

## Lampiran 1. Surat Keterangan Determinasi



KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI  
UNIVERSITAS DIPONEGORO  
FAKULTAS SAINS DAN MATEMATIKA  
LABORATORIUM EKOLOGI DAN BIOSISTEMATI DEPARTEMEN BIOLOGI  
II. Prof. H. Soedarto SH Tambalang Semarang, 024 7474754 024 76480023

### SURAT KETERANGAN

Yang bertanda tangan dibawah ini, menyatakan bahwa mahasiswa sbb :

|                  |                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nama             | : Muhammad Nor Fauzi                                                                                                                                  |
| NIM              | : 145010027                                                                                                                                           |
| Fakultas / Prodi | : FARMASI                                                                                                                                             |
| Perguruan Tinggi | : UNIVERSITAS WAHID HASYIM SEMARANG                                                                                                                   |
| Judul Penelitian | : "Uji Aktivitas Antioksidan dan Penetapan Kadar Fenolik Total Ekstrak Etanol, Etil Asetat, dan n-Heksan Daun Kersen ( <i>Muntingia calabura</i> L.)" |
| Pembimbing       | : —                                                                                                                                                   |

Telah melakukan determinasi / identifikasi sampel tumbuhan (satu jenis) di Laboratorium Ekologi dan Biosistemati Departemen Biologi Fakultas Sains dan Matematika UNIVERSITAS DIPONEGORO. Hasil determinasi / identifikasi terlampir.

Demikian Surat Keterangan ini dibuat untuk dapat digunakan seperlunya.

Semarang, Desember 2017

Laboratorium Ekologi Dan Biosistemati



Dr. Muhammad Hadi, M.Si

NIP. 196001081987031002

## Lampiran 2. Hasil Determinasi Daun Kersen



KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI  
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LABORATORIUM EKOLOGI DAN BIOSISTEMATIK DEPARTEMEN BIOLOGI  
Il. Prof. H. Soedarto SH Tembalang Semarang, 024 7474754, 024 76480923

### HASIL DETERMINASI / IDENTIFIKASI

#### KLASIFIKASI

Kingdom : Plantae (Tumbuhan)  
Subkingdom : Tracheobionta (Tumbuhan berpembuluh)  
Super Divisi : Spermatophyta (Menghasilkan biji)  
Divisi : Magnoliophyta (Tumbuhan berbunga)  
Kelas : Magnoliopsida – Dicotyledoneae (berkeping dua / dikotil)  
Sub Kelas : -  
Ordo : Malvales  
Famili : Tiliaceae  
Genus : *Muntingia*  
Spesies : *Muntingia calabura* L.  
(Kersen, Talok )

#### DETERMINASI

1b, 2b, 3b, 4b, 6b, 7b, 9b, 10b, 11b, 12b, 13b, 14a, 15a, Golongan 8. Tanaman dengan daun tunggal dan tersebar. 109b, 119b, 120b, 128b, 129b, 135b, 136b, 139b, 140b, 142b, 143b, 146b, 154b, 155b, 145b, 162b, 163b, 167b, 169b, 171b, 177b, 179b, 187a, 188b, Famili 74. Tiliaceae ..... Genus 1. *Muntingia* ..... Spesies : *Muntingia calabura* L. (Kersen)

#### DESKRIPSI

Pohon kecil, tinggi 2-10 m. Hijau abadi dan terus menerus berbunga dan berbuah sepanjang tahun. Cabang-cabang mendatar, menggantung di ujungnya; membentuk naungan yang rindang. Ranting diselubungi rapat oleh rambut biasa yang halus dan oleh rambut kelenjar. Daun terletak mendatar, berseling, helaian daun sangat tidak sama sisi, bulat telur bentuk lanset, ujung runcing, tepi bergerigi, berambut rapat, ukuran 4,5-14 kali 1,5-4 cm, tangkai pendek, berambut seperti wool rapat. Bunga kersen, muncul di antara dedaunan. Bunga 1-3 menjadi satu di ketiak daun, berbilangan 5, berkelamin 2. Kelopak berbagi dalam, tajuk meruncing menjadi bentuk benang, berambut halus. Daun mahkota tepi rata, bulat telur terbalik, gundul, putih, panjang 8-11 mm. Tonjolan dasar bunga bentuk cawan. Benang sari banyak, terutama pada tonjolan dasar bunga. Bakal buah bertangkai pendek, gundul, beruang 5-6. Kepala putik hampir duduk, berlekuk 5-6. Buah buni dimahkotai oleh tangkai putik yang tetap, akhirnya merah, panjang 1 cm. Dari Amerika tropis. Banyak ditanam di kebun sebagai pohon peneduh.

## Lampiran 2. Lanjutan



KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI  
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LABORATORIUM EKOLOGI DAN BIOSISTEMATIKA DEPARTEMEN BIOLOGI  
II. Prof. H. Soedarto SH Tembalang Semarang, 024 7474754 024 76480923

### PUSTAKA :

- Backer, CA, RCB Van Den Brink, 1963. Flora of Java. Volume I (III). NV. Noordhoff, Groningen, The Netherlands.
- Van Steenis, C.G.G.J. 1981. Flora, Untuk Sekolah Indonesia. P.T. Pradnya Paramita, Jakarta.



### Lampiran 3. Surat Telah Melakukan Penelitian



UNIVERSITAS WAHID HASYIM  
FAKULTAS FARMASI  
BAGIAN BIOLOGI FARMASI

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

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**SURAT KETERANGAN**

No.113/Lab. Biologi Farmasi/C.05/UWH/VI/2018

Assalamu'alaikum Wr. Wb.

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

Nama : Muhammad Nor Fauzi  
NIM : 145010027  
Fakultas : Farmasi

Telah melakukan pembuatan ekstrak daun kersen dalam rangka penelitian dengan judul: "Uji Aktivitas Antioksidan dan Penetapan Kadar Fenolik Total Ekstrak Etanol, Etil Asetat dan N-Heksan Daun Kersen (*Muntingia calabura* L.)"

Demikian surat keterangan ini dibuat untuk dipergunakan semestinya.

Wassalamu'alaikum Wr. Wb.

Semarang, Juni 2018



Kepala Bagian Biologi Farmasi

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

### Lampiran 3. Lanjutan



**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. 03/Lab. Kimia Farmasi/ C.05/UWH/VI/ 2018

Assalamu'alaikum Wr. Wb.

Yang bertanda tangan dibawah ini, Kepala Bagian Kimia Farmasi Fakultas Farmasi Universitas Wahid Hasyim Semarang menerangkan bahwa :

Nama : Muhammad Nor Fauzi  
NIM : 145010027  
Fak/ Univ/ Sekolah : Farmasi / Universitas Wahid Hasyim

Telah melakukan Penelitian Antioksidan dan Penetapan Kadar Fenolik Total menggunakan Spektrofotometer UV-Vis di Laboratorium Kimia Analisa, Fakultas Farmasi Universitas Wahid Hasyim Semarang, dengan judul penelitian :

“ Uji Aktivitas Antioksidan dan Penetapan Kadar Fenolik Total Ekstrak Etanol, n-Heksan dan Etil Asetat Daun Kersen (*Muntingia calabura* L.) ”

Demikian surat keterangan ini dibuat untuk dipergunakan semestinya.

Wassalamu'alaikum Wr. Wb.

Semarang, Juni 2018

Ka. Bag Kimia Farmasi



Ulfah, M.Sc, Apt

#### Lampiran 4. Perhitungan Susut Pengeringan dan Rendemen Ekstrak

##### a. Perhitungan Susut Pengeringan

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

$$\text{Susut Pengeringan} = \frac{10000 \text{ gram} - 3130 \text{ gram}}{10000 \text{ gram}} \times 100 \%$$

$$\text{Susut Pengeringan} = \frac{6870 \text{ gram}}{10000 \text{ gram}} \times 100 \%$$

$$\text{Susut Pengeringan} = 68,7 \%$$

##### b. Perhitungan Rendemen Ekstrak

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

$$\text{Rendemen Ekstrak Etanol} = \frac{15 \text{ gram}}{100 \text{ gram}} \times 100 \% = 15 \%$$

$$\text{Rendemen Ekstrak Etil Asetat} = \frac{5 \text{ gram}}{100 \text{ gram}} \times 100 \% = 5 \%$$

$$\text{Rendemen Ekstrak n-Heksan} = \frac{7 \text{ gram}}{100 \text{ gram}} \times 100 \% = 7 \%$$

## Lampiran 5. Perhitungan Pembuatan Larutan Induk Ekstrak

### a. Penimbangan Ekstrak

#### Ekstrak etanol

| Keterangan               | Penimbangan |
|--------------------------|-------------|
| Berat kaca arloji kosong | 7185,0 mg   |
| Berat kaca arloji + zat  | 7685,5 mg   |
| Berat kaca arloji + sisa | 7185,5 mg   |
| Berat Ekstrak Etanol     | 500 mg      |

#### Ekstrak etil asetat

| Keterangan                    | Penimbangan |
|-------------------------------|-------------|
| Berat kaca arloji kosong      | 6483,6 mg   |
| Berat kaca arloji + zat       | 6983,9 mg   |
| Berat kaca arloji + sisa      | 6483,9 mg   |
| Berat zat ekstrak etil asetat | 500 mg      |

#### Ekstrak n-heksan

| Keterangan               | Penimbangan |
|--------------------------|-------------|
| Berat kaca arloji kosong | 6685,4 mg   |
| Berat kaca arloji + zat  | 7185,8 mg   |
| Berat kaca arloji + sisa | 6685,8 mg   |
| Berat zat n-heksan       | 500 mg      |

### b. Pembuatan larutan stok ekstrak etanol , etil asetat, dan n-heksan daun kersen 50000 ppm sebanyak 10 mL

Ekstrak 50000 ppm = 0,5 gram/10 mL

$$= 500 \text{ mg}/10 \text{ mL}$$

Ekstrak etanol, etil asetat, dan n-heksan daun kersen 500 mg dilarutkan dalam etanol p.a ad 10 mL, dalam labu takar.

### Lampiran 6. Perhitungan Pembuatan Larutan DPPH dan Seri Konsentrasi Vitamin C dan Estrak Etanol, Etil Asetat, dan n-Heksan

- a. Pembuatan larutan stok 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 DPPH dilarutkan dalam etanol p.a ad 250 mL.

DPPH ditimbang sebanyak ~ 10 mg.

- b. Pembuatan larutan stok vitamin C 100 ppm sebanyak 100 mL

$$\text{Vitamin C } 100 \text{ ppm} = 0,01 \text{ gram/100 mL}$$

$$= 10 \text{ mg/100 mL}$$

Serbuk vitamin C sebanyak 10 mg dilarutkan dalam aquadest ad 100 mL dalam labu takar.

- c. Penimbangan vitamin C

| Keterangan               | Penimbangan |
|--------------------------|-------------|
| Berat kaca arloji kosong | 6480,1 mg   |
| Berat kaca arloji + zat  | 6491,1 mg   |
| Berat kaca arloji + sisa | 6481,1 mg   |
| Berat zat (vitamin C)    | 10,0 mg     |

**Lampiran 6. Lanjutan****d. Pembuatan Seri Konsentrasi dari Larutan stok 100 ppm sebanyak 5 mL**

a. 1 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 1 \text{ µg/mL}$$

$$V_1 = 0,05 \text{ mL} \sim 50 \text{ µL}$$

b. 2 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 2 \text{ µg/mL}$$

$$V_1 = 0,1 \text{ mL} \sim 100 \text{ µL}$$

c. 3 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 3 \text{ µg/mL}$$

$$V_1 = 0,15 \text{ mL} \sim 150 \text{ µL}$$

d. 4 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 4 \text{ µg/mL}$$

$$V_1 = 0,2 \text{ mL} \sim 200 \text{ µL}$$

e. 5 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 5 \text{ µg/mL}$$

$$V_1 = 0,25 \text{ mL} \sim 250 \text{ µL}$$

f. 6 µg/mL     $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \text{ µg/mL} = 5 \text{ mL} \times 6 \text{ µg/mL}$$

$$V_1 = 0,3 \text{ mL} \sim 300 \text{ µL}$$

## Lampiran 6. Lanjutan

g.  $7 \mu\text{g/mL}$   $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \mu\text{g/mL} = 5 \text{ mL} \times 7 \mu\text{g/mL}$$

$$V_1 = 0,35 \text{ mL} \sim 350 \mu\text{L}$$

h.  $8 \mu\text{g/mL}$   $V_1 \times C_1 = V_2 \times C_2$

$$V_1 \times 100 \mu\text{g/mL} = 5 \text{ mL} \times 8 \mu\text{g/mL}$$

$$V_1 = 0,4 \text{ mL} \sim 400 \mu\text{L}$$

**e. Data penimbangan pembuatan larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen**

### Ekstrak etanol

| Keterangan               | Penimbangan |
|--------------------------|-------------|
| Berat kaca arloji kosong | 6232,3 mg   |
| Berat kaca arloji + zat  | 6282,5 mg   |
| Berat kaca arloji + sisa | 6232,5 mg   |
| Berat zat ekstrak etanol | 50 mg       |

### Ekstrak etil asetat

| Keterangan                    | Penimbangan |
|-------------------------------|-------------|
| Berat kaca arloji kosong      | 7834,2 mg   |
| Berat kaca arloji + zat       | 7884,4 mg   |
| Berat kaca arloji + sisa      | 7834,4 mg   |
| Berat zat ekstrak etil asetat | 50 mg       |

### Ekstrak n-heksan

| Keterangan                 | Penimbangan |
|----------------------------|-------------|
| Berat kaca arloji kosong   | 6872,5 mg   |
| Berat kaca arloji + zat    | 6922,7 mg   |
| Berat kaca arloji + sisa   | 6872,7 mg   |
| Berat zat ekstrak n-heksan | 50 mg       |

## Lampiran 6. Lanjutan

### **f. Pembuatan larutan stok ekstrak etanol , etil asetat, dan n-heksan daun kersen 1000 ppm sebanyak 50 mL**

Ekstrak 1000 ppm = 50 mg/50 mL

Ekstrak etanol, etil asetat, dan n-heksan daun kersen 50 mg dilarutkan dalam etanol p.a ad 50 mL, dalam labu takar.

#### 1) Membuat seri konsentrasi ekstrak etanol, etil asetat, n-heksan daun kersen

5 ppm sebanyak 5 mL

$$5 \text{ ppm } V_1 \times C_1 = V_2 \times V_2$$

$$V_1 \times 1000 \text{ ppm} = 5 \text{ mL} \times 5 \text{ ppm}$$

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

Sebanyak 25  $\mu\text{L}$  larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen 1000 ppm diencerkan dalam etanol p.a ad 5 mL

#### 2) Membuat seri konsentrasi ekstrak etanol, etil asetat, n-heksan daun kersen

10 ppm sebanyak 5 mL

$$10 \text{ ppm } V_1 \times C_1 = V_2 \times V_2$$

$$V_1 \times 1000 \text{ ppm} = 5 \text{ mL} \times 10 \text{ ppm}$$

$$V_1 = 0,05 \text{ mL} \sim 50 \mu\text{L}$$

Sebanyak 50  $\mu\text{L}$  larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen 1000 ppm diencerkan dalam etanol p.a ad 5 mL

## Lampiran 6. Lanjutan

- 3) Membuat seri konsentrasi ekstrak etanol, etil asetat, n-heksan daun kersen

15 ppm sebanyak 5 mL

$$15 \text{ ppm } V_1 \times C_1 = V_2 \times V_2$$

$$V_1 \times 1000 \text{ ppm} = 5 \text{ mL} \times 15 \text{ ppm}$$

$$V_1 = 0,075 \text{ mL} \sim 75 \mu\text{L}$$

Sebanyak 75  $\mu\text{L}$  larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen 1000 ppm diencerkan dalam etanol p.a ad 5 mL

- 4) Membuat seri konsentrasi ekstrak etanol, etil asetat, n-heksan daun kersen

20 ppm sebanyak 5 mL

$$20 \text{ ppm } V_1 \times C_1 = V_2 \times V_2$$

$$V_1 \times 1000 \text{ ppm} = 5 \text{ mL} \times 20 \text{ ppm}$$

$$V_1 = 0,1 \text{ mL} \sim 100 \mu\text{L}$$

Sebanyak 100  $\mu\text{L}$  larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen 1000 ppm diencerkan dalam etanol p.a ad 5 mL

- 5) Membuat seri konsentrasi ekstrak etanol, etil asetat, n-heksan daun kersen

25 ppm sebanyak 5 mL

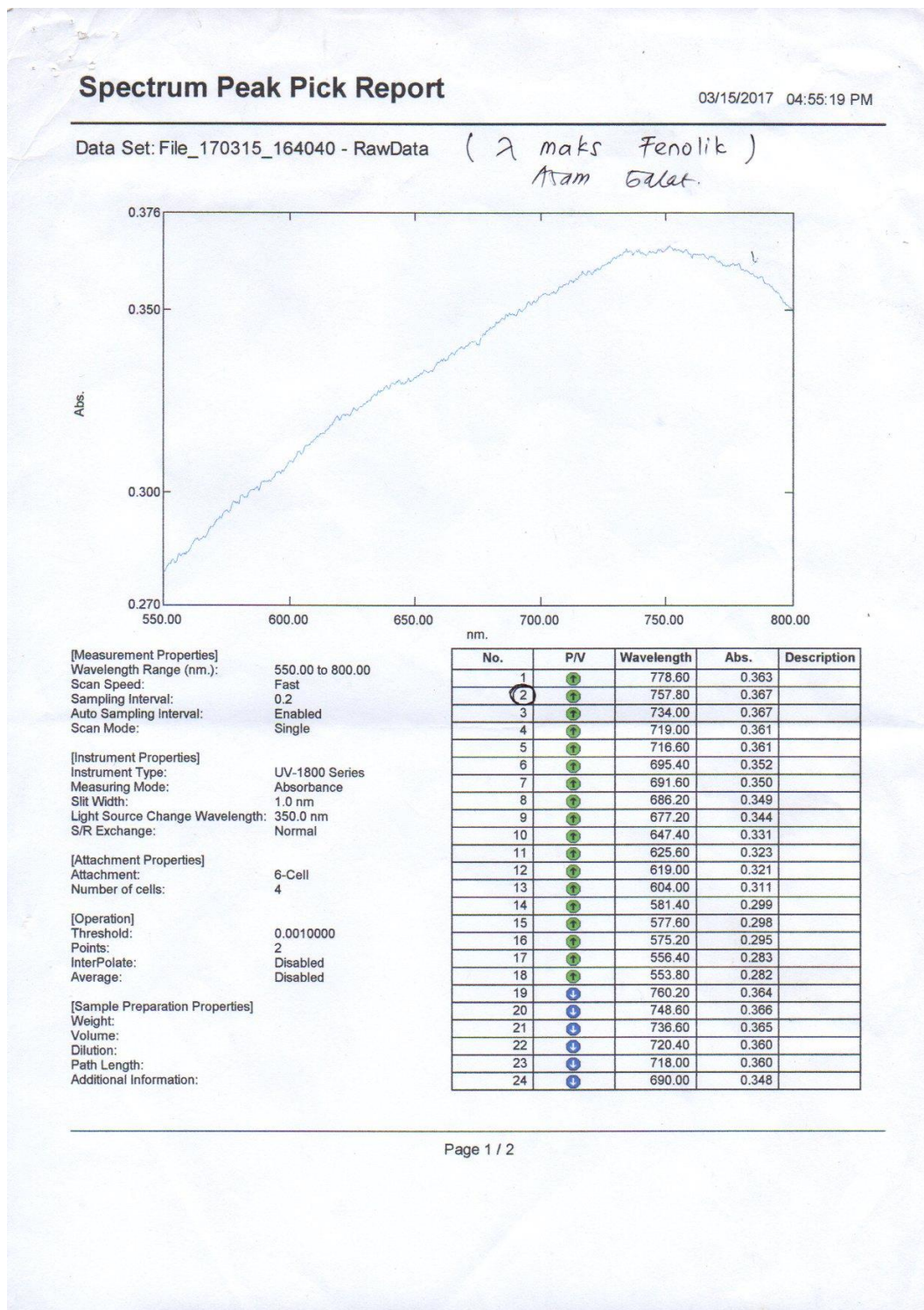
$$25 \text{ ppm } V_1 \times C_1 = V_2 \times V_2$$

$$V_1 \times 1000 \text{ ppm} = 5 \text{ mL} \times 25 \text{ ppm}$$

$$V_1 = 0,125 \text{ mL} \sim 125 \mu\text{L}$$

Sebanyak 125  $\mu\text{L}$  larutan stok ekstrak etanol, etil asetat, dan n-heksan daun kersen 1000 ppm diencerkan dalam etanol p.a ad 5 mL

## Lampiran 7. Penentuan Panjang Gelombang ( $\lambda$ ) Maksimum Asam Galat

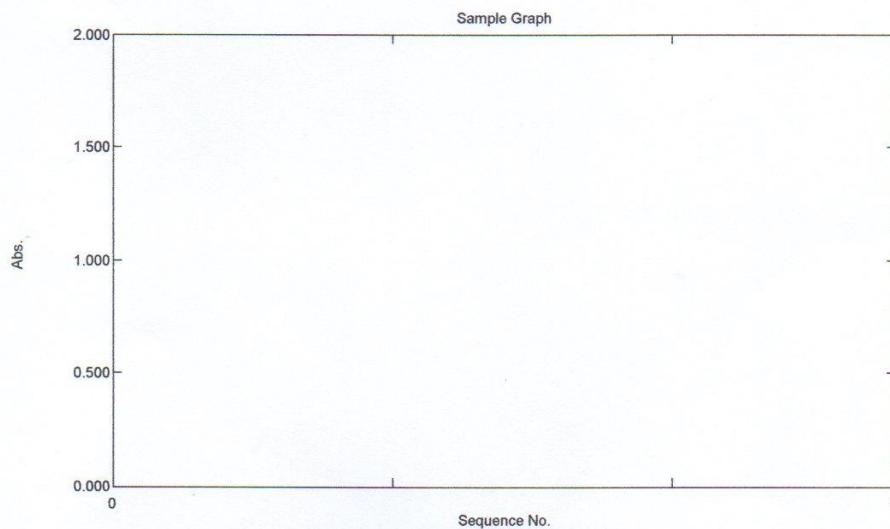


## Lampiran 8. Penentuan *Operating Time* (OT) Fenolik

### Sample Table Report

02/15/2018 11:52:48 AM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\ot fenolik ismail dkk.pho



Sample Table

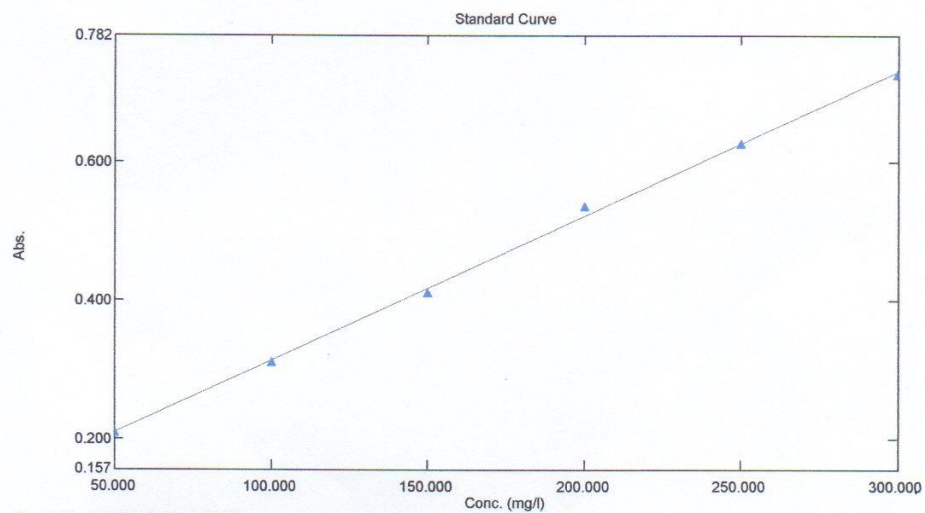
|    | Sample ID | Type    | Ex | Conc  | WL757.8 | Comments |
|----|-----------|---------|----|-------|---------|----------|
| 1  | 0.1       | Unknown |    | ***** | 0.237   |          |
| 2  | 5         | Unknown |    | ***** | 0.245   |          |
| 3  | 10        | Unknown |    | ***** | 0.255   |          |
| 4  | 15        | Unknown |    | ***** | 0.263   |          |
| 5  | 20        | Unknown |    | ***** | 0.272   |          |
| 6  | 25        | Unknown |    | ***** | 0.280   |          |
| 7  | 30        | Unknown |    | ***** | 0.291   |          |
| 8  | 45        | Unknown |    | ***** | 0.299   |          |
| 9  | 60        | Unknown |    | ***** | 0.316   |          |
| 10 | 75        | Unknown |    | ***** | 0.330   |          |
| 11 | 90        | Unknown |    | ***** | 0.366   |          |
| 12 | 105       | Unknown |    | ***** | 0.379   |          |
| 13 | 120       | Unknown |    | ***** | 0.401   |          |
| 14 | 135       | Unknown |    | ***** | 0.400   |          |
| 15 | 150       | Unknown |    | ***** | 0.400   |          |
| 16 |           |         |    |       |         |          |

## Lampiran 9. Penentuan Kandungan Fenolik Total

### Standard Table Report

02/15/2018 11:55:32 AM

File Name: C:\Program Files\Shimadzu\UVPProbe\Data\kb fenol mail.pho



Standard Table

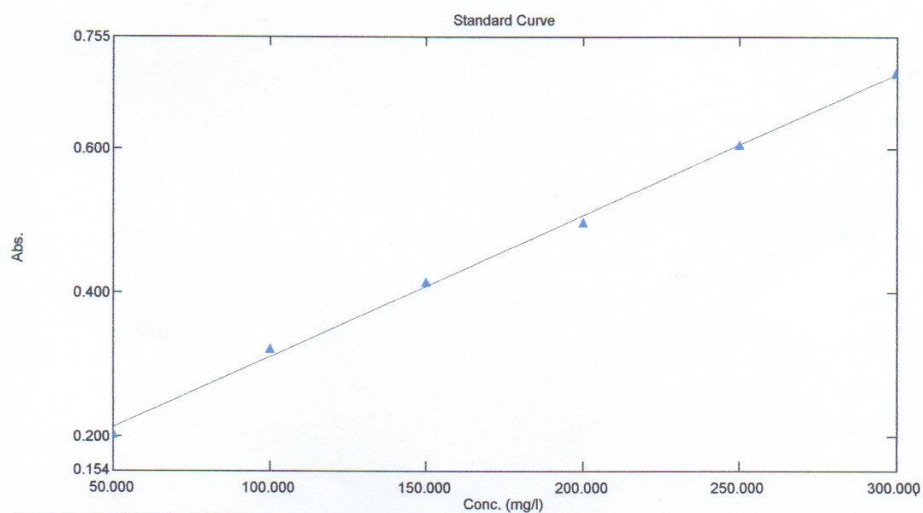
|   | Sample ID | Type     | Ex | Conc    | WL757.8 | Wgt.Factor | Comments |
|---|-----------|----------|----|---------|---------|------------|----------|
| 1 | 1         | Standard |    | 50.000  | 0.210   | 1.000      |          |
| 2 | 2         | Standard |    | 100.000 | 0.311   | 1.000      |          |
| 3 | 3         | Standard |    | 150.000 | 0.412   | 1.000      |          |
| 4 | 4         | Standard |    | 200.000 | 0.536   | 1.000      |          |
| 5 | 5         | Standard |    | 250.000 | 0.626   | 1.000      |          |
| 6 | 6         | Standard |    | 300.000 | 0.726   | 1.000      |          |
| 7 |           |          |    |         |         |            |          |

## Lampiran 9. Lanjutan

### Standard Table Report

02/15/2018 11:55:11 AM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\kb fenol mail1.pho



Standard Table

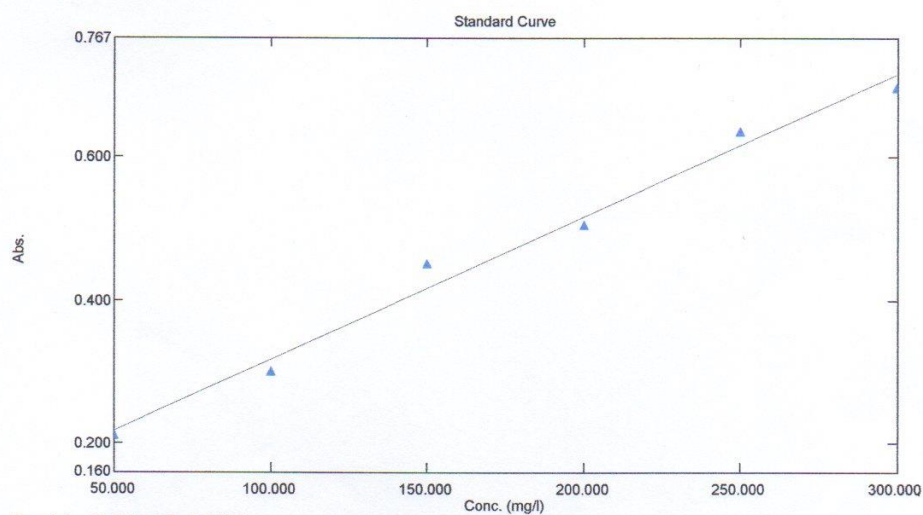
|   | Sample ID | Type     | Ex | Conc    | WL757.8 | Wgt.Factor | Comments |
|---|-----------|----------|----|---------|---------|------------|----------|
| 1 | 1         | Standard |    | 50.000  | 0.204   | 1.000      |          |
| 2 | 2         | Standard |    | 100.000 | 0.323   | 1.000      |          |
| 3 | 3         | Standard |    | 150.000 | 0.414   | 1.000      |          |
| 4 | 4         | Standard |    | 200.000 | 0.498   | 1.000      |          |
| 5 | 5         | Standard |    | 250.000 | 0.604   | 1.000      |          |
| 6 | 6         | Standard |    | 300.000 | 0.705   | 1.000      |          |
| 7 |           |          |    |         |         |            |          |

## Lampiran 9. Lanjutan

### Standard Table Report

02/15/2018 11:55:49 AM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\kb fenol mail2.pho



Standard Table

|   | Sample ID | Type     | Ex | Conc    | WL757.8 | Wgt.Factor | Comments |
|---|-----------|----------|----|---------|---------|------------|----------|
| 1 | 1         | Standard |    | 50.000  | 0.211   | 1.000      |          |
| 2 | 2         | Standard |    | 100.000 | 0.301   | 1.000      |          |
| 3 | 3         | Standard |    | 150.000 | 0.451   | 1.000      |          |
| 4 | 4         | Standard |    | 200.000 | 0.505   | 1.000      |          |
| 5 | 5         | Standard |    | 250.000 | 0.637   | 1.000      |          |
| 6 | 6         | Standard |    | 300.000 | 0.698   | 1.000      |          |
| 7 |           |          |    |         |         |            |          |

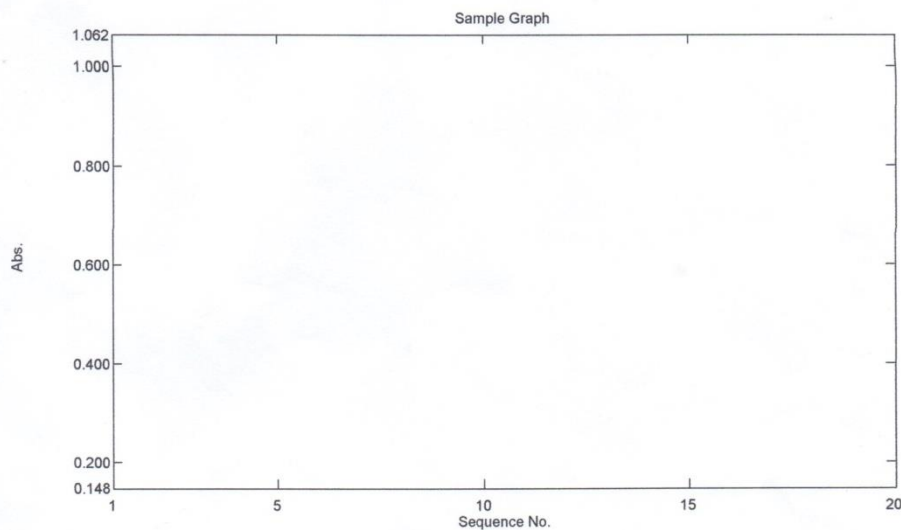
## Lampiran 10. Hasil Absorbansi Sampel Ekstrak

### Sample Table Report

03/17/2017 02:18:50 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\kb-fenol mail.pho

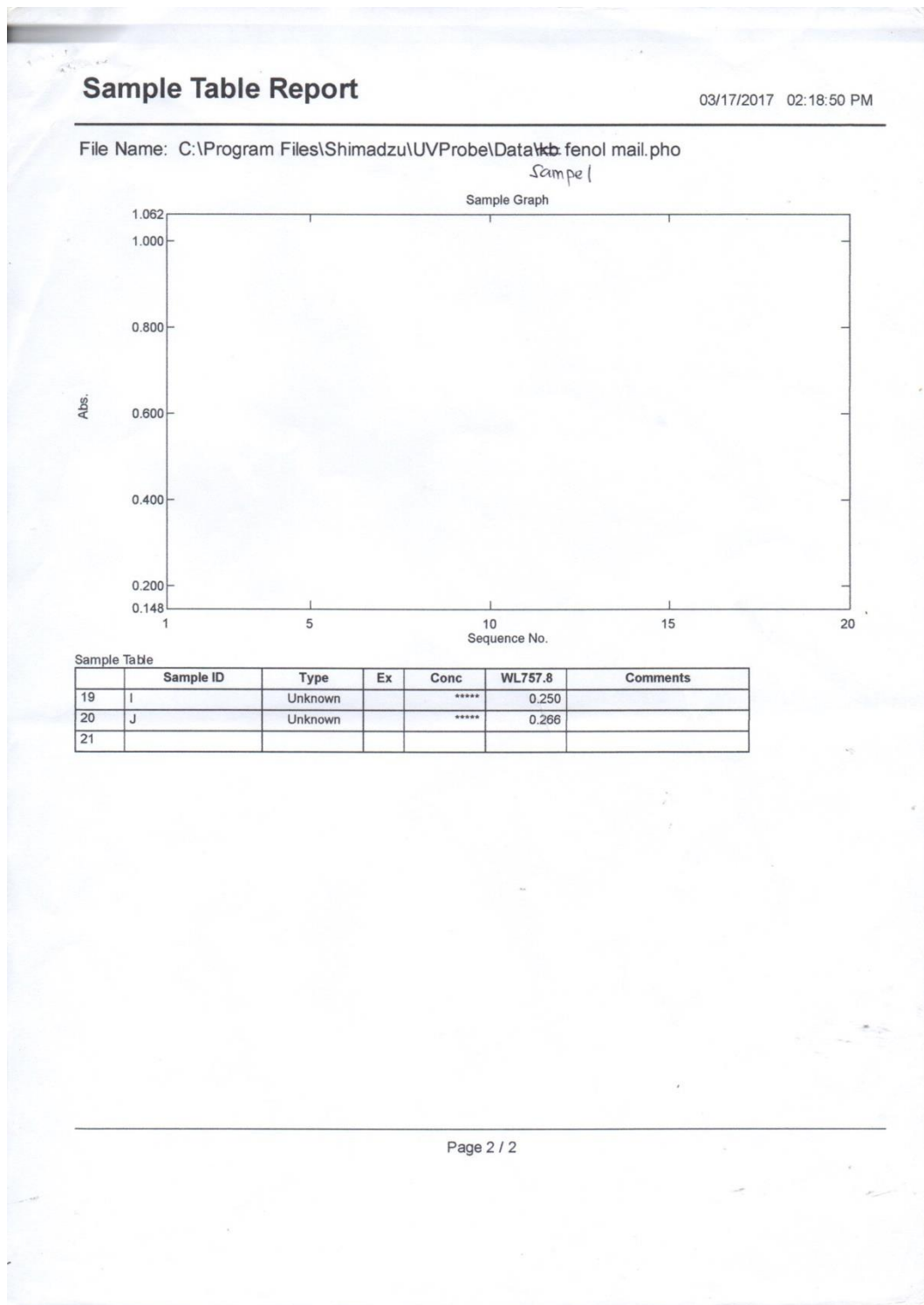
Sample



Sample Table

|    | Sample ID      | Type    | Ex | Conc  | WL757.8 | Comments |
|----|----------------|---------|----|-------|---------|----------|
| 1  | ekstrak etanol | Unknown |    | ***** | 0.426   |          |
| 2  | 1              | Unknown |    | ***** | 0.423   |          |
| 3  | 2              | Unknown |    | ***** | 0.430   |          |
| 4  | ekstrak EA     | Unknown |    | ***** | 0.473   |          |
| 5  | a              | Unknown |    | ***** | 0.462   |          |
| 6  | b              | Unknown |    | ***** | 0.481   |          |
| 7  | ekstrak heksan | Unknown |    | ***** | 0.248   |          |
| 8  | x              | Unknown |    | ***** | 0.224   |          |
| 9  | y              | Unknown |    | ***** | 0.281   |          |
| 10 | fraksi heksan  | Unknown |    | ***** | -0.325  |          |
| 11 | f              | Unknown |    | ***** | 0.316   |          |
| 12 | g              | Unknown |    | ***** | 0.355   |          |
| 13 | fraksi EA      | Unknown |    | ***** | 0.935   | X        |
| 14 | 3              | Unknown |    | ***** | 0.615   |          |
| 15 | 4              | Unknown |    | ***** | 0.644   |          |
| 16 | 5              | Unknown |    | ***** | 0.621   |          |
| 17 | FRAKSI AIR     | Unknown |    | ***** | 0.986   | X        |
| 18 | H              | Unknown |    | ***** | 0.263   |          |

## Lampiran 10. lanjutan



## Lampiran 11. Perhitungan Kandungan Fenolik Total

### 1. Kurva baku Asam galat

| Sampel     | Konsentrasi (µg/mL) (x) | Rerata absorbansi (y) | Persamaan Regresi                                     |
|------------|-------------------------|-----------------------|-------------------------------------------------------|
| Asam galat | 50                      | 0,208                 | $Y = 2,0154 \times 10^{-3}X + 0,1125$<br>$r = 0,9993$ |
|            | 100                     | 0,312                 |                                                       |
|            | 150                     | 0,426                 |                                                       |
|            | 200                     | 0,513                 |                                                       |
|            | 250                     | 0,622                 |                                                       |
|            | 300                     | 0,710                 |                                                       |

### 2. Perhitungan Kadar Fenolik Total

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

$$\text{Kadar fenolik} = \frac{X \times F_p \times 50 \text{ mL}}{0,05 \text{ gram}} (\mu\text{g/gram})$$

$$\text{Kadar fenolik} = \frac{X \times F_p \times 50 \text{ mL}}{0,05 \text{ gram} \times 1000} (\text{mg/gram})$$

#### a. Ekstrak etanol (pengenceran 2 kali)

Rata-rata abs : 0,426

$$Y = 2,0154 \times 10^{-3}X + 0,1125$$

$$0,426 = 2,0154 \times 10^{-3}X + 0,1125$$

$$X = 155,552$$

$$\text{Kadar fenolik} = \frac{155,552 \times 2 \times 50 \text{ mL}}{0,05 \text{ gram} \times 1000} (\text{mg/gram}) = \mathbf{311,104 \text{ mg/gram}}$$

#### b. Ekstrak etil asetat (Pengenceran 2 kali)

Rata-rata abs : 0,472

$$Y = 2,0154 \times 10^{-3}X + 0,1125$$

$$0,472 = 2,0154 \times 10^{-3}X + 0,1125$$

$$X = 178,376$$

$$\text{Kadar fenolik} = \frac{178,376 \times 2 \times 50 \text{ mL}}{0,05 \text{ gram} \times 1000} (\text{mg/gram}) = \mathbf{356,752 \text{ mg/gram}}$$

**Lampiran 11. Lanjutan****c. Ekstrak n-heksan (Pengenceran 2kali)**

Rata-rata abs : 0,251

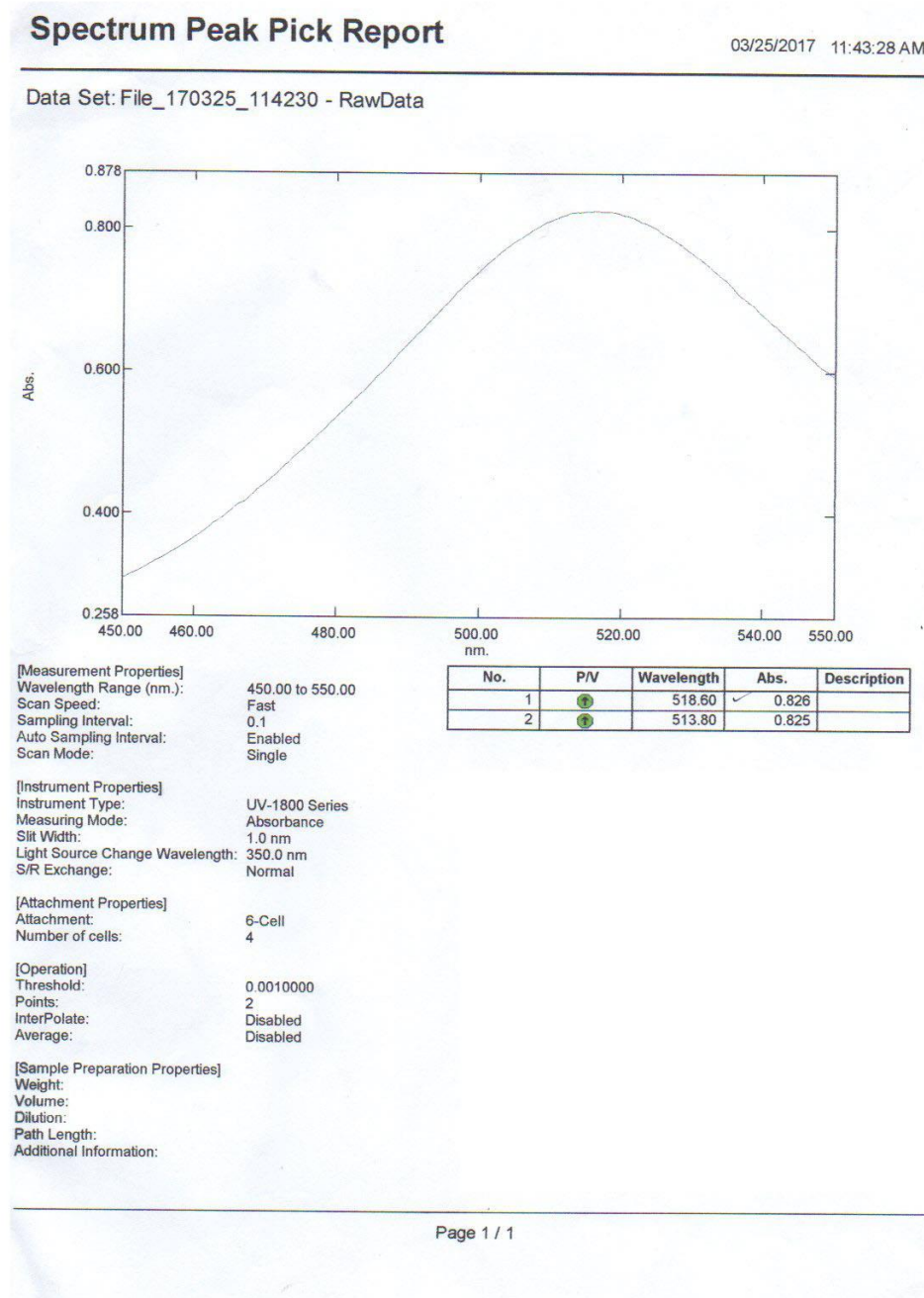
$$Y = 2,0154 \times 10^{-3}X + 0,1125$$

$$0,251 = 2,0154 \times 10^{-3}X + 0,1125$$

$$X = 65,796$$

$$\text{Kadar fenolik} = \frac{65,796 \times 2 \times 50 \text{ mL}}{0,05 \text{ gram} \times 1000} \text{ (mg/gram)} = \mathbf{131,592 \text{ mg/gram}}$$

## Lampiran 12. Penentuan Panjang Gelombang Maksimum DPPH

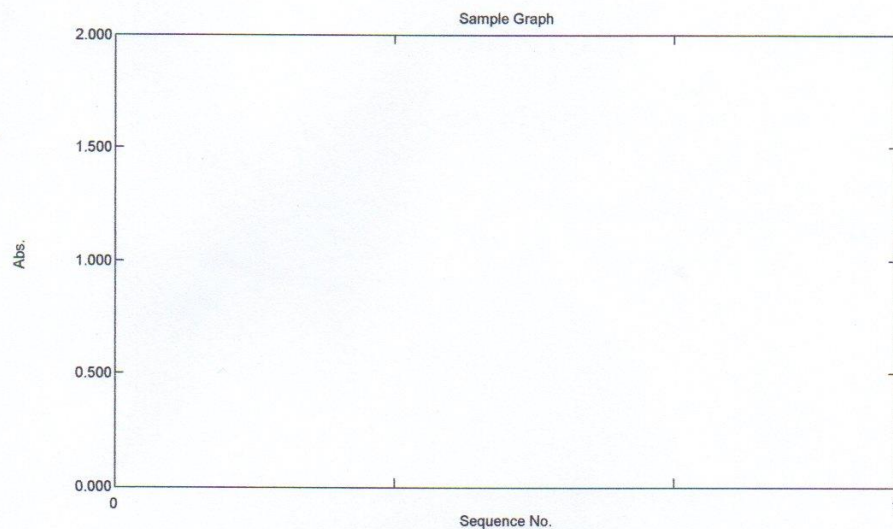


### Lampiran 13. Penentuan *Operating Time* (OT) DPPH

#### Sample Table Report

02/15/2018 12:00:03 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\dpph + vit c ismail OT.pho



Sample Table

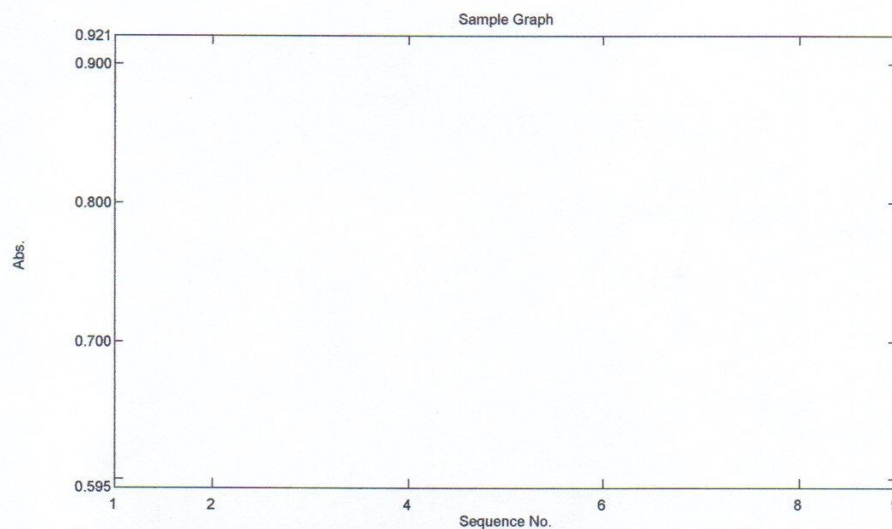
|    | Sample ID | Type    | Ex | Conc  | WL518.6 | Comments |
|----|-----------|---------|----|-------|---------|----------|
| 1  | 0.1       | Unknown |    | ***** | 0.647   |          |
| 2  | 5         | Unknown |    | ***** | 0.651   |          |
| 3  | 10        | Unknown |    | ***** | 0.651   |          |
| 4  | 15        | Unknown |    | ***** | 0.651   |          |
| 5  | 20        | Unknown |    | ***** | 0.652   |          |
| 6  | 25        | Unknown |    | ***** | 0.654   |          |
| 7  | 30        | Unknown |    | ***** | 0.654   |          |
| 8  | 35        | Unknown |    | ***** | 0.653   |          |
| 9  | 40        | Unknown |    | ***** | 0.653   |          |
| 10 | 45        | Unknown |    | ***** | 0.653   |          |
| 11 | 50        | Unknown |    | ***** | 0.653   |          |
| 12 | 55        | Unknown |    | ***** | 0.653   |          |
| 13 | 60        | Unknown |    | ***** | 0.653   |          |
| 14 |           |         |    |       |         |          |

## Lampiran 14. Hasil Absorbansi Vitamin C

### Sample Table Report

02/15/2018 12:00:30 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\vit c rep1 ismail + dpvh.pho



Sample Table

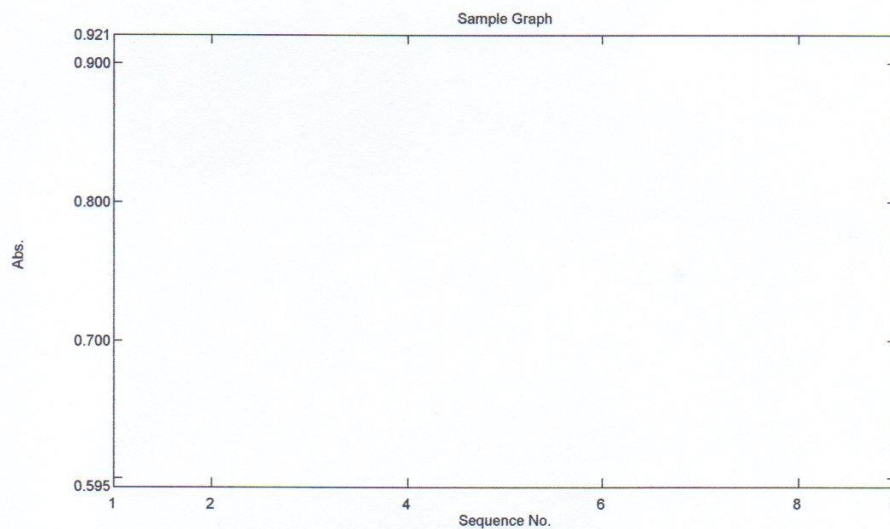
|    | Sample ID | Type    | Ex | Conc  | WL518.6 | Comments |
|----|-----------|---------|----|-------|---------|----------|
| 1  | vit c 1   | Unknown |    | ***** | 0.688   |          |
| 2  | vit c 2   | Unknown |    | ***** | 0.685   |          |
| 3  | vit c 3   | Unknown |    | ***** | 0.676   |          |
| 4  | vit c 4   | Unknown |    | ***** | 0.674   |          |
| 5  | vit c 5   | Unknown |    | ***** | 0.661   |          |
| 6  | vit c 6   | Unknown |    | ***** | 0.656   |          |
| 7  | vit c 7   | Unknown |    | ***** | 0.631   |          |
| 8  | vit c 8   | Unknown |    | ***** | 0.622   |          |
| 9  | dpvh      | Unknown |    | ***** | 0.893   |          |
| 10 |           |         |    |       |         |          |

## Lampiran 14. Lanjutan

### Sample Table Report

02/15/2018 12:00:48 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\vit c rep2 ismail + dpph.pho



Sample Table

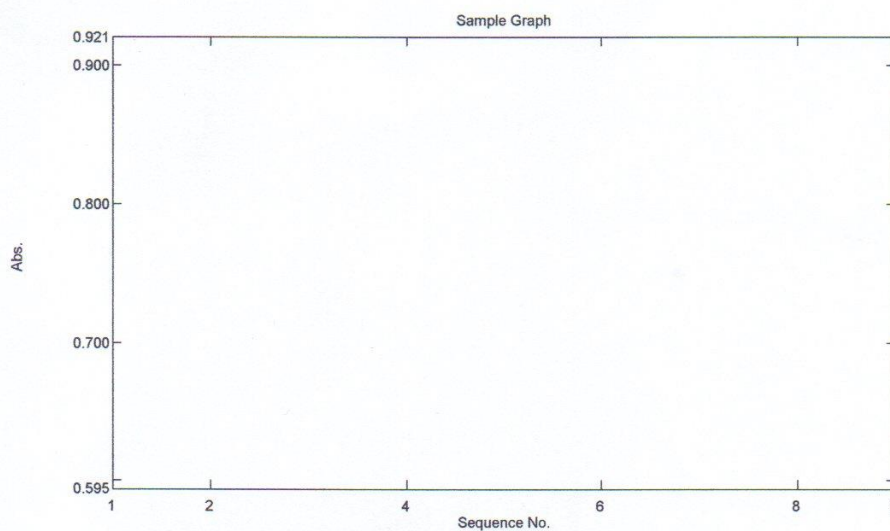
|    | Sample ID | Type    | Ex | Conc  | WL518.6 | Comments |
|----|-----------|---------|----|-------|---------|----------|
| 1  | vit c 1   | Unknown |    | ***** | 0.692   |          |
| 2  | vit c 2   | Unknown |    | ***** | 0.683   |          |
| 3  | vit c 3   | Unknown |    | ***** | 0.675   |          |
| 4  | vit c 4   | Unknown |    | ***** | 0.673   |          |
| 5  | vit c 5   | Unknown |    | ***** | 0.661   |          |
| 6  | vit c 6   | Unknown |    | ***** | 0.655   |          |
| 7  | vit c 7   | Unknown |    | ***** | 0.625   |          |
| 8  | vit c 8   | Unknown |    | ***** | 0.619   |          |
| 9  | dpph      | Unknown |    | ***** | 0.895   |          |
| 10 |           |         |    |       |         |          |

## Lampiran 14. Lanjutan

### Sample Table Report

02/15/2018 12:01:05 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\vit c rep3 ismail + dpph.pho



Sample Table

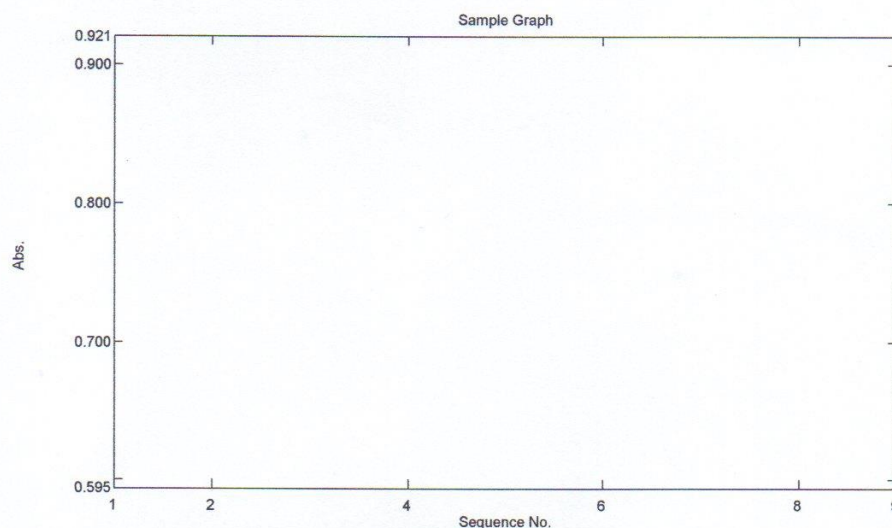
|    | Sample ID | Type    | Ex | Conc  | WL518.6 | Comments |
|----|-----------|---------|----|-------|---------|----------|
| 1  | vit c 1   | Unknown |    | ***** | 0.692   |          |
| 2  | vit c 2   | Unknown |    | ***** | 0.680   |          |
| 3  | vit c 3   | Unknown |    | ***** | 0.675   |          |
| 4  | vit c 4   | Unknown |    | ***** | 0.673   |          |
| 5  | vit c 5   | Unknown |    | ***** | 0.661   |          |
| 6  | vit c 6   | Unknown |    | ***** | 0.659   |          |
| 7  | vit c 7   | Unknown |    | ***** | 0.624   |          |
| 8  | vit c 8   | Unknown |    | ***** | 0.618   |          |
| 9  | dpph      | Unknown |    | ***** | 0.894   |          |
| 10 |           |         |    |       |         |          |

## Lampiran 15. Hasil Absorbansi Ekstrak Etanol Daun Kersen

### Sample Table Report

02/15/2018 12:02:50 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\DPPH - Eks Etanol Ismail.pho



Sample Table

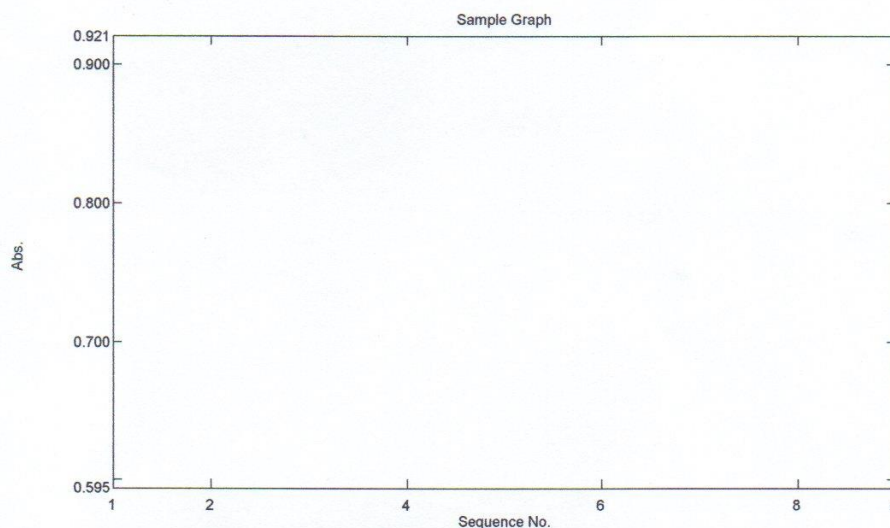
|    | Sample ID     | Type    | Ex | Conc  | WL518.6 | Comments |
|----|---------------|---------|----|-------|---------|----------|
| 1  | Eks Etanol 5  | Unknown |    | ***** | 0.757   |          |
| 2  | Eks Etanol 10 | Unknown |    | ***** | 0.713   |          |
| 3  | Eks Etanol 15 | Unknown |    | ***** | 0.702   |          |
| 4  | Eks Etanol 20 | Unknown |    | ***** | 0.689   |          |
| 5  | Eks Etanol 25 | Unknown |    | ***** | 0.671   |          |
| 6  | dpph          | Unknown |    | ***** | 0.941   |          |
| 7  | Eks Et 5 R2   | Unknown |    | ***** | 0.754   |          |
| 8  | Eks Et 10 R2  | Unknown |    | ***** | 0.710   |          |
| 9  | Eks Et 15 R2  | Unknown |    | ***** | 0.703   |          |
| 10 | Eks Et 20 R2  | Unknown |    | ***** | 0.687   |          |
| 11 | Eks Et 25 R2  | Unknown |    | ***** | 0.675   |          |
| 12 | dpph2         | Unknown |    | ***** | 0.940   |          |
| 13 | Eks Et 5 R3   | Unknown |    | ***** | 0.748   |          |
| 14 | Eks Et 10 R3  | Unknown |    | ***** | 0.714   |          |
| 15 | Eks Et 15 R3  | Unknown |    | ***** | 0.702   |          |
| 16 | Eks Et 20 R3  | Unknown |    | ***** | 0.683   |          |
| 17 | Eks Et 25 R3  | Unknown |    | ***** | 0.677   |          |
| 18 | dpph3         | Unknown |    | ***** | 0.937   |          |

## Lampiran 16. Hasil Absorbansi Ekstrak Etil Asetat Daun Kersen

### Sample Table Report

02/15/2018 12:03:19 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\DPPH - Eks Etil Ismail dkk.pho



Sample Table

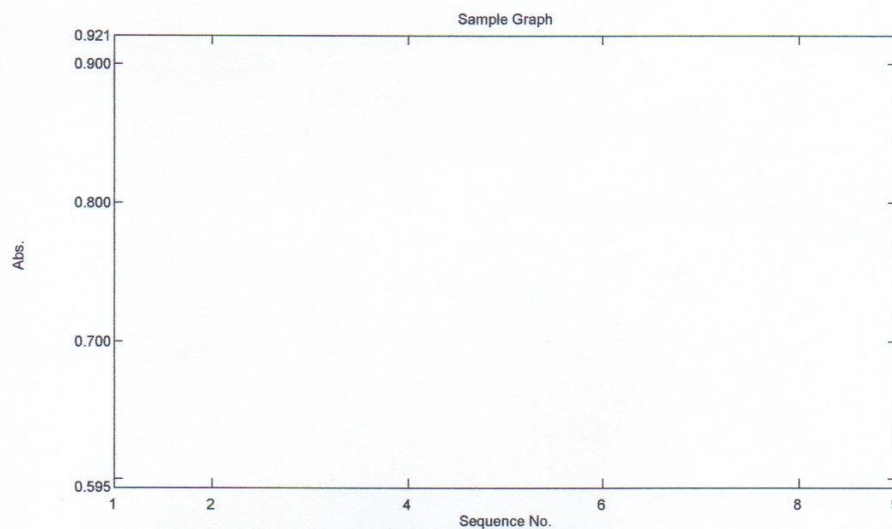
|    | Sample ID     | Type    | Ex | Conc  | WL518.6 | Comments |
|----|---------------|---------|----|-------|---------|----------|
| 1  | Fr Etil 5     | Unknown |    | ***** | 0.701   |          |
| 2  | Fr Etil 10    | Unknown |    | ***** | 0.689   |          |
| 3  | Fr Etil 15    | Unknown |    | ***** | 0.681   |          |
| 4  | Fr Etil 20    | Unknown |    | ***** | 0.675   |          |
| 5  | Fr Etil 25    | Unknown |    | ***** | 0.661   |          |
| 6  | dpph          | Unknown |    | ***** | 0.941   |          |
| 7  | Fr Etil 5 R2  | Unknown |    | ***** | 0.704   |          |
| 8  | Fr Etil 10 R2 | Unknown |    | ***** | 0.682   |          |
| 9  | Fr Etil 15 R2 | Unknown |    | ***** | 0.674   |          |
| 10 | Fr Etil 20 R2 | Unknown |    | ***** | 0.672   |          |
| 11 | Fr Etil 25 R2 | Unknown |    | ***** | 0.669   |          |
| 12 | dpph2         | Unknown |    | ***** | 0.941   |          |
| 13 | Fr Etil 5 R3  | Unknown |    | ***** | 0.700   |          |
| 14 | Fr Etil 10 R3 | Unknown |    | ***** | 0.698   |          |
| 15 | FR Etil 15 R3 | Unknown |    | ***** | 0.683   |          |
| 16 | Fr Etil 20 R3 | Unknown |    | ***** | 0.672   |          |
| 17 | Fr Etil 25 R3 | Unknown |    | ***** | 0.658   |          |
| 18 | dpph3         | Unknown |    | ***** | 0.939   |          |

## Lampiran 17. Hasil Absorbansi Ekstrak n-Heksan Daun Kersen

### Sample Table Report

02/15/2018 12:03:51 PM

File Name: C:\Program Files\Shimadzu\UVProbe\Data\DPPH - Eks NH ismail.pho



Sample Table

|    | Sample ID    | Type    | Ex | Conc  | WL518.6 | Comments |
|----|--------------|---------|----|-------|---------|----------|
| 1  | Eks NH 5 R1  | Unknown |    | ***** | 0.770   |          |
| 2  | Eks NH 10 R1 | Unknown |    | ***** | 0.761   |          |
| 3  | Eks NH 15 R1 | Unknown |    | ***** | 0.759   |          |
| 4  | Eks NH 20 R1 | Unknown |    | ***** | 0.754   |          |
| 5  | Eks NH 25 R1 | Unknown |    | ***** | 0.725   |          |
| 6  | dpph R1      | Unknown |    | ***** | 0.938   |          |
| 7  | Eks NH 5 R2  | Unknown |    | ***** | 0.772   |          |
| 8  | Eks NH 10 R2 | Unknown |    | ***** | 0.761   |          |
| 9  | Eks NH 15 R2 | Unknown |    | ***** | 0.760   |          |
| 10 | Eks NH 20 R2 | Unknown |    | ***** | 0.754   |          |
| 11 | Eks NH 25 R2 | Unknown |    | ***** | 0.729   |          |
| 12 | dpph R2      | Unknown |    | ***** | 0.940   |          |
| 13 | Eks NH 5 R3  | Unknown |    | ***** | 0.771   |          |
| 14 | Eks NH 10 R3 | Unknown |    | ***** | 0.762   |          |
| 15 | Eks NH 15 R3 | Unknown |    | ***** | 0.760   |          |
| 16 | Eks NH 20 R3 | Unknown |    | ***** | 0.754   |          |
| 17 | Eks NH 25 R3 | Unknown |    | ***** | 0.731   |          |
| 18 | dpph R3      | Unknown |    | ***** | 0.940   |          |

## 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 (%)

$\text{IC}_{50}$  = nilai x, ketika y = 50

Aktivitas antioksidan (Blois, 1958)

| Nilai $\text{IC}_{50}$ | Aktivitas antioksidan |
|------------------------|-----------------------|
| < 50                   | Sangat kuat           |
| 50 – 100               | Kuat                  |
| 100 – 150              | Sedang                |
| 151 – 200              | Lemah                 |

**Lampiran 18. Lanjutan**  
**1. VITAMIN C**

| Uji Aktivitas Antioksidan        |                          |                   |                           |
|----------------------------------|--------------------------|-------------------|---------------------------|
| Sampel                           | Seri konsentrasi (µg/mL) | Absorbansi sampel | Aktivitas Antioksidan (%) |
| Vitamin C Replikasi 1            | 1                        | 0,688             | 22,956                    |
|                                  | 2                        | 0,685             | 23,292                    |
|                                  | 3                        | 0,676             | 24,300                    |
|                                  | 4                        | 0,674             | 24,524                    |
|                                  | 5                        | 0,661             | 25,980                    |
|                                  | 6                        | 0,656             | 26,540                    |
|                                  | 7                        | 0,631             | 29,339                    |
|                                  | 8                        | 0,622             | 30,347                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,893             |                           |
| Vitamin C Replikasi 2            | 1                        | 0,692             | 22,682                    |
|                                  | 2                        | 0,683             | 23,687                    |
|                                  | 3                        | 0,675             | 24,581                    |
|                                  | 4                        | 0,673             | 24,804                    |
|                                  | 5                        | 0,661             | 26,145                    |
|                                  | 6                        | 0,655             | 26,816                    |
|                                  | 7                        | 0,625             | 30,168                    |
|                                  | 8                        | 0,619             | 30,838                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,895             |                           |
| Vitamin C Replikasi 3            | 1                        | 0,692             | 22,595                    |
|                                  | 2                        | 0,680             | 23,937                    |
|                                  | 3                        | 0,675             | 24,497                    |
|                                  | 4                        | 0,673             | 24,720                    |
|                                  | 5                        | 0,661             | 26,063                    |
|                                  | 6                        | 0,659             | 26,286                    |
|                                  | 7                        | 0,624             | 30,201                    |
|                                  | 8                        | 0,618             | 30,872                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,894             |                           |
| Rata-rata Vitamin C              | 1                        | 0,691             | 22,744                    |
|                                  | 2                        | 0,683             | 23,639                    |
|                                  | 3                        | 0,675             | 24,459                    |
|                                  | 4                        | 0,673             | 24,683                    |
|                                  | 5                        | 0,661             | 26,063                    |
|                                  | 6                        | 0,657             | 26,547                    |
|                                  | 7                        | 0,627             | 29,903                    |
|                                  | 8                        | 0,620             | 30,686                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,894             |                           |

**Lampiran 18. Lanjutan**

Regresi linier rata-rata (konsentrasi vs % aktivitas antioksidan)

$$A = 21,0249$$

$$B = 1,1257$$

$$r = 0,9603$$

$$Y = 1,1257 X + 21,0249$$

$$50 = 1,1257 X + 21,0249$$

$$IC_{50} = X = 25,740 \text{ } \mu\text{g/mL ( Sangat kuat)}$$

## Lampiran 18. Lanjutan

### 2. EKSTRAK ETANOL

| Uji Aktivitas Antioksidan        |                          |                   |                           |
|----------------------------------|--------------------------|-------------------|---------------------------|
| Sampel                           | Seri konsentrasi (µg/mL) | Absorbansi sampel | Aktivitas Antioksidan (%) |
| Ekstrak Etanol Replikasi 1       | 5                        | 0,757             | 19,554                    |
|                                  | 10                       | 0,713             | 24,230                    |
|                                  | 15                       | 0,702             | 25,399                    |
|                                  | 20                       | 0,689             | 26,780                    |
|                                  | 25                       | 0,671             | 28,693                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,941             |                           |
|                                  |                          |                   |                           |
| Ekstrak Etanol Replikasi 2       | 5                        | 0,754             | 19,787                    |
|                                  | 10                       | 0,710             | 24,468                    |
|                                  | 15                       | 0,703             | 25,213                    |
|                                  | 20                       | 0,687             | 26,915                    |
|                                  | 25                       | 0,675             | 28,191                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,940             |                           |
|                                  |                          |                   |                           |
| Ekstrak Etanol Replikasi 3       | 5                        | 0,748             | 20,171                    |
|                                  | 10                       | 0,714             | 23,799                    |
|                                  | 15                       | 0,702             | 25,080                    |
|                                  | 20                       | 0,683             | 27,108                    |
|                                  | 25                       | 0,677             | 27,748                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,937             |                           |
|                                  |                          |                   |                           |
| Rata-rata Ekstrak Etanol         | 5                        | 0,753             | 19,837                    |
|                                  | 10                       | 0,712             | 24,166                    |
|                                  | 15                       | 0,702             | 25,231                    |
|                                  | 20                       | 0,686             | 26,934                    |
|                                  | 25                       | 0,674             | 28,211                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,939             |                           |

Regresi linier rata-rata (konsentrasi vs % aktivitas antioksidan)

$$A = 19,0210$$

$$B = 0,3903$$

$$r = 0,9594$$

$$Y = 0,3903 X + 19,0210$$

$$50 = 0,3903 X + 19,0210$$

$$IC_{50} = X = 79,372 \text{ µg/mL (Kuat)}$$

## Lampiran 18. Lanjutan

### 3. EKSTRAK ETIL ASETAT

| Uji Aktivitas Antioksidan        |                          |                   |                           |
|----------------------------------|--------------------------|-------------------|---------------------------|
| Sampel                           | Seri konsentrasi (µg/mL) | Absorbansi sampel | Aktivitas Antioksidan (%) |
| Ekstrak Etil asetat Replikasi 1  | 5                        | 0,725             | 22,790                    |
|                                  | 10                       | 0,699             | 25,559                    |
|                                  | 15                       | 0,663             | 29,393                    |
|                                  | 20                       | 0,643             | 31,523                    |
|                                  | 25                       | 0,628             | 33,120                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,939             |                           |
| Ekstrak Etil asetat Replikasi 2  | 5                        | 0,724             | 22,814                    |
|                                  | 10                       | 0,699             | 25,480                    |
|                                  | 15                       | 0,662             | 29,424                    |
|                                  | 20                       | 0,636             | 32,196                    |
|                                  | 25                       | 0,625             | 33,369                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,938             |                           |
| Ekstrak Etil asetat Replikasi 3  | 5                        | 0,724             | 22,897                    |
|                                  | 10                       | 0,699             | 25,559                    |
|                                  | 15                       | 0,660             | 29,712                    |
|                                  | 20                       | 0,630             | 32,907                    |
|                                  | 25                       | 0,622             | 33,759                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,939             |                           |
| Rata-rata Ekstrak Etil asetat    | 5                        | 0,724             | 22,834                    |
|                                  | 10                       | 0,699             | 25,533                    |
|                                  | 15                       | 0,662             | 29,510                    |
|                                  | 20                       | 0,636             | 32,209                    |
|                                  | 25                       | 0,625             | 33,416                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,939             |                           |

Regresi linier rata-rata (konsentrasi vs % aktivitas antioksidan)

$$A = 20,3484$$

$$B = 0,5568$$

$$R = 0,9864$$

$$Y = 0,5568 X + 20,3484$$

$$50 = 0,5568 X + 20,3484$$

$$IC_{50} = X = 53,254 \text{ µg/mL (Kuat)}$$

## Lampiran 18. Lanjutan

### 4. EKSTRAK n-HEKSAN

| Uji Aktivitas Antioksidan        |                          |                   |                           |
|----------------------------------|--------------------------|-------------------|---------------------------|
| Sampel                           | Seri konsentrasi (µg/mL) | Absorbansi sampel | Aktivitas Antioksidan (%) |
| Ekstrak n-heksan Replikasi 1     | 5                        | 0,770             | 17,910                    |
|                                  | 10                       | 0,761             | 18,870                    |
|                                  | 15                       | 0,759             | 19,083                    |
|                                  | 20                       | 0,754             | 19,616                    |
|                                  | 25                       | 0,725             | 22,708                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,938             |                           |
| Ekstrak n-heksan Replikasi 2     | 5                        | 0,772             | 17,872                    |
|                                  | 10                       | 0,761             | 19,043                    |
|                                  | 15                       | 0,760             | 19,149                    |
|                                  | 20                       | 0,754             | 19,787                    |
|                                  | 25                       | 0,729             | 22,447                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,940             |                           |
| Ekstrak n-heksan Replikasi 3     | 5                        | 0,771             | 17,979                    |
|                                  | 10                       | 0,762             | 18,936                    |
|                                  | 15                       | 0,760             | 19,149                    |
|                                  | 20                       | 0,754             | 19,787                    |
|                                  | 25                       | 0,731             | 22,234                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,940             |                           |
| Rata-rata Ekstrak n-heksan       | 5                        | 0,771             | 17,921                    |
|                                  | 10                       | 0,761             | 18,950                    |
|                                  | 15                       | 0,760             | 19,127                    |
|                                  | 20                       | 0,754             | 19,730                    |
|                                  | 25                       | 0,728             | 22,463                    |
| Absorbansi kontrol (DPPH 0,1 mM) |                          | 0,939             |                           |

Regresi linier rata-rata (konsentrasi vs % aktivitas antioksidan)

$$A = 16,6790$$

$$B = 0,1973$$

$$R = 0,9130$$

$$Y = 0,1973 X + 16,6790$$

$$50 = 0,1973 X + 16,6790$$

$$IC_{50} = X = \mathbf{168,885 \mu g/mL (Lemah)}$$

## Lampiran 19. Hasil Uji Korelasi *Pearson Product Moment*

### Correlations

[DataSet0]

| Correlations                  |                     |                               |                     |
|-------------------------------|---------------------|-------------------------------|---------------------|
|                               |                     | Kadar Fenolik Total (mg/gram) | IC50 (µg/mL)        |
| Kadar Fenolik Total (mg/gram) | Pearson Correlation | 1                             | -1.000 <sup>*</sup> |
|                               | Sig. (2-tailed)     |                               | .015                |
|                               | N                   | 3                             | 3                   |
| IC50 (µg/mL)                  | Pearson Correlation | -1.000 <sup>*</sup>           | 1                   |
|                               | Sig. (2-tailed)     | .015                          |                     |
|                               | N                   | 3                             | 3                   |

\*. Correlation is significant at the 0.05 level (2-tailed).

**Lampiran 20. Proses Pembuatan Ekstrak Etanol, Etil Asetat, dan n-heksan Daun Kersen**



**Proses pembuatan serbuk daun kersen**



**Hasil pengukuran kadar air**



**Proses maserasi ekstrak**



**Proses pengentalan ekstrak dengan Rotary evaporator**

**Lampiran 21. Deret Seri Konsentrasi Vitamin C dan Ekstrak Etanol, Etil Asetat, dan n-heksan Daun Kersen**

- a. Deret seri konsentrasi vitamin C setelah ditambah larutan DPPH



- b. Deret konsentrasi ekstrak etanol setelah ditambah larutan DPPH



- c. Deret konsentrasi ekstrak etil asetat setelah ditambah larutan DPPH



### Lampiran 21. Lanjutan

- d. Deret konsentrasi ekstrak n-heksan setelah ditambah larutan DPPH

