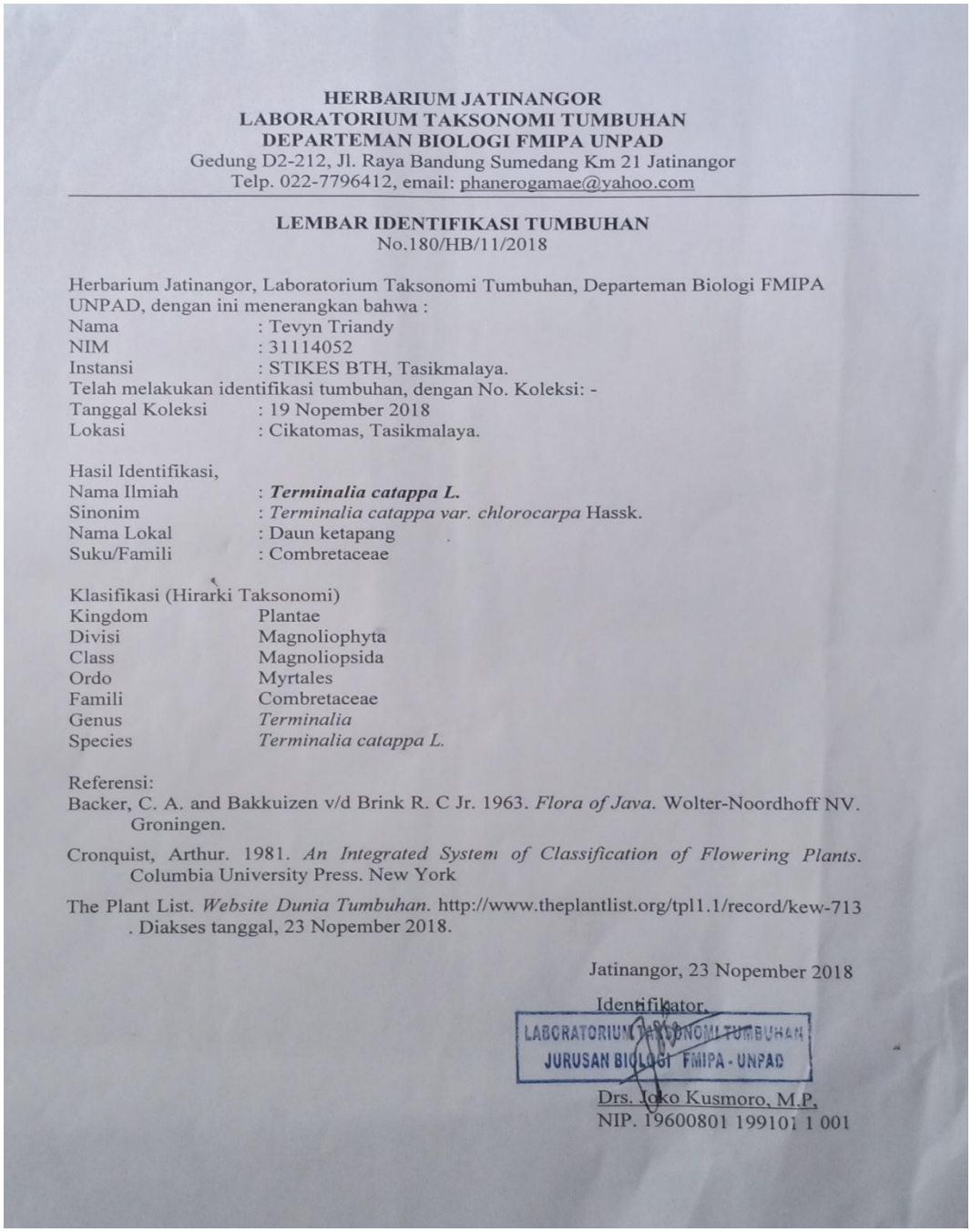
## LAMPIRAN 1

## HASIL DETERMINASI DAUN KETAPANG (*Terminalia catappa* L.)



**HERBARIUM JATINANGOR**
**LABORATORIUM TAKSONOMI TUMBUHAN**
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**LEMBAR IDENTIFIKASI TUMBUHAN**
No.180/HB/11/2018

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Departeman Biologi FMIPA UNPAD, dengan ini menerangkan bahwa :

| | |
|---|---|
| Nama | : Tevyn Triandy |
| NIM | : 31114052 |
| Instansi | : STIKES BTH, Tasikmalaya. |

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -

| | |
|---|---|
| Tanggal Koleksi | : 19 Nopember 2018 |
| Lokasi | : Cikatomas, Tasikmalaya. |

Hasil Identifikasi,

| | |
|---|---|
| Nama Ilmiah | : ***Terminalia catappa L.*** |
| Sinonim | : *Terminalia catappa var. chlorocarpa* Hassk. |
| Nama Lokal | : Daun ketapang |
| Suku/Famili | : Combretaceae |

Klasifikasi (Hirarki Taksonomi)

| | |
|---|---|
| Kingdom | Plantae |
| Divisi | Magnoliophyta |
| Class | Magnoliopsida |
| Ordo | Myrtales |
| Famili | Combretaceae |
| Genus | *Terminalia* |
| Species | *Terminalia catappa L.* |

Referensi:

Backer, C. A. and Bakkuizen v/d Brink R. C Jr. 1963. *Flora of Java.* Wolter-Noordhoff NV. Groningen.

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants.* Columbia University Press. New York

The Plant List. *Website Dunia Tumbuhan.* http://www.theplantlist.org/tpl1.1/record/kew-713 . Diakses tanggal, 23 Nopember 2018.

Jatinangor, 23 Nopember 2018

Identifikator,

LABORATORIUM TAKSONOMI TUMBUHAN
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## LAMPIRAN 2

## PERHITUNGAN KADAR SARI SIMPLISIA DAUN KETAPANG (*Terminalia Cattapa* L.)

| Penetapan | Berat Sampel (gram) | Berat Cawan Kosong (gram) | Berat Cawan + Sampel Konstan (gram) | Hasil | Standar |
|---|---|---|---|---|---|
| Kadar Sari | 5 | 47,501 | 47,9485 | 44,75% | |
| Larut Air | 5 | 43,1198 | 43,5527 | 43,29% | |
| | 5 | 65,1684 | 65,6164 | 44,8% | ≥20% |
| **Rata-rata** | | | | 44,28 ± 0,85% | |
| Kadar Sari | 5 | 47,6824 | 47,8324 | 15% | |
| Larut Etanol | 5 | 43,3046 | 43,4546 | 15,3% | ≥8,6% |
| | 5 | 65,4040 | 65,5539 | 14,99% | |
| **Rata-rata** | | | | 15,09 ± 0,17% | |

**Perhitungan :**

$$\textbf{\% Kadar Sari Larut Air} = \frac{\textbf{(berat cawan+sampel)}-\textbf{berat cawan koson)}}{\boldsymbol{berat\ sampel}} \boldsymbol{x} \frac{\textbf{100}}{\textbf{20}} \boldsymbol{x}\ \textbf{100}\ \%$$

**a. Kadar Sari Larut Air**

1. Kadar Sari Larut Air = $\frac{47,9485-47,501}{5} x \frac{100}{20} x$ 100 % = 44,75 %
2. Kadar Sari Larut Air = $\frac{43,5527-43,1198}{5} x \frac{100}{20} x$ 100 % = 43,29 %
3. Kadar Sari Larut Air = $\frac{65,6164-65,1684}{5} x \frac{100}{20} x$ 100 % = 44,8 %

Rata-rata Kadar Sari Larut Air = $\frac{44,75+43,29+44,8}{3}$ = 44,28 %

**b. Kadar Sari Larut Etanol**

1. Kadar Sari Larut Etanol = $\frac{47,8324-47,6824}{5} x \frac{100}{20} x$ 100 % = 15%
2. Kadar Sari Larut Etanol = $\frac{43,4546-43,3024}{5} x \frac{100}{20} x$ 100 % = 15,3 %
3. Kadar Sari Larut Etanol = $\frac{65,5539-65,4040}{5} x \frac{100}{20} x$ 100 % = 14,99 %

Rata-rata Kadar Sari Larut Air = $\frac{15+15,3+14,99}{3}$ = 15,09%

## LAMPIRAN 3

## PERHITUNGAN KADAR ABU SIMPLISIA DAUN KETAPANG (*Terminalia Cattapa* L.)

| No | Berat Sampel (gram) | Berat Krus Kosong (gram) | Berat Krus + Abu (gram) | Hasil (%) | Standar |
|---|---|---|---|---|---|
| 1 | 2 | 19,3128 | 19,5828 | 13,5% | |
| 2 | 2 | 19,2271 | 19,4907 | 13,18% | ≥13,1% |
| 3 | 2 | 18,2839 | 18,6497 | 13,34% | |
| **Rata-rata** | | | | | **13,34 ± 0,16%** |

**a. Penetapan Kadar Abu Total**

**Perhitungan :**

$$\textbf{\% Kadar Abu Total} = \frac{\textbf{(berat krus+abu)}-\textbf{berat krus kosong)}}{\boldsymbol{berat\ sampel}}\boldsymbol{x}\ \mathbf{100}\ \%$$

1. Kadar Abu Total = $\frac{19,5828-19,3128}{2}\ x\ 100\ \%$ = 13,5 %
2. Kadar Abu Total = $\frac{19,2271-19,4907}{2}\ x\ 100\ \%$ = 13,18 %
3. Kadar Abu Total = $\frac{18,2839-18,6497}{2}\ x\ 100\ \%$ = 13,34 %

Rata-rata Kadar Abu Total = $\frac{13,5+13,18+13,34}{3}$ = 13,34%

**b. Penetapan Kadar Abu Tidak Larut Asam**

| No | Berat Sampel (gram) | Berat Krus Kosong (gram) | Berat Krus + Abu (gram) | Hasil (%) | Standar |
|---|---|---|---|---|---|
| 1 | 2 | 18,4652 | 18,4846 | 0,97% | |
| 2 | 2 | 20,0816 | 20,0997 | 0,90% | ≥2,7% |
| 3 | 2 | 19,8417 | 19,8615 | 0,99% | |
| **Rata-rata** | | | | | **0,95 ± 0,04%** |

**Perhitungan :**

$$\textbf{\% Kadar Abu Tidak Larut Asam} = \frac{(\textbf{berat krus+abu}) - \textbf{berat krus kosong})}{\boldsymbol{berat\ sampel}} \boldsymbol{x}\ \mathbf{100}\ \%$$

1. Kadar AbuTidak Larut Asam = $\frac{18,4846-18,4652}{2} x$ 100 % = 0,97 %
2. Kadar Abu Tidak Larut Asam = $\frac{20,0997-20,0816}{2} x$ 100 % = 0,90 %
3. Kadar Abu Tidak Larut Asam = $\frac{19,8615-19,8417}{2} x$ 100 % = 0,99 %

Rata-rata Kadar Abu Total = $\frac{0,97+0,90+0,99}{3}$ = 0,95 %

**c. Penetapan Kadar Abu Larut Air**

| No | Berat Sampel (gram) | Berat Krus Kosong (gram) | Berat Krus + Abu (gram) | Hasil (%) | Standar |
|---|---|---|---|---|---|
| 1 | 2 | 18,3467 | 18,5329 | 9,31% | |
| 2 | 2 | 19,4045 | 19,5901 | 9,28% | ≥6,8% |
| 3 | 2 | 19,7869 | 19,9827 | 9,79% | |
| **Rata-rata** | | | | | **9,46 ± 0,28%** |

**Perhitungan :**

$$\textbf{\% Kadar Abu Larut Air} = \frac{(\textbf{berat krus+abu}) - \textbf{berat krus kosong})}{\boldsymbol{berat\ sampel}} \boldsymbol{x}\ \mathbf{100}\ \%$$

4. Kadar Abu Larut Air = $\frac{18,5329-18,3467}{2} x$ 100 % = 9,31 %
5. Kadar Abu Larut Air = $\frac{195901-19,4045}{2} x$ 100 % = 9,28 %
6. Kadar Abu Larut Air = $\frac{19,9827-19,7869}{2} x$ 100 % = 9,79 %

Rata-rata Kadar Abu Larut Air = $\frac{0,58+-0,42+-0,42}{3}$ = 9,46 %

## LAMPIRAN 4

## PERHITUNGAN KADAR AIR SIMPLISIA DAUN KETAPANG (*Terminalia Cattapa* L.)

| No | Berat Sampel (gram) | Volume Awal (mL) | Volume Akhir (mL) | Hasil (%) | Standar |
|---|---|---|---|---|---|
| 1 | 5 gram | 1,5 mL | 1,7 mL | 4% | |
| 2 | 5 gram | 1,7 mL | 1,9 mL | 4% | ≥10% |
| 3 | 5 gram | 1,8 mL | 2,0 mL | 4% | |
| **Rata-rata** | | | | | **4%** |

**Perhitungan :**

$$\textbf{\% Kadar Air} = \frac{\boldsymbol{volume\ akhir - volume\ awal}}{\boldsymbol{berat\ sampel}} \boldsymbol{x}\ \mathbf{100}\ \%$$

1. Kadar Air $= \frac{1{,}7\ \text{mL} - 1{,}5\ \text{mL}}{5\ gram} x\ 100\ \% = 4\ \%$

2. Kadar Air $= \frac{1{,}9\ \text{mL} - 1{,}7\ \text{mL}}{5\ gram} x\ 100\ \% = 4\ \%$

3. Kadar Air $= \frac{2{,}0\ \text{mL} - 1{,}8\ \text{mL}}{5\ gram} x\ 100\ \% = 4\ \%$

Rata-rata % Kadar Air = $\frac{4\% + 4\% + 4\%}{3} = 4\ \%$

## LAMPIRAN 5

## PERHITUNGAN SUSUT PENGERINGAN SIMPLISIA DAUN KETAPANG (*Terminalia Cattapa* L.)

| No | Berat Sampel (gram) | Krus Timbang Konstan (gram) | Krus Timbang + Sampel Sebelum Dioven | Krus Timbang + Sampel Setelah Dioven | Hasil | Standar |
|---|---|---|---|---|---|---|
| 1 | 2 | 34,9334 | 36,6095 | 36,3880 | 11,075% | |
| 2 | 2 | 33,3246 | 34,9934 | 34,7736 | 10,855% | ≥10% |
| 3 | 2 | 33,9943 | 35,6542 | 35,4335 | 11,035% | |
| **Rata-rata** | | | | | **10,988 ± 0,11%** | |

**Perhitungan :**

**% Susut Pengeringan =**

$$\frac{\textbf{\textit{B.simplisia sebelum dioven}} - \textbf{\textit{B.simplisia setelah dioven}}}{\textbf{\textit{berat simplisia}}} \boldsymbol{x\ 100}\ \%$$

1. Susut Pengeringan $= \frac{36{,}6095\ g - 36{,}3880\ g}{2\ gram}\ x\ 100\ \% = 11{,}075\ \%$
2. Susut Pengeringan $= \frac{34{,}7763\ g - 34{,}9934\ g}{2\ gram}\ x\ 100\ \% = 10{,}855\ \%$
3. Susut Pengeringan $= \frac{35{,}6542\ g - 35{,}4335\ g}{2\ gram}\ x\ 100\ \% = 11{,}035\ \%$

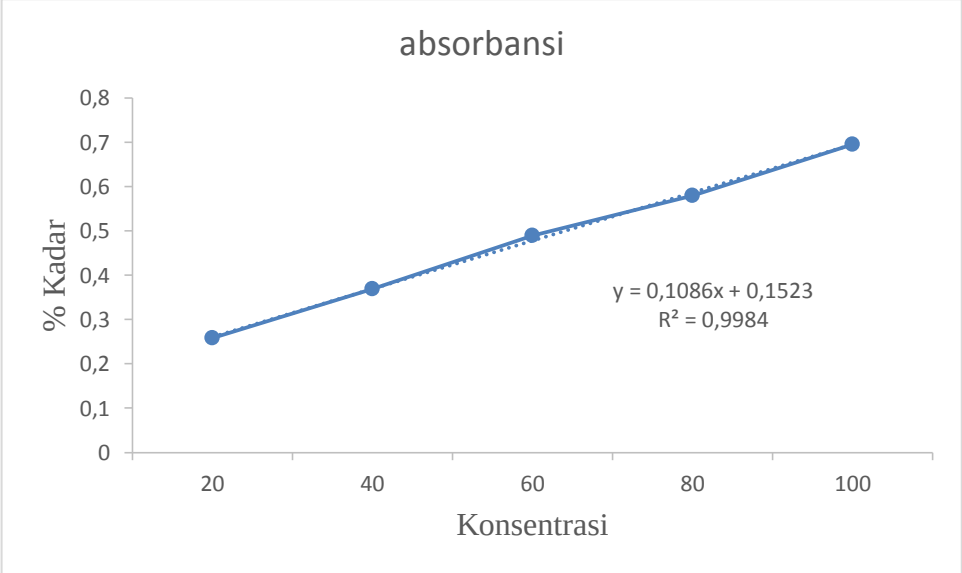
Rata-rata % Kadar Air = $\frac{11{,}075\% + 10{,}855\% + 11{,}035\%}{3}$ = 10,988 %

## LAMPIRAN 6

## PENETAPAN KADAR TANIN TOTAL EKSTRAK ETANOL DAUN KETAPANG (*Terminalia Cattapa* L.)

### 1. Kurva Kalibrasi Asam Tanat

| Konsentrasi | Absorbansi |
|---|---|
| 20 | 0,2577 |
| 40 | 0,3686 |
| 60 | 0,4894 |
| 80 | 0,5794 |
| 100 | 0,6953 |




**Gambar 4.8** Kurva Regresi Linier Asam Tanat

**2. Sampel Ekstrak Etanol Daun Ketapang**

| Sampel | Absorbansi |
|---|---|
| 1 | 0,287 |
| 2 | 0,368 |
| 3 | 0,439 |
| 4 | 0,549 |
| 5 | 0,649 |
| **Rata-rata** | **0,459** |

**Perhitungan Kadar Tanin Total Ekstrak Daun Ketapang**

**1. Sampel 1**

Y = bx + a

0,287 = 0,0905x – 0,1869

0,287 + 0,1869 = 0,0905x

$$= \frac{0,4739}{0,0905}$$

= 5,2364 ppm

$$= \frac{5,2364}{20} \; x \; 100\%$$

% Kadar = 26,182 %

**2. Sampel 2**

Y = bx + a

0,368 = 0,0905x – 0,1869

0,368 + 0,1869 = 0,0905x

$$= \frac{0,5549}{0,0905}$$

= 6,1314 ppm

$$= \frac{6,1314}{30} \; x \; 100\%$$

% Kadar = 20,43 %

**3. Sampel 3**

Y = bx + a

0,439 = 0,0905x – 0,1869

0,439 + 0,1869 = 0,0905x

$$= \frac{0,8359}{0,0905}$$

= 9,2364 ppm

$$= \frac{9,2364}{40} \; x \; 100\%$$

% Kadar = 17,29 %

**4. Sampel 4**

Y = bx + a

0,549 = 0,0905x – 0,1869

0,549 + 0,1869 = 0,0905x

$$= \frac{0,7359}{0,0905}$$

= 8,1314 ppm

$$= \frac{8,1314}{50} \; x \; 100\%$$

% Kadar = 16,2628 %

**5. Sampel 5**

Y = bx + a

0,649 = 0,0905x – 0,1869

0,649 + 0,1869 = 0,0905x

$$= \frac{0,8359}{0,0905}$$

= 9,2364 ppm

$$= \frac{9,2364}{60} \; x \; 100\%$$

% Kadar = 15,394 %

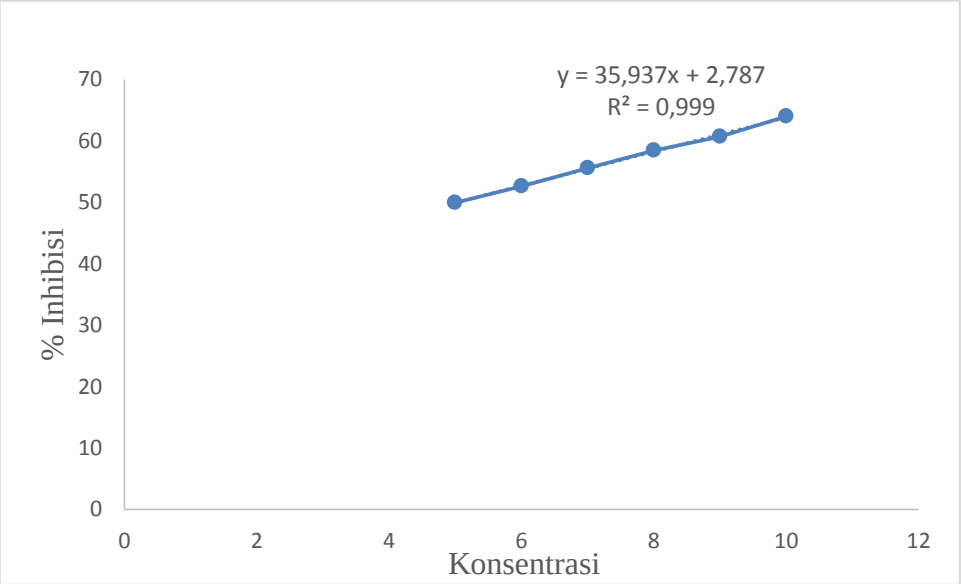
Rata-rata = $\frac{26,182+20,43+17,29+16,2628+15,394}{5} = 17,11\ \%$

## LAMPIRAN 7

## PENETAPAN KADAR ANTIOKSIDAN EKSTRAK ETANOL DAUN KETAPANG (*Terminalia Cattapa* L.)

### 1. Peredaman Ekstrak Etanol Daun Ketapang

| Konsentrasi | Absorbansi | % Inhibisi |
|---|---|---|
| 5 | 0,367 | 49,93 |
| 6 | 0,348 | 52,55 |
| 7 | 0,326 | 55,52 |
| 8 | 0,305 | 58,39 |
| 9 | 0,288 | 60,7 |
| 10 | 0,264 | 63,98 |




**Gambar 4.9** Kurva Regresi Linier Ekstrak Etanol Daun Ketapang

Y = bx + a

50 = 2,787x + 35,937

50 – 35,937 = 2,787x

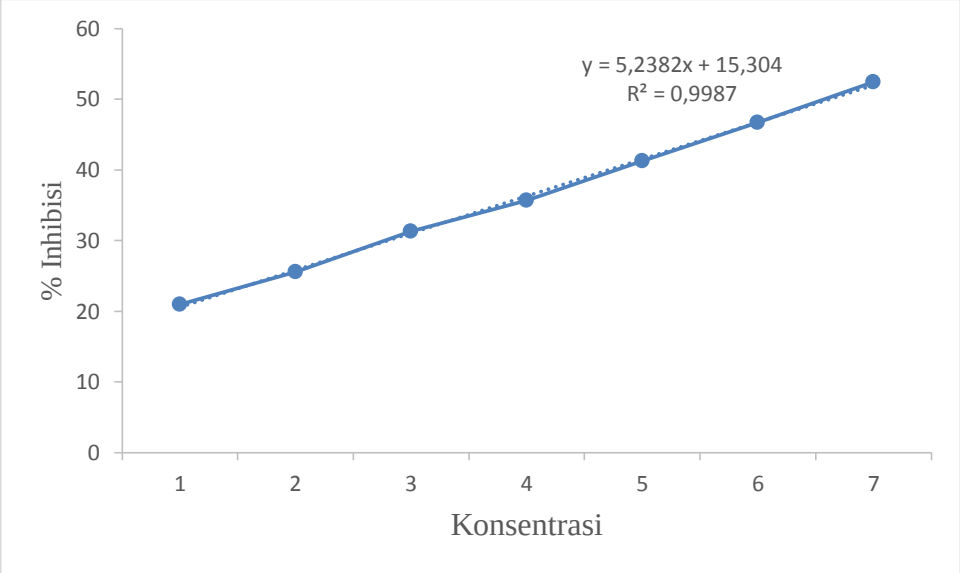
14,063 = 2,787x

$$X = \frac{14,063}{2,787}$$

X = 5,044 ppm

**2. Peredaman Vitamin C**

| Konsentrasi | Absorbansi | % Inhibisi |
|---|---|---|
| 1 | 0,452 | 20,97 |
| 2 | 0,426 | 25,52 |
| 3 | 0,393 | 31,29 |
| 4 | 0,368 | 35,66 |
| 5 | 0,336 | 41,25 |
| 6 | 0,305 | 46,67 |
| 7 | 0,272 | 52,44 |




**Gambar 4.10** Kurva Regresi Linier Vitamin C

$$Y = bx + a$$

$$50 = 5{,}238x + 15{,}304$$

$$50 - 15{,}304 = 5{,}238x$$

$$34{,}696 = 5{,}238x$$

$$X = \frac{34{,}696}{5{,}238}$$

$$X = 6{,}623 \text{ ppm}$$