	Unknown		*****	0.257	
14						

Lampiran 9. Penetapan Kurva Baku Flavonoid

Standard Table Report

05/18/2018 04:14:54 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\AMAKB3.pho

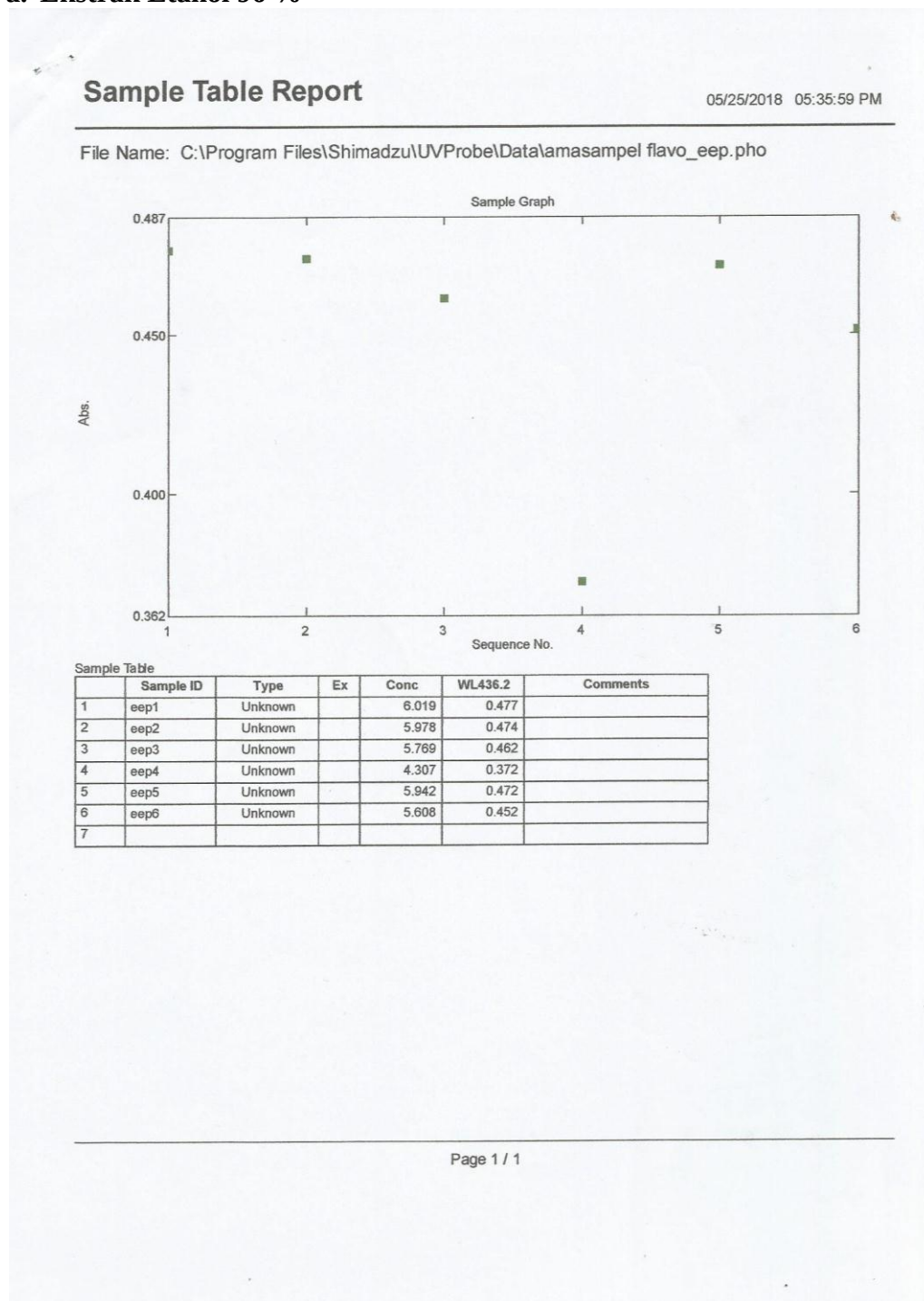


Standard Table

	Sample ID	Type	Ex	Conc	WL436.2	Wgt.Factor	Comments
1	1	Standard		2.000	0.239	1.000	
2	2	Standard		4.000	0.329	1.000	
3	3	Standard		6.000	0.419	1.000	
4	4	Standard		8.000	0.537	1.000	
5	5	Standard		10.000	0.611	1.000	
6	6	Standard		12.000	0.756	1.000	
7							

Lampiran 10. Pembacaan Absorbansi Sampel Ekstrak Etanol 96 %, Etil Asetat, dan *n*-Heksan Flavonoid

a. Ekstrak Etanol 96 %



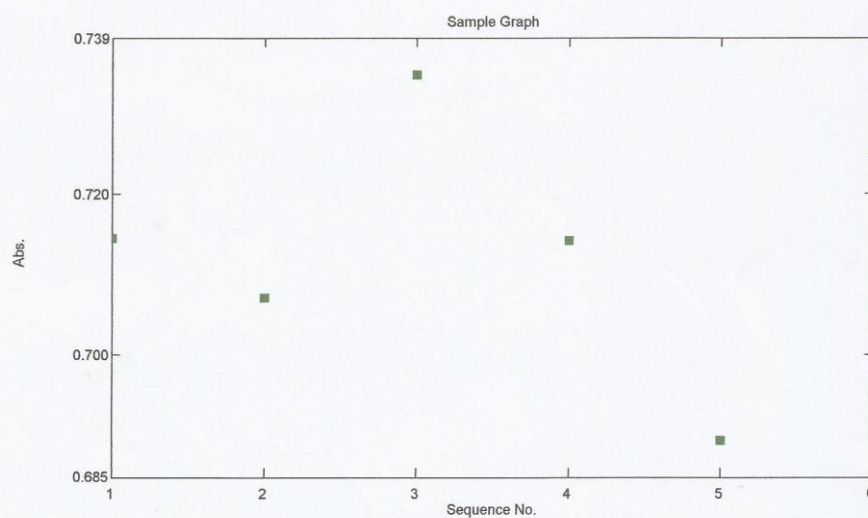
Lampiran 10. Lanjutan

b. Ekstrak Etil Asetat

Sample Table Report

05/25/2018 05:43:41 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amasampel flavo_eeap.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL436.2	Comments
1	eeap1	Unknown		9.906	0.714	
2	eeap2	Unknown		9.785	0.707	
3	eeap3	Unknown		10.240	0.735	
4	eeap4	Unknown		9.901	0.714	
5	eeap5	Unknown		9.494	0.689	
6	eeap6	Unknown		10.080	0.725	
7						

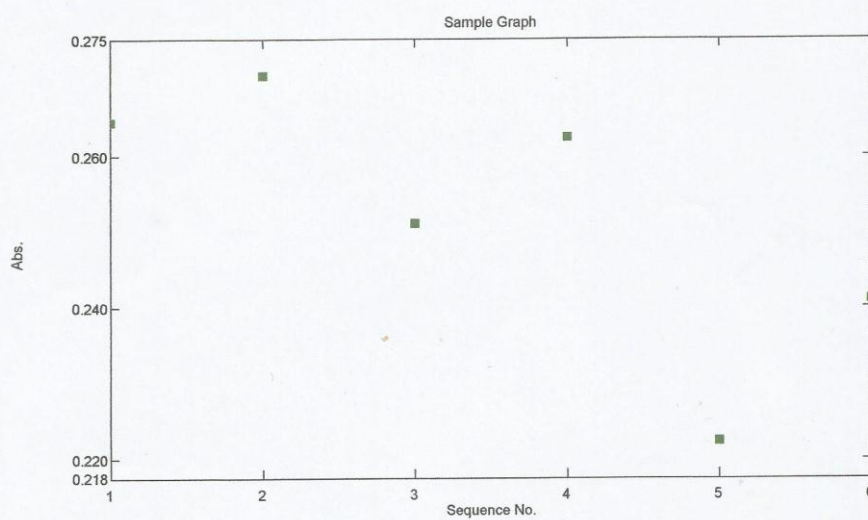
Lampiran 10. Lanjutan

c. Ekstrak *n*-Heksan

Sample Table Report

05/25/2018 05:40:10 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amasampele flavo_nhp.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL436.2	Comments
1	enhp1	Unknown		2.544	0.264	
2	enhp2	Unknown		2.644	0.271	
3	enhp3	Unknown		2.326	0.251	
4	enhp4	Unknown		2.509	0.262	
5	enhp5	Unknown		1.855	0.222	
6	enhp6	Unknown		2.160	0.241	
7						

Lampiran 11. Perhitungan Kandungan Flavonoid Total

1. Kurva Baku Kuersetin

Sampel	Konsentrasi ($\mu\text{g/mL}$) (x)	Absorbansi (y)	Persamaan Regresi
Kuersetin	2	0,239	$y = 0,0507 x + 0,1269$ $r = 0,9965$
	4	0,329	
	6	0,419	
	8	0,537	
	10	0,611	
	12	0,756	

2. Perhitungan Kadar Flavonoid Total

$$\text{Kadar flavonoid} = \frac{X \times F_p \times \text{Vol total Ekstrak}}{\text{Bobot penimbangan (gram)}} (\mu\text{g/gram})$$

a. Ekstrak Etanol 96 %

Replikasi 1

absorbansi : 0,477

$$y = 0,0507 x + 0,1269$$

$$0,477 = 0,0507 x + 0,1269$$

$$x = 6,905 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{6,905 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} (\text{mg/gram}) = 13,810 \text{ mg/gram}$$

Replikasi 2

absorbansi : 0,474

$$y = 0,0507 x + 0,1269$$

$$0,474 = 0,0507 x + 0,1269$$

$$x = 6,846 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{6,846 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} (\text{mg/gram}) = 13,692 \text{ mg/gram}$$

Replikasi 3

absorbansi : 0,472

$$y = 0,0507 x + 0,1269$$

$$0,472 = 0,0507 x + 0,1269$$

$$x = 6,807 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{6,807 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} (\text{mg/gram}) = 13,614 \text{ mg/gram}$$

Lampiran 11. Lanjutan

b. Ekstrak Etil Asetat

Replikasi 1

absorbansi : 0,714

$$y = 0,0507 x + 0,1269$$

$$0,714 = 0,0507 x + 0,1269$$

$$x = 11,580 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{11,580 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 23,160 \text{ mg/gram}$$

Replikasi 2

absorbansi : 0,707

$$y = 0,0507 x + 0,1269$$

$$0,707 = 0,0507 x + 0,1269$$

$$x = 11,442 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{11,442 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 22,884 \text{ mg/gram}$$

Replikasi 3

absorbansi : 0,714

$$y = 0,0507 x + 0,1269$$

$$0,714 = 0,0507 x + 0,1269$$

$$x = 11,580 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{11,580 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 23,160 \text{ mg/gram}$$

c. Ekstrak *n*-heksan

Replikasi 1

absorbansi : 0,264

$$y = 0,0507 x + 0,1269$$

$$0,264 = 0,0507 x + 0,1269$$

$$x = 2,704 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{2,704 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 5,408 \text{ mg/gram}$$

Replikasi 2

absorbansi : 0,251

$$y = 0,0507 x + 0,1269$$

$$0,251 = 0,0507 x + 0,1269$$

$$x = 2,445 \text{ ppm}$$

$$\text{Kadar flavonoid} = \frac{2,445 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 4,890 \text{ mg/gram}$$

Lampiran 11. Lanjutan

Replikasi 3

absorbansi : 0,262

$y = 0,0507 x + 0,1269$

$0,262 = 0,0507 x + 0,1269$

$x = 2,665 \text{ ppm}$

Kadar flavonoid = $\frac{2,665 \times 1 \times 50 \text{ mL}}{0,025 \text{ gram} \times 1000} \text{ (mg/gram)} = 5,330 \text{ mg/gram}$

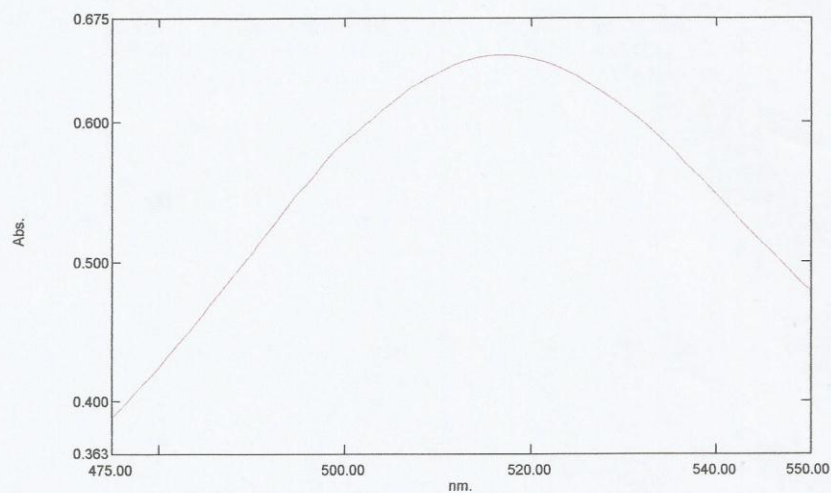
Sampel	Replikasi	Kadar (mg/gram)	Rata-rata (mg/gram)
Ekstrak etanol 96 %	1	13,810	13,705 ± 0,098
	2	13,692	
	3	13,614	
Ekstrak etil asetat	1	23,160	23,068 ± 0,159
	2	22,884	
	3	23,160	
Ekstrak <i>n</i> -hexan	1	5,408	5,209 ± 0,279
	2	4,890	
	3	5,330	

Lampiran 12. Penentuan Panjang Gelombang Maksimum DPPH

Spectrum Peak Pick Report

05/21/2018 05:41:14 PM

Data Set: File_180521_174048 - RawData



[Measurement Properties]
Wavelength Range (nm.): 475.00 to 550.00
Scan Speed: Medium
Sampling Interval: 0.2
Auto Sampling Interval: Disabled
Scan Mode: Single

[Instrument Properties]
Instrument Type: UV-1800 Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 340.0 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: 6-Cell
Number of cells: 4

[Operation]
Threshold: 0.0010000
Points: 4
InterPolate: Disabled
Average: Disabled

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

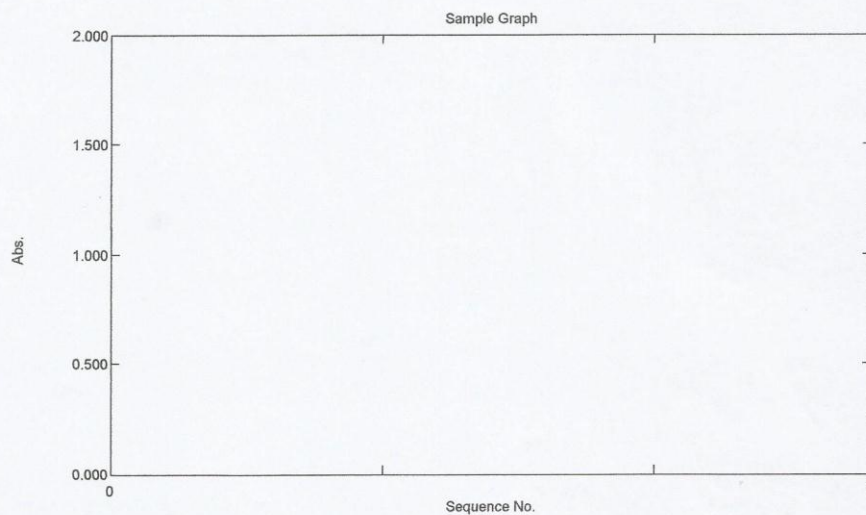
No.	P/V	Wavelength	Abs.	Description
1	1	517.40	0.649	

Lampiran 13. Penentuan *Operating Time* (OT) DPPH dengan Vitamin C

Sample Table Report $\sigma\tau$

05/21/2018 06:41:35 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\lamaotdpphvitc.pho



Sample Table

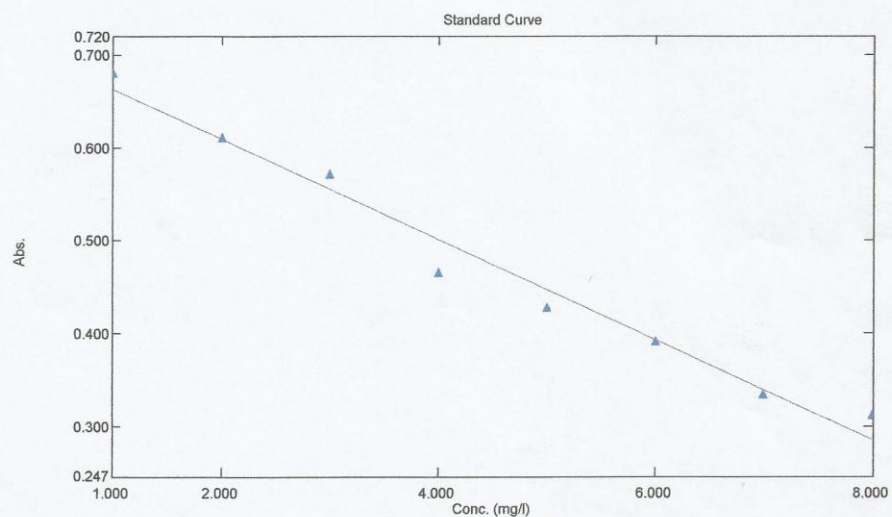
	Sample ID	Type	Ex	Conc	WL517.4	Comments
1	0.1	Unknown		*****	0.350	
2	5	Unknown		*****	0.350	
3	10	Unknown		*****	0.355	
4	15	Unknown		*****	0.365	
5	20	Unknown		*****	0.362	
6	25	Unknown		*****	0.362	
7	30	Unknown		*****	0.362	
8	35	Unknown		*****	0.360	
9	40	Unknown		*****	0.367	
10	45	Unknown		*****	0.369	
11	50	Unknown		*****	0.367	
12	55	Unknown		*****	0.340	
13	60	Unknown		*****	0.337	
14						

Lampiran 14. Penetapan Kurva Baku Vitamin C

Standard Table Report/

05/21/2018 07:17:55 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amavitcdpph1.pho



Standard Table

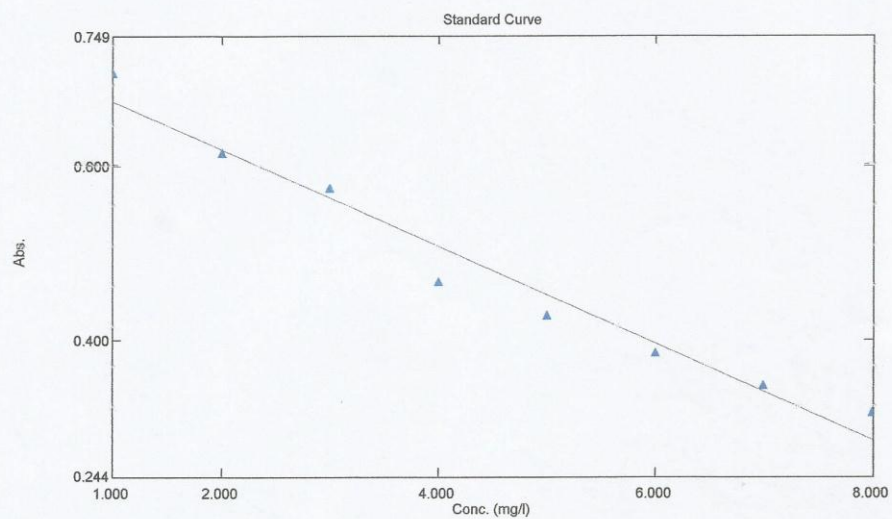
	Sample ID	Type	Ex	Conc	WL517.4	Wgt.Factor	Comments
1	1	Standard		1.000	0.680	1.000	
2	2	Standard		2.000	0.611	1.000	
3	3	Standard		3.000	0.572	1.000	
4	4	Standard		4.000	0.466	1.000	
5	5	Standard		5.000	0.428	1.000	
6	6	Standard		6.000	0.392	1.000	
7	7	Standard		7.000	0.335	1.000	
8	8	Standard		8.000	0.312	1.000	
9							

Lampiran 14. Lanjutan

Standard Table Report²

05/21/2018 07:22:28 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amavitcdpph1.pho



Standard Table

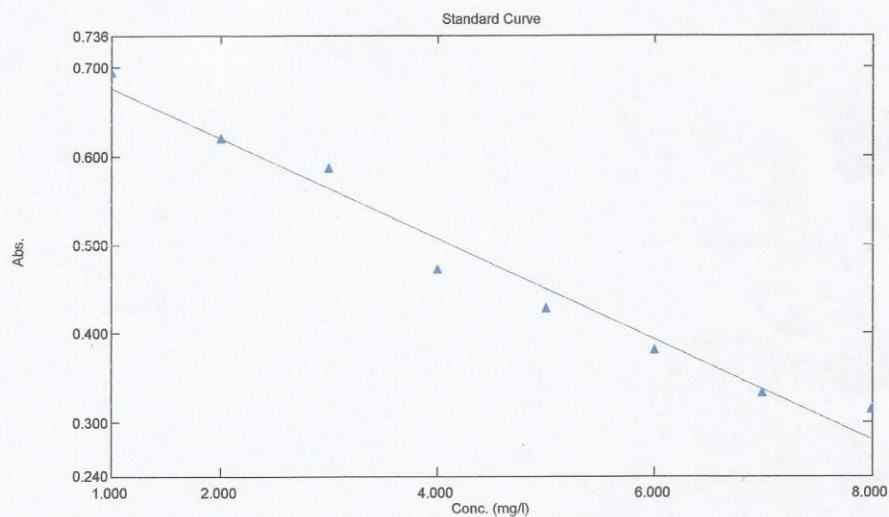
	Sample ID	Type	Ex	Conc	WL517.4	Wgt.Factor	Comments
1	1	Standard		1.000	0.707	1.000	
2	2	Standard		2.000	0.614	1.000	
3	3	Standard		3.000	0.574	1.000	
4	4	Standard		4.000	0.468	1.000	
5	5	Standard		5.000	0.428	1.000	
6	6	Standard		6.000	0.386	1.000	
7	7	Standard		7.000	0.347	1.000	
8	8	Standard		8.000	0.316	1.000	
9							

Lampiran 14. Lanjutan

Standard Table Report

05/21/2018 07:28:29 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amavitcdpph3.pho



Standard Table

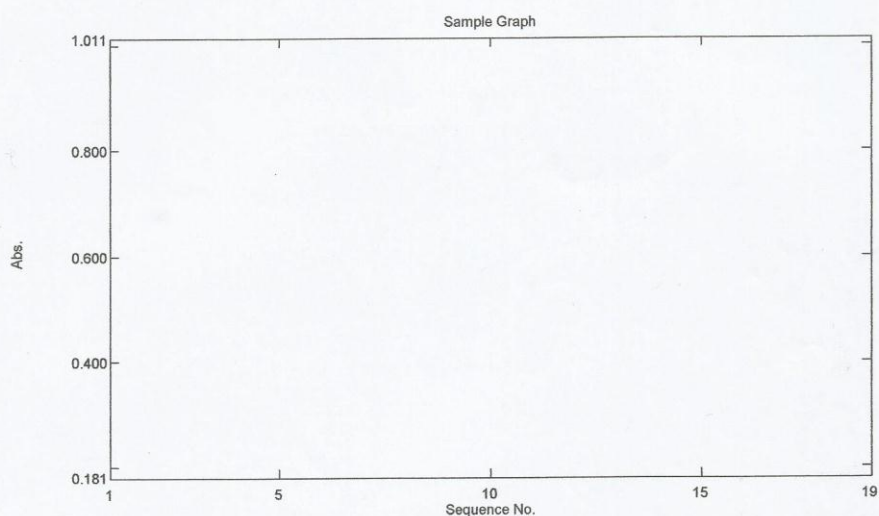
	Sample ID	Type	Ex	Conc	WL517.4	Wgt.Factor	Comments
1	1	Standard		1.000	0.694	1.000	
2	2	Standard		2.000	0.620	1.000	
3	3	Standard		3.000	0.586	1.000	
4	4	Standard		4.000	0.472	1.000	
5	5	Standard		5.000	0.429	1.000	
6	6	Standard		6.000	0.382	1.000	
7	7	Standard		7.000	0.333	1.000	
8	8	Standard		8.000	0.314	1.000	
9							

Lampiran 15. Pembacaan Absorbansi Sampel Ekstrak Etanol 96 % Antioksidan

Sample Table Report*

05/24/2018 05:29:03 PM

File Name: C:\Program Files\Shimadzu\UVPProbe\Data\amaeepdpph.pho



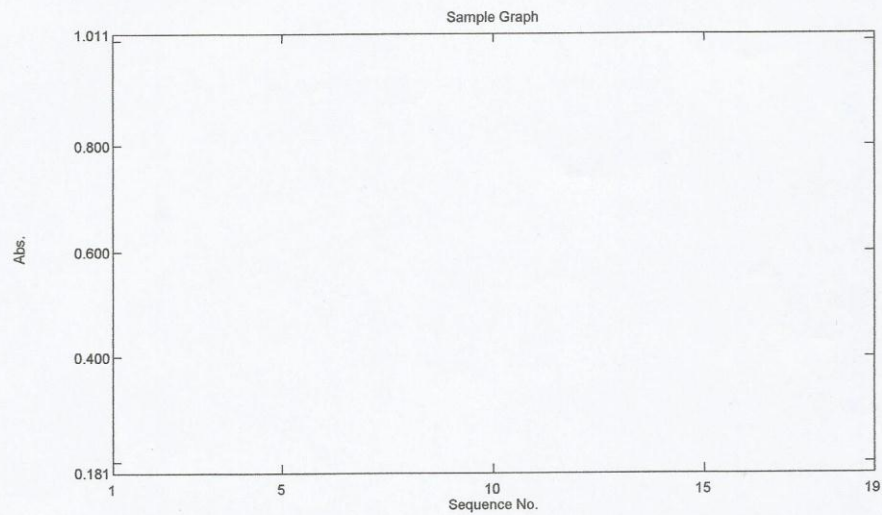
Sample Table

	Sample ID	Type	Ex	Conc	WL517.4	Comments
1	dpph	Unknown		*****	0.942	
2	eep20	Unknown		*****	0.551	
3	eep40	Unknown		*****	0.510	
4	eep60	Unknown		*****	0.465	
5	eep80	Unknown		*****	0.378	
6	eep100	Unknown		*****	0.295	
7	eep120	Unknown		*****	0.262	
8	eep20.1	Unknown		*****	0.547	
9	eep40.1	Unknown		*****	0.508	
10	eep60.1	Unknown		*****	0.461	
11	eep80.1	Unknown		*****	0.370	
12	eep100.1	Unknown		*****	0.285	
13	eep120.1	Unknown		*****	0.252	
14	eep20.2	Unknown		*****	0.555	
15	eep40.2	Unknown		*****	0.516	
16	eep60.2	Unknown		*****	0.468	
17	eep80.2	Unknown		*****	0.383	
18	eep100.2	Unknown		*****	0.304	

Lampiran 15. Lanjutan**Sample Table Report**

05/24/2018 05:29:03 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\amaeepdp.pho



Sample Table

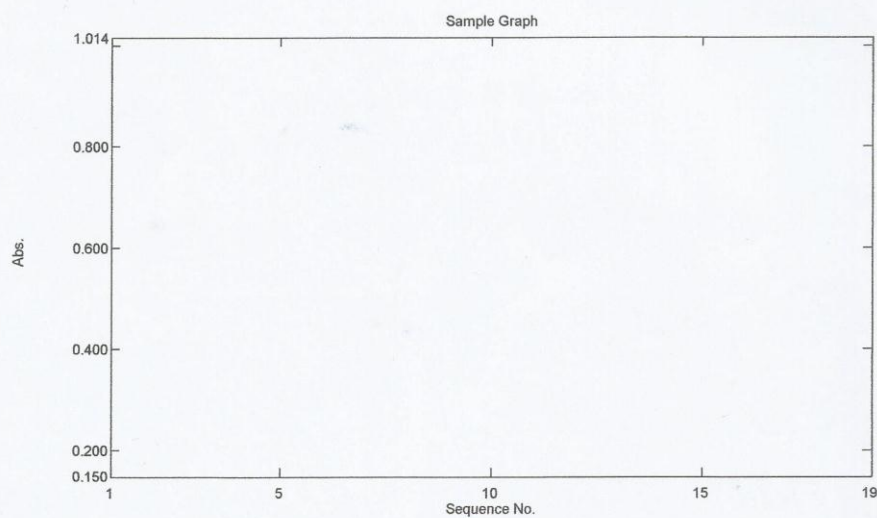
	Sample ID	Type	Ex	Conc	WL517.4	Comments
19	eep120.2	Unknown		*****	0.250	
20						

Lampiran 16. Pembacaan Absorbansi Sampel Ekstrak Etil Asetat Antioksidan

Sample Table Report

05/25/2018 07:26:57 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\ammaeeapnew.pho



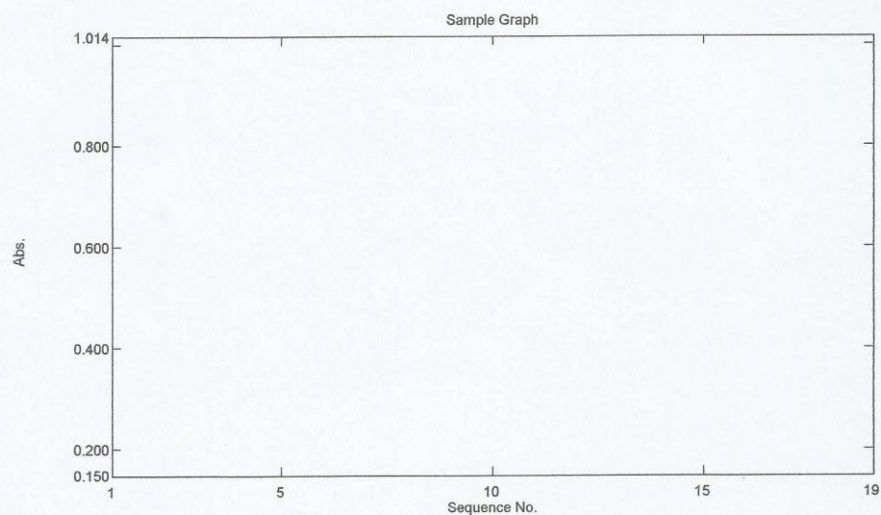
Sample Table

	Sample ID	Type	Ex	Conc	WL517.4	Comments
1	dpph	Unknown		*****	0.942	
2	eeap20	Unknown		*****	0.498	
3	eeap40	Unknown		*****	0.442	
4	eeap60	Unknown		*****	0.382	
5	eeap80	Unknown		*****	0.335	
6	eeap100	Unknown		*****	0.269	
7	eeap120	Unknown		*****	0.222	
8	eeap20.1	Unknown		*****	0.500	
9	eeap40.1	Unknown		*****	0.438	
10	eeap60.1	Unknown		*****	0.378	
11	eeap80.1	Unknown		*****	0.344	
12	eeap100.1	Unknown		*****	0.272	
13	eeap120.1	Unknown		*****	0.223	
14	eeap20.2	Unknown		*****	0.493	
15	eeap40.2	Unknown		*****	0.424	
16	eeap60.2	Unknown		*****	0.370	
17	eeap80.2	Unknown		*****	0.342	
18	eeap100.2	Unknown		*****	0.281	

Lampiran 16. Lanjutan**Sample Table Report**

05/25/2018 07:26:57 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\ammaeeapnew.pho



Sample Table

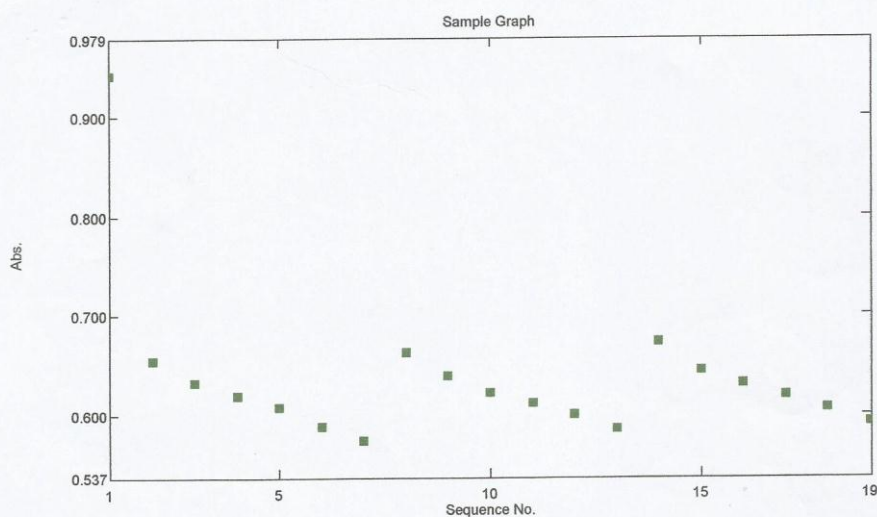
	Sample ID	Type	Ex	Conc	WL517.4	Comments
19	eeap120.2	Unknown		*****	0.223	
20						

Lampiran 17. Pembacaan Absorbansi Sampel Ekstrak *n*-Heksan Antioksidan

Sample Table Report

05/24/2018 06:50:37 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\ammaenhph.pho



Sample Table

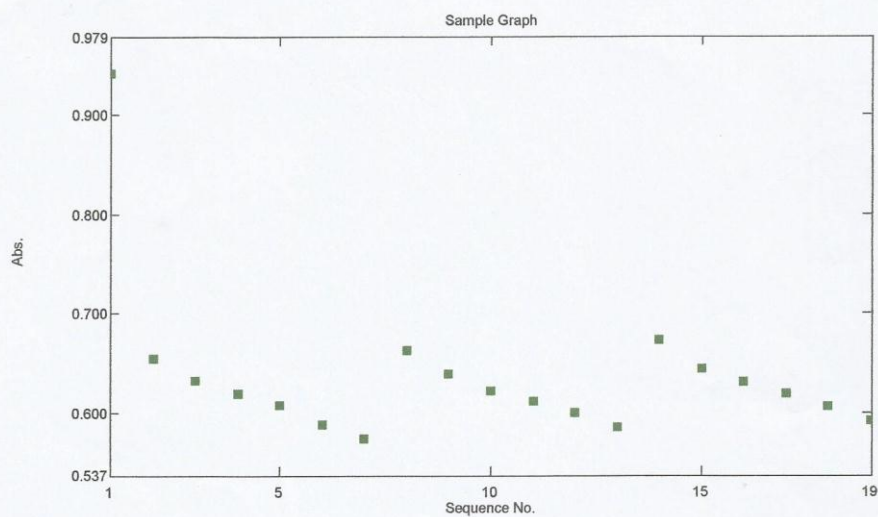
	Sample ID	Type	Ex	Conc	WL517.4	Comments
1	dpph	Unknown		-3.689	0.942	
2	enhph20	Unknown		1.389	0.655	
3	enhph40	Unknown		1.781	0.633	
4	enhph60	Unknown		2.020	0.619	
5	enhph80	Unknown		2.217	0.608	
6	enhph100	Unknown		2.571	0.588	
7	enhph120	Unknown		2.820	0.574	
8	enhph20.1	Unknown		1.260	0.662	
9	enhph40.1	Unknown		1.667	0.639	
10	enhph60.1	Unknown		1.979	0.621	
11	enhph80.1	Unknown		2.150	0.612	
12	enhph100.1	Unknown		2.352	0.600	
13	enhph120.1	Unknown		2.610	0.586	
14	enhph20.2	Unknown		1.078	0.672	
15	enhph40.2	Unknown		1.567	0.645	
16	enhph60.2	Unknown		1.800	0.632	
17	enhph80.2	Unknown		2.018	0.619	
18	enhph100.2	Unknown		2.239	0.607	

Lampiran 17. Lanjutan

Sample Table Report

05/24/2018 06:50:37 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\ammaenhp.pho



Sample Table

	Sample ID	Type	Ex	Conc	WL517.4	Comments
19	enhp120.2	Unknown		2.501	0.592	
20						

Lampiran 18. Perhitungan Aktivitas Antioksidan

Rumus:

$$\% \text{ Aktivitas Antioksidan} = \frac{\text{Absorbansi kontrol} - \text{absorbansi sampel}}{\text{absorbansi kontrol}} \times 100 \%$$

Regresi linier = Seri konsentrasi ($\mu\text{g/mL}$) VS Aktivitas antioksidan (%)

IC_{50} = nilai x, ketika y = 50

Aktivitas antioksidan

Nilai IC_{50}	Aktivitas antioksidan
< 50	Sangat kuat
50 – 100	Kuat
101 – 150	Sedang
> 150	Lemah

a. Vitamin C

Uji Aktivitas Antioksidan			
Sampel	Seri konsentrasi ($\mu\text{g/mL}$)	Absorbansi sampel	Aktivitas Antioksidan (%)
Vitamin C Replikasi 1	1	0,680	27,813
	2	0,611	35,138
	3	0,572	39,278
	4	0,466	50,531
	5	0,428	54,565
	6	0,392	58,386
	7	0,335	64,437
	8	0,312	66,879
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Vitamin C Replikasi 2	1	0,707	24,947
	2	0,614	34,819
	3	0,574	39,066
	4	0,468	50,318
	5	0,428	54,565
	6	0,386	59,023
	7	0,347	63,163

Lampiran 18. Lanjutan

	8	0,316	66,454
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Vitamin C Replikasi 3	1	0,694	26,327
	2	0,620	34,182
	3	0,586	37,792
	4	0,472	49,893
	5	0,429	54,458
	6	0,382	59,448
	7	0,333	64,650
	8	0,314	66,667
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Rerata Vitamin C	1	0,694	26,327
	2	0,615	34,713
	3	0,577	38,747
	4	0,469	50,212
	5	0,428	54,565
	6	0,387	58,917
	7	0,338	64,119
	8	0,314	66,667
Absorbansikontrol (DPPH 0,1 mM)		0,942	

Regresi Linier Vitamin C (Konsentrasi vs % aktivitas antioksidan)

Replikasi 1

A = 23,8436

B = 5,7299

r = 0,9883

Y = 5,7299x + 23,8436

50 = 5,7299x + 23,8436

IC₅₀ = x = 4,5649 µg/mL (Sangat kuat)

Replikasi 2

A = 22,4522

B = 5,9094

r = 0,9834

Y = 5,9094x + 22,4522

50 = 5,9094x + 22,4522

IC₅₀ = x = 4,6617 µg/mL (Sangat kuat)

Replikasi 3

A = 22,1636

B = 6,0030

Lampiran 18. Lanjutan

$$r = 0,9863$$

$$Y = 6,0030x + 22,1636$$

$$50 = 6,0030x + 22,1636$$

$$IC_{50} = x = 4,6371 \mu\text{g/mL (Sangat kuat)}$$

Rerata Regresi Linier Vitamin C (Konsentrasi vs % aktivitas antioksidan)

$$A = 22,8045$$

$$B = 5,8842$$

$$r = 0,9865$$

$$Y = 5,8842x + 22,8045$$

$$50 = 5,8842x + 22,8045$$

$$IC_{50} = x = 4,6220 \mu\text{g/mL (Sangat kuat)}$$

b. Ekstrak Etanol 96 %

Uji Aktivitas Antioksidan			
Sampel	Seri konsentrasi ($\mu\text{g/mL}$)	Absorbansi sampel	Aktivitas Antioksidan (%)
Ekstrak Etanol Replikasi 1	20	0,551	41,507
	40	0,510	45,860
	60	0,465	50,637
	80	0,378	59,873
	100	0,295	68,684
	120	0,262	72,187
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak Etanol Replikasi 2	20	0,547	41,932
	40	0,508	46,072
	60	0,461	51,061
	80	0,370	60,722
	100	0,285	69,745
	120	0,252	73,248
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak Etanol Replikasi 3	20	0,555	41,083
	40	0,516	45,223
	60	0,468	50,318
	80	0,383	59,342
	100	0,304	67,728

Lampiran 18. Lanjutan

	120	0,250	73,461
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Rerata Ektrak Etanol	20	0,551	41,507
	40	0,511	45,754
	60	0,465	50,637
	80	0,377	59,979
	100	0,295	68,684
	120	0,255	72,930
Absorbansi kontrol (DPPH 0,1 mM)		0,942	

Regresi linier Ekstrak Etanol 96 % (Konsentrasi vs % aktivitas antioksidan)

Replikasi 1

$$A = 33,3472$$

$$B = 0,3301$$

$$r = 0,9901$$

$$Y = 0,3301x + 33,3472$$

$$50 = 0,3301x + 33,3472$$

$$IC_{50} = x = 50,448 \mu\text{g/mL (Kuat)}$$

Replikasi 2

$$A = 33,4040$$

$$B = 0,3389$$

$$r = 0,9891$$

$$Y = 0,3389x + 33,4040$$

$$50 = 0,3389x + 33,4040$$

$$IC_{50} = x = 48,970 \mu\text{g/mL (Sangat Kuat)}$$

Replikasi 3

$$A = 32,3496$$

$$B = 0,3406$$

$$r = 0,9926$$

$$Y = 0,3406x + 32,3496$$

$$50 = 0,3406x + 32,3496$$

$$IC_{50} = x = 51,821 \mu\text{g/mL (Kuat)}$$

Regresi linier rata ekstrak etanol 96 % (Konsentrasi vs % aktivitas antioksidan)

$$A = 33,0571$$

$$B = 0,3361$$

$$r = 0,9909$$

Lampiran 18. Lanjutan

$$Y = 0,3361x + 33,0571$$

$$50 = 0,3361x + 33,0571$$

$$IC_{50} = x = 49,744 \mu\text{g/mL (Sangat kuat)}$$

Replikasi	IC ₅₀	Rata-rata = 50,413 SD = 1,426
1	50,448	
2	48,970	
3	51,821	

c. Ekstrak Etil Asetat

Uji Aktivitas Antioksidan			
Sampel	Seri konsentrasi (μg/mL)	Absorbansi sampel	Aktivitas Antioksidan (%)
Ekstrak Etil Asetat Replikasi 1	20	0,498	47,134
	40	0,442	53,078
	60	0,382	59,448
	80	0,335	64,437
	100	0,269	71,444
	120	0,222	76,433
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak Etil Asetat Replikasi 2	20	0,500	46,921
	40	0,438	53,503
	60	0,378	59,873
	80	0,344	63,482
	100	0,272	71,125
	120	0,223	76,327
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak Etil Asetat Replikasi 3	20	0,493	47,664
	40	0,424	54,989
	60	0,370	60,722
	80	0,342	63,694
	100	0,281	70,170
	120	0,223	76,327
Absorbansi kontrol (DPPH 0,1 mM)		0,942	

Lampiran 18. Lanjutan

Rata-rata Ekstrak Etil Asetat	20	0,497	47,240
	40	0,435	53,822
	60	0,377	59,979
	80	0,340	63,906
	100	0,274	70,913
	120	0,223	76,327
Absorbansi kontrol (DPPH 0,1 mM)		0.942	

Regresi linier Etil Asetat (Konsentrasi vs % aktivitas antioksidan)

Replikasi 1

$$A = 41,3375$$

$$B = 0,2951$$

$$r = 0,9993$$

$$Y = 0,2951x + 41,3375$$

$$50 = 0,2951x + 41,3375$$

$$IC_{50} = x = 29,354 \mu\text{g/mL} \text{ (Sangat Kuat)}$$

Replikasi 2

$$A = 41,5213$$

$$B = 0,2907$$

$$r = 0,9974$$

$$Y = 0,2907x + 41,5213$$

$$50 = 0,2907x + 41,5213$$

$$IC_{50} = x = 29,166 \mu\text{g/mL} \text{ (Sangat Kuat)}$$

Replikasi 3

$$A = 41,0780$$

$$B = 0,2740$$

$$r = 0,9952$$

$$Y = 0,2740x + 41,0780$$

$$50 = 0,2740x + 41,0780$$

$$IC_{50} = x = 32,562 \mu\text{g/mL} \text{ (Sangat Kuat)}$$

Regresi linier rerata ekstrak etil asetat (Konsentrasi vs % aktivitas antioksidan)

$$A = 41,9677$$

$$B = 0,2866$$

$$r = 0,9982$$

$$Y = 0,2866x + 41,9677$$

Lampiran 18. Lanjutan

$$50 = 0,2866x + 41,9677$$

$$IC_{50} = x = 28,026 \mu\text{g/mL (Sangat Kuat)}$$

Replikasi	IC ₅₀	Rata-rata = 30,361 SD = 1,909
1	29,354	
2	29,166	
3	32,562	

d. Ekstrak *n*-Heksan

Uji Aktivitas Antioksidan			
Sampel	Seri konsentrasi (μg/mL)	Absorbansi sampel	Aktivitas Antioksidan (%)
Ekstrak <i>n</i> -Heksan Replikasi 1	20	0,655	30,467
	40	0,633	32,802
	60	0,619	34,289
	80	0,608	35,456
	100	0,588	37,580
	120	0,574	39,066
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak <i>n</i> -Heksan Replikasi 2	20	0,662	29,724
	40	0,639	32,166
	60	0,621	34,076
	80	0,612	35,032
	100	0,600	36,306
	120	0,586	37,792
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Ekstrak <i>n</i> -Heksan Replikasi 3	20	0,672	28,662
	40	0,645	31,529
	60	0,632	32,909
	80	0,619	34,289
	100	0,607	35,563
	120	0,592	37,155
Absorbansi kontrol (DPPH 0,1 mM)		0,942	
Rata-rata Ekstrak <i>n</i> -Heksan	20	0,663	29,618
	40	0,639	32,166
	60	0,624	33,758

Lampiran 18. Lanjutan

	80	0,613	34,926
	100	0,598	36,518
	120	0,584	38,004
Absorbansi kontrol (DPPH 0,1 mM)		0.942	

Regresi linier *n*-Heksan (Konsentrasi vs % aktivitas antioksidan)

Replikasi 1

$$A = 29,0937$$

$$B = 0,0836$$

$$r = 0,9961$$

$$Y = 0,0836x + 29,0937$$

$$50 = 0,0836x + 29,0937$$

$$IC_{50} = x = 250,075 \mu\text{g/mL (Sangat Lemah)}$$

Replikasi 2

$$A = 28,8111$$

$$B = 0,0767$$

$$r = 0,9881$$

$$Y = 0,0767x + 28,8111$$

$$50 = 0,0767x + 28,8111$$

$$IC_{50} = x = 276,257 \mu\text{g/mL (Sangat Lemah)}$$

Replikasi 3

$$A = 27,7565$$

$$B = 0,0799$$

$$r = 0,9887$$

$$Y = 0,0799x + 27,7565$$

$$50 = 0,0799x + 27,7565$$

$$IC_{50} = x = 278,392 \mu\text{g/mL (Sangat lemah)}$$

Regresi linier rerata ekstrak *n*-Heksan (konsentrasi vs % aktivitas antioksidan)

$$A = 28,5080$$

$$B = 0,0793$$

$$r = 0,9886$$

$$Y = 0,0793x + 28,5080$$

$$50 = 0,0793x + 28,5080$$

$$IC_{50} = x = 271,021 \mu\text{g/mL (Sangat lemah)}$$

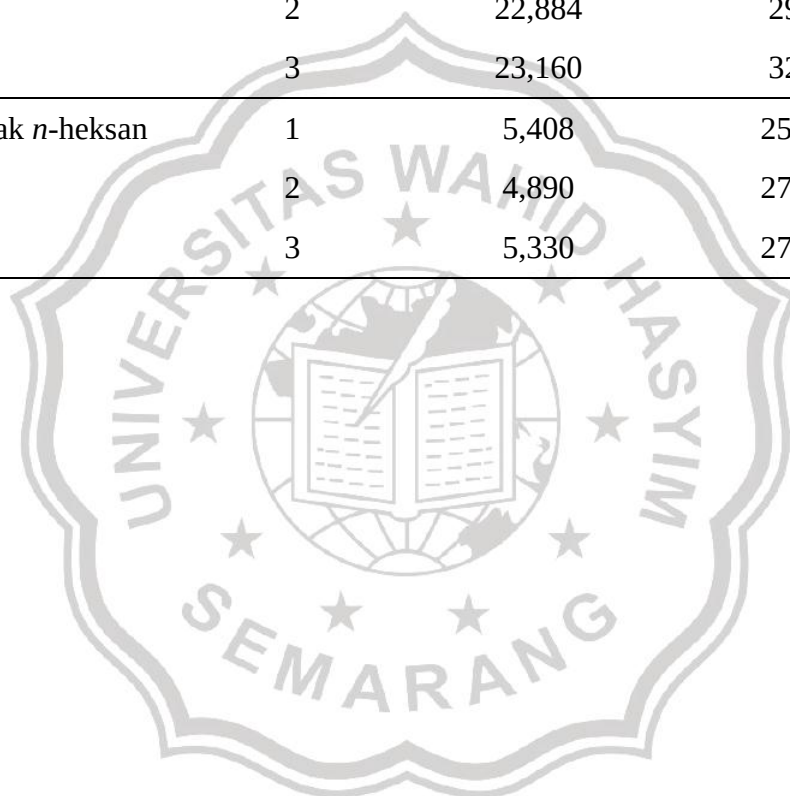
Lampiran 18. Lanjutan

Replikasi	IC ₅₀	Rata-rata = 268,241 SD = 15,769
1	250,075	
2	276,257	
3	278,392	



Lampiran 19. Data Analisis Korelasi

Sampel	Replikasi	Kandungan Flavonoid Total (mg/gram)	IC ₅₀ (µg/mL)
Ekstrak Etanol 96 %	1	13,810	50,448
	2	13,692	48,970
	3	13,614	51,821
Ekstrak Etil Asetat	1	23,160	29,351
	2	22,884	29,166
	3	23,160	32,562
Ekstrak <i>n</i> -heksan	1	5,408	250,075
	2	4,890	276,257
	3	5,330	278,392



Lampiran 20. Hasil Analisis Data

a. Uji Normalitas Data

Tests of Normality						
Ekstrak daun petai		Kolmogorov-Smirnov ^a			Shapiro-Wilk	
		Statistic	df	Sig.	Statistic	df Sig.
Kadar Flavonoid	Etanol	.220	3	.	.986	3 .776
	Etil Asetat	.385	3	.	.750	3 .000
	n-Heksan	.334	3	.	.860	3 .268
Nilai IC50	Etanol	.178	3	.	1.000	3 .959
	Etil Asetat	.368	3	.	.791	3 .094
	n-Heksan	.361	3	.	.806	3 .129

b. Uji Korelasi Spearman

Correlations					
			Ekstrak daun petai	Kadar Flavonoid	Nilai IC50
Spearman's rho	Ekstrak daun petai	Correlation Coefficient	1.000	-.476	.474
		Sig. (2-tailed)	.	.195	.197
		N	9	9	9
	Kadar Flavonoid	Correlation Coefficient	-.476	1.000	-.912 ^{**}
		Sig. (2-tailed)	.195	.	.001
		N	9	9	9
	Nilai IC50	Correlation Coefficient	.474	-.912 ^{**}	1.000
		Sig. (2-tailed)	.197	.001	.
		N	9	9	9

Lampiran 21. Dokumentasi

1. Proses Pembuatan Serbuk Simplisia Daun Petai



Simplisia daun petai



Serbuk kering daun petai



Kadar air
7 %

2. Proses Pembuatan Ekstrak Etanol 96 %, Etil Asetat, dan *n*-Heksan Daun Petai

a. Penimbangan Serbuk Daun Petai



Penimbangan serbuk
untuk ekstrak etanol
96%



Penimbangan serbuk
untuk ekstrak etil asetat



Penimbangan serbuk
untuk ekstrak *n*-heksan

Lampiran 21. Lanjutan

b. Ekstraksi Perkolasi Daun Petai



Ekstraksi daun petai
(pelarut etanol 96 %)



Ekstraksi daun petai
(pelarut etil asetat)



Ekstraksi daun petai
(pelarut *n*-heksan)

c. Ekstrak Kental daun petai



Ekstrak etanol 96 %



Ekstrak etil asetat



Ekstrak *n*-heksan

3. Penetapan Kadar Flavonoid Total



Kuersetin ditambah dengan pereaksi



Sampel ekstrak ditambah dengan
pereaksi

Lampiran 21. Lanjutan

4. Uji Aktivitas Antioksidan



Vitamin c ditambah dengan DPPH



Sampel ekstrak ditambah dengan
DPPH

