**Lampiran 1.** Sampel Buah Labu Siam (*Sechium edule* Jacq. Swartz.) Tua



Labu Siam Tua

**Lampiran 2.** Pembuatan ekstrak kental etanol dan air



Ekstrak kental etanol menggunakan rotary evaporator



Ekstrak kental sari menggunakan penangas air

**Lampiran 3.** Ekstrak kental etanol dan air

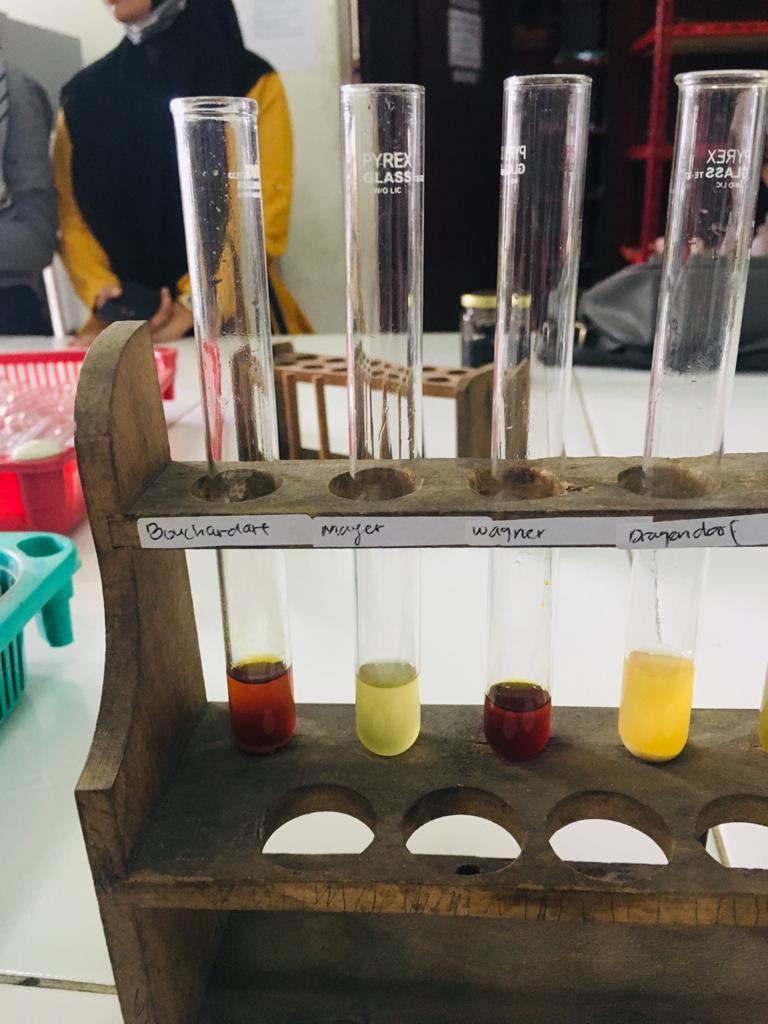


Ekstrak Kental Etanol

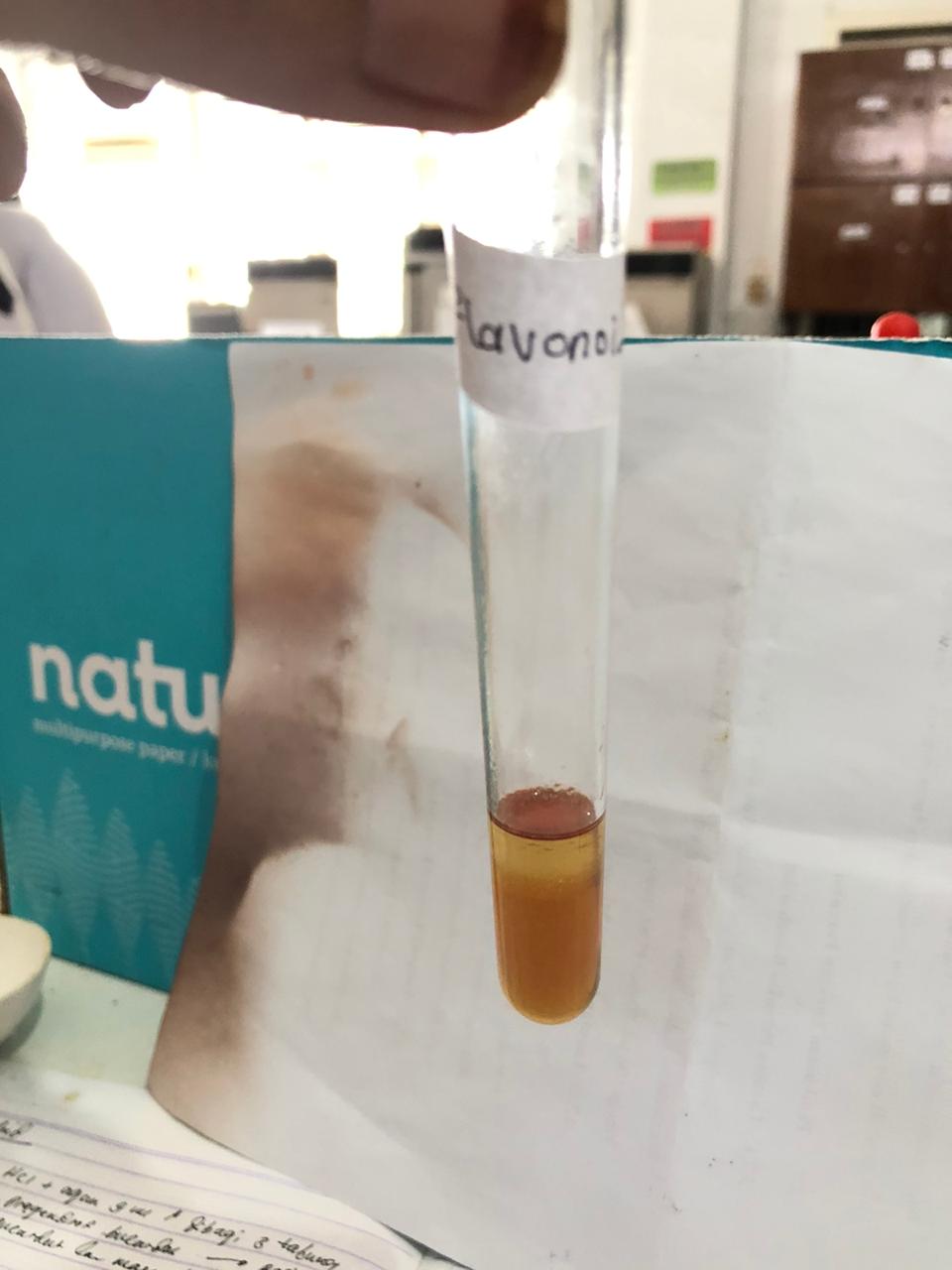
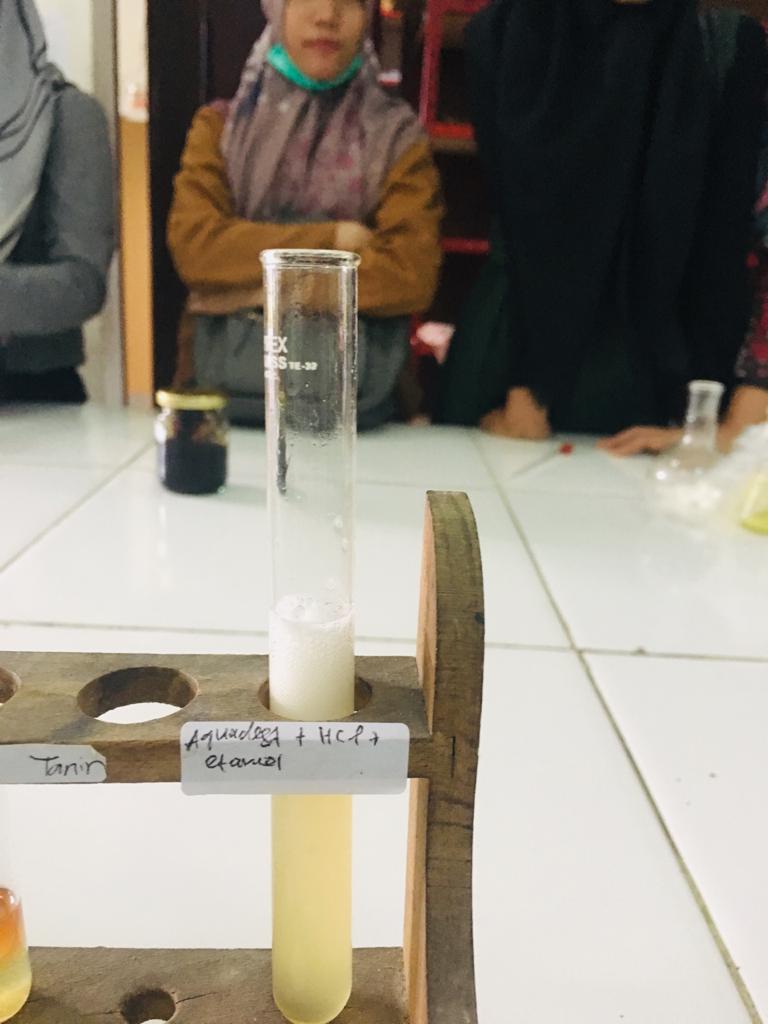
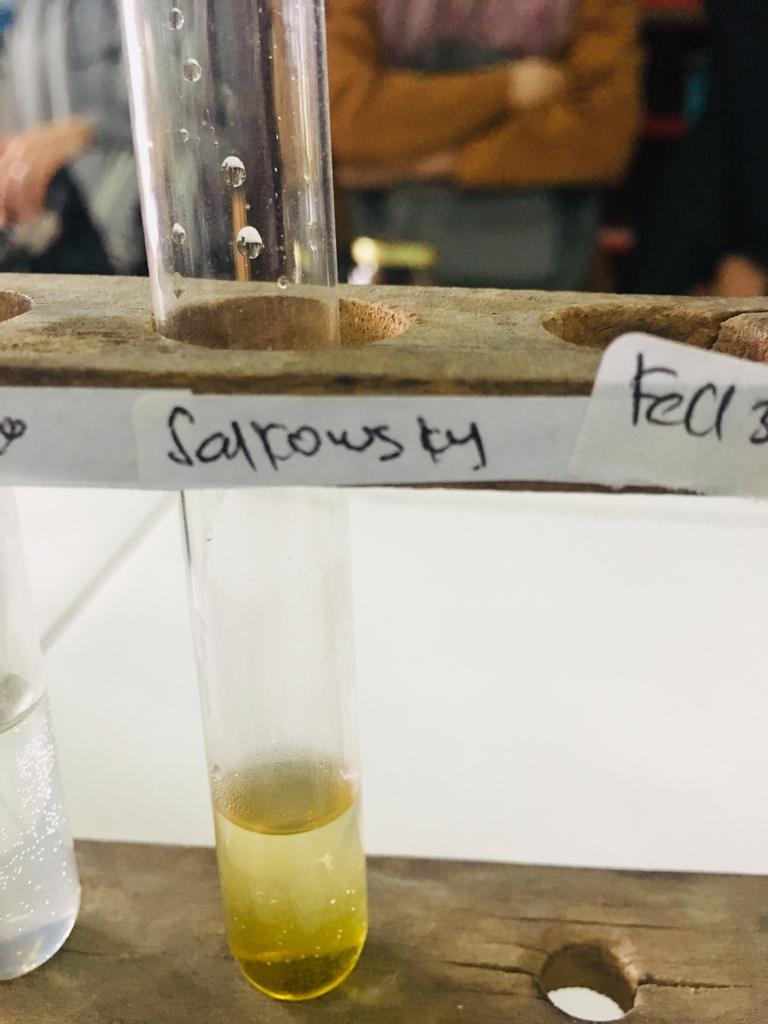


Ekstrak Kental Sari

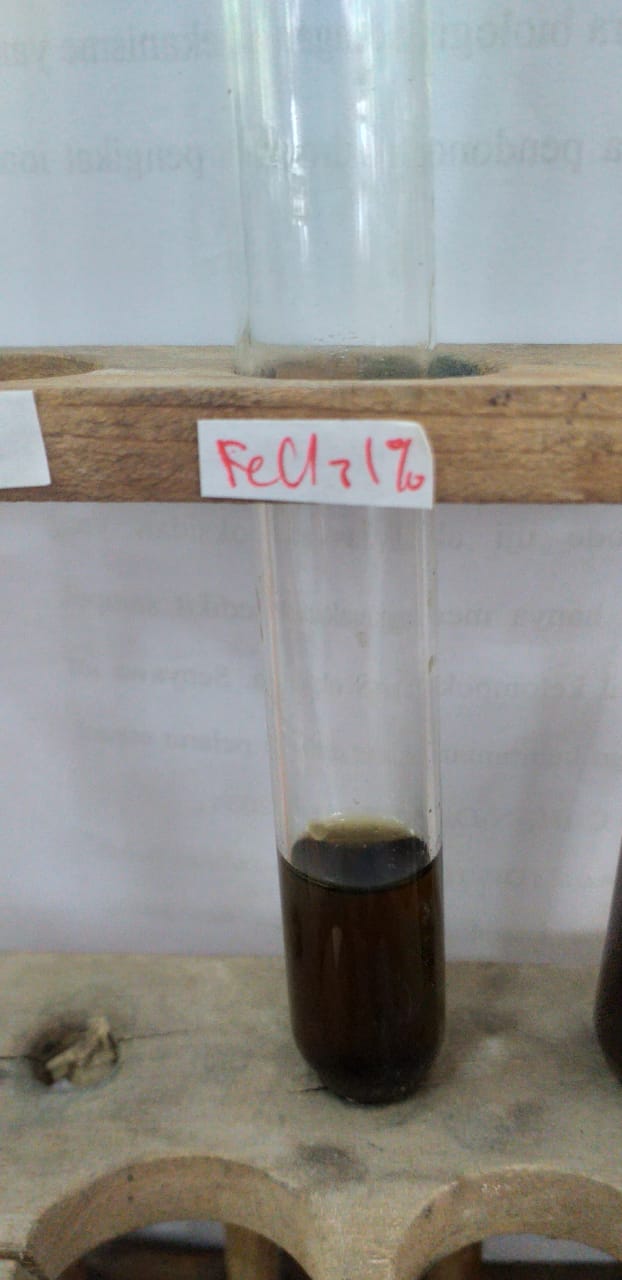
**Lampiran 4.** Skrining Fitokimia Ekstrak Etanol Labu Siam Tua



Alkaloid (+)

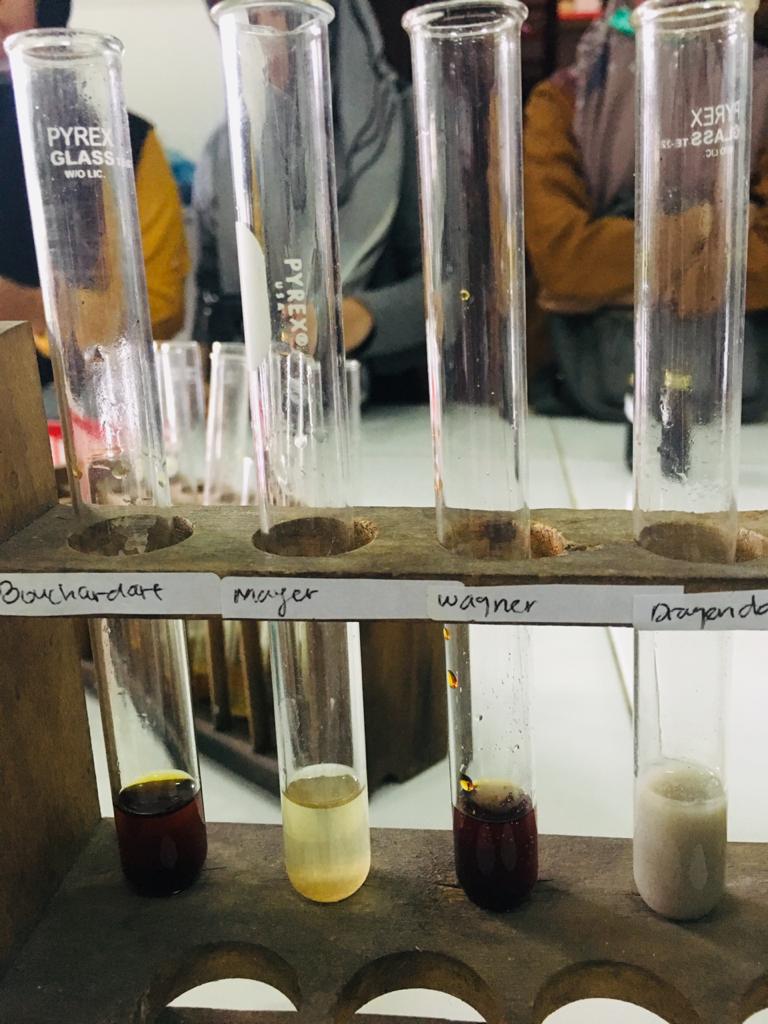


Steroid (-) Saponin (+) Flavonoid (+)

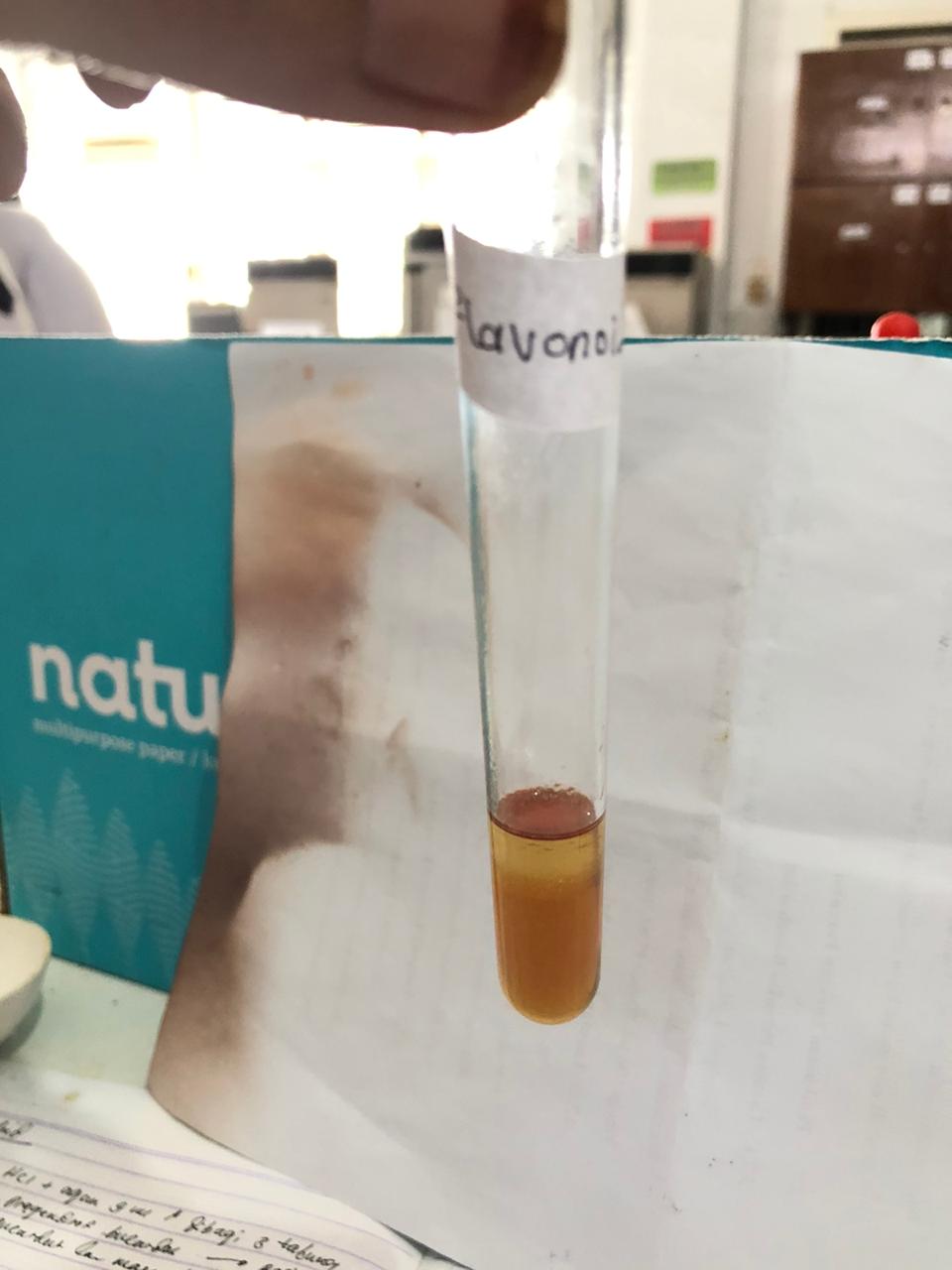
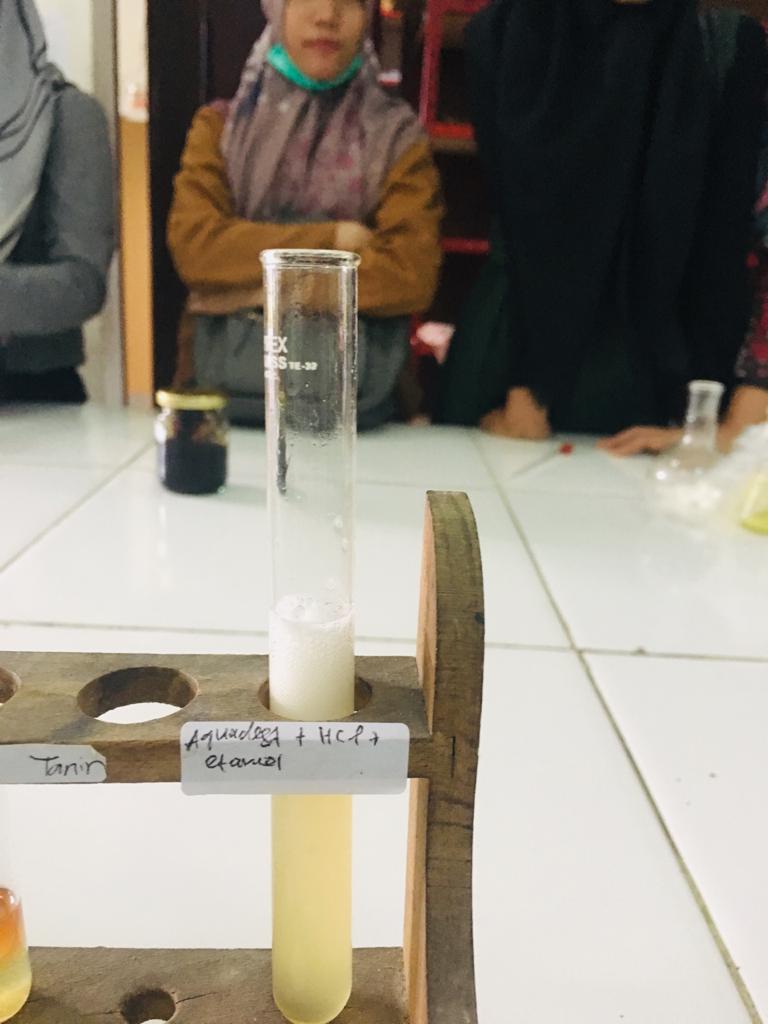
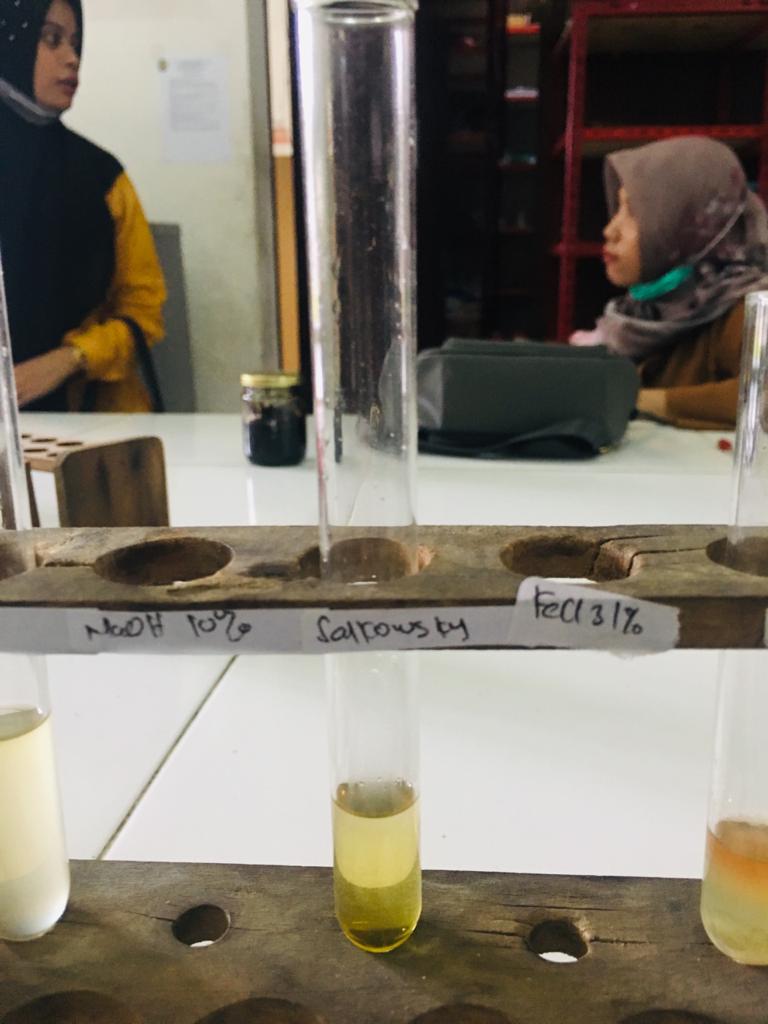


Tanin (+) Glikosida (+)

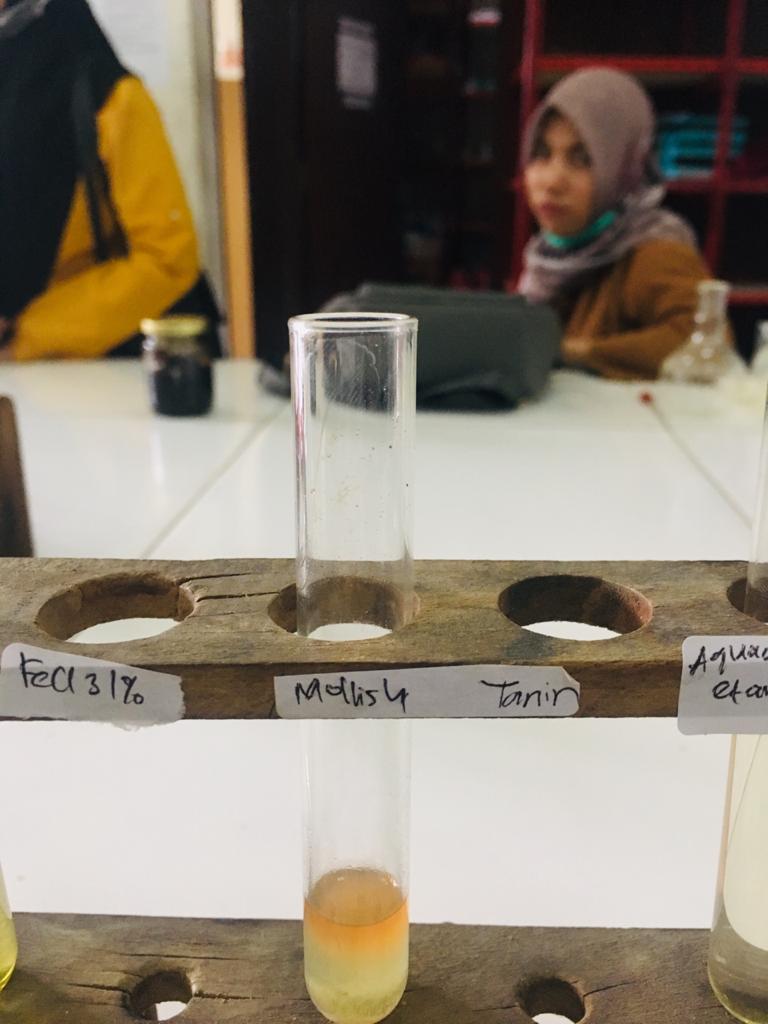
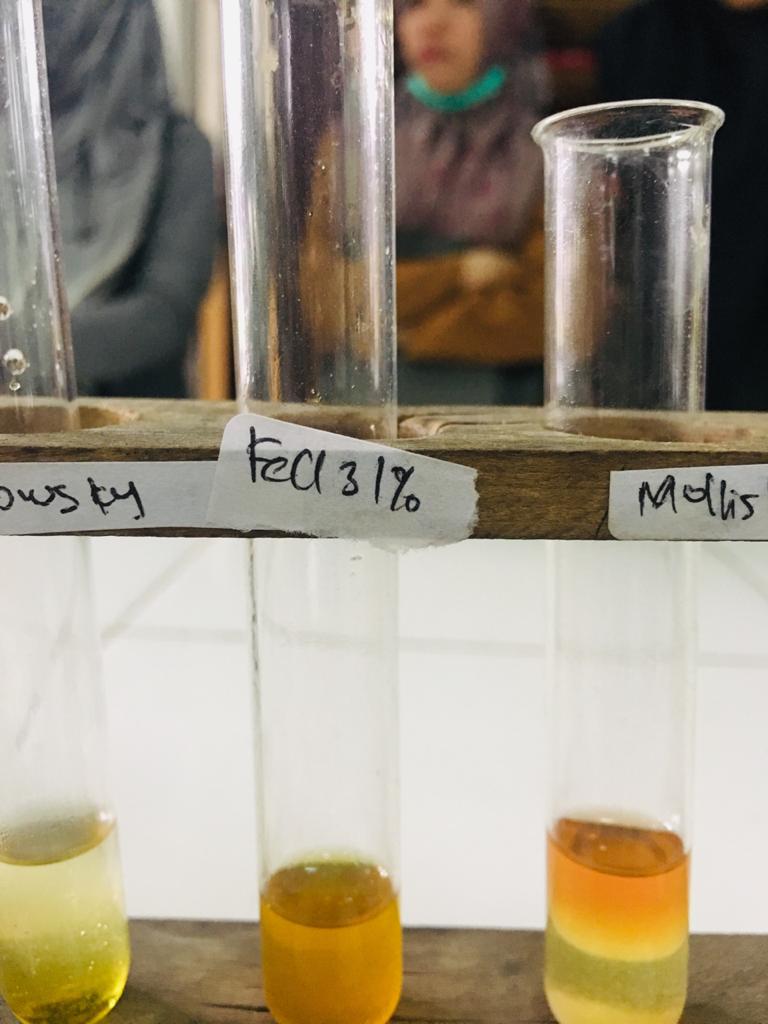
**Lampiran 5.** Skrining Fitokimia Ekstrak Sari Labu Siam Tua



Alkaloid (+)



Steroid (-) Saponin (+) Flavonoid (+)



Tanin (-) Glikosida (-)

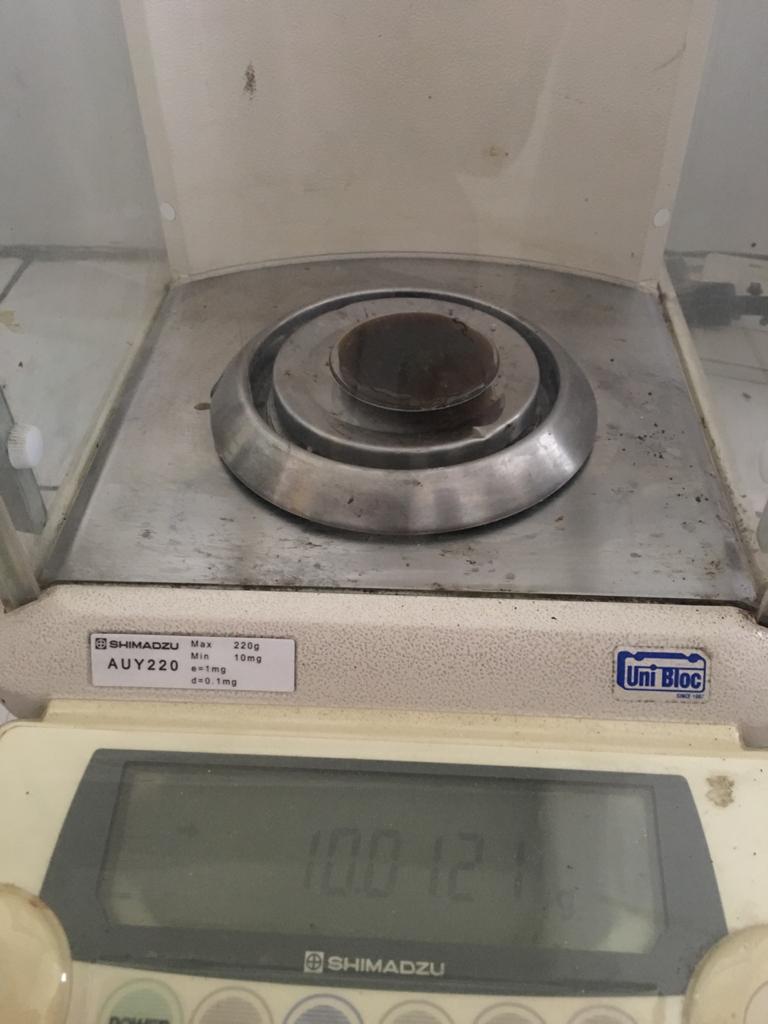
**Lampiran 6.** Alat Instrumen Penelitian



Spektrofotometri UV-VIS

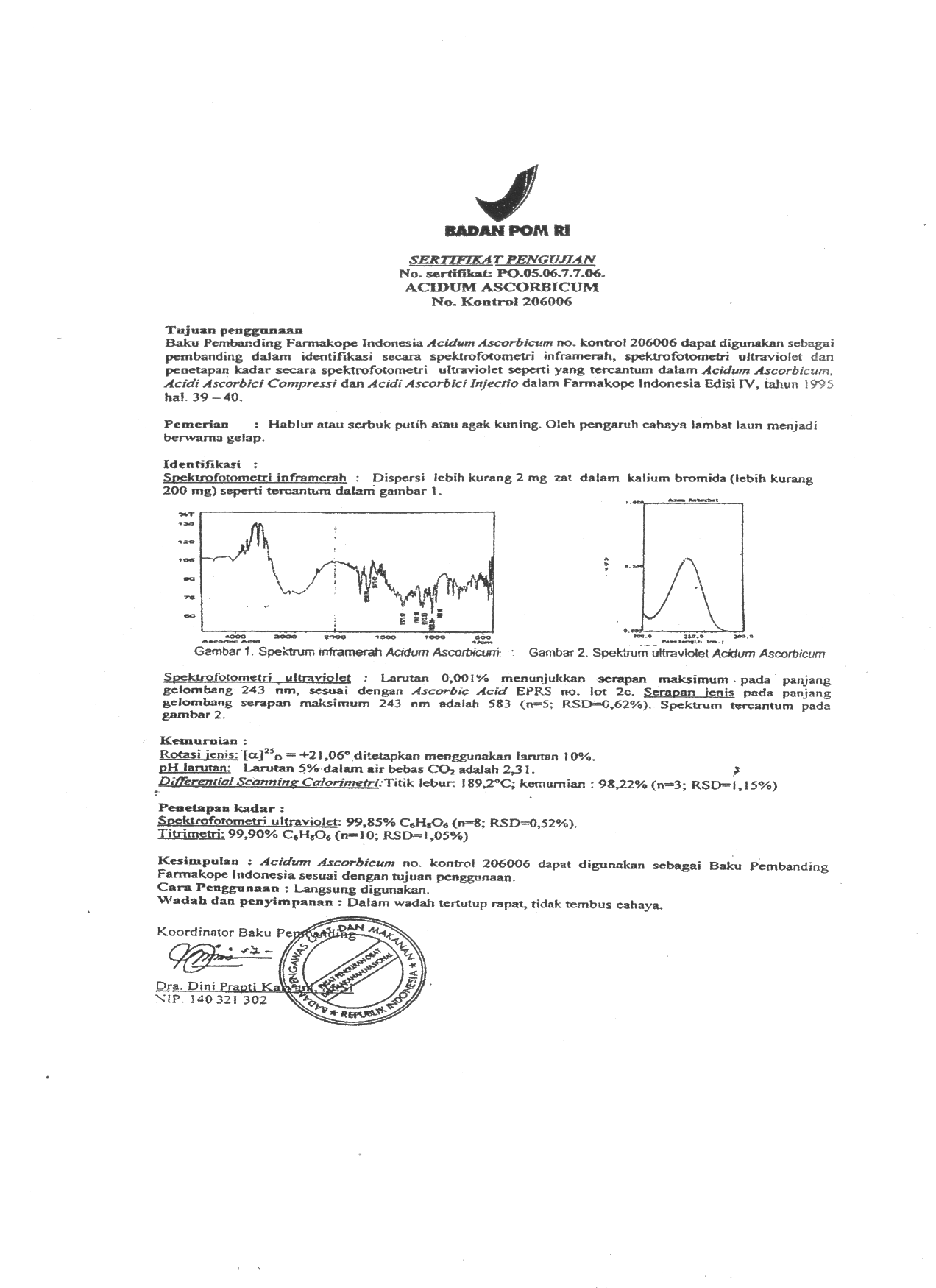


Labu Tentukur



Timbangan

**Lampiran 7.** Sertifikat Baku Pembanding Vitamin C



**Lampiran 8.** Bagan Alir Pembuatan Larutan Induk

Ditimbang 50 mg Asam Askorbat

LIB I 50 ml

C = 1000 µg/ml

Dipipet 5 ml

LIB II 50 ml

C = 100 µg/ml

A

50 ml

C = 8 µg/ml µg/ml µg/ml

1 ml dalam 50 ml 2µg/ml

5 ml dalam 50 ml 10µg/ml

4 ml dalam 50 ml 8µg/ml

3 ml dalam 50 ml 6µg/ml

2 ml dalam 50 ml 4µg/ml

**Lampiran 9.** Bagan Alir Penentuan Kadar Sampel

Sampel

* Ditimbang 10 gram
* Dimasukkan ke dalam labu tentukur 100 ml

Kemudian dicukupkan sampai batas tandadengan pelarut aquadest

* Disaring menggunakan kertas saring
* Dipipet 1 ml untuk ekstrak etanol
* Dipipet 1,5 ml untuk ekstrak air
* Masing-masing dimasukkan kedalam labu tentukur 50 ml

50 ml Sampel

* Dimasukkan sampel kedalam kuvet
* Di ukur serapannya

Hasil Serapan

Perlakuan dilakukan sebanyak 6 kali pada setiap sampel

**Lampiran 10.** Perhitungan Persamaan Regresi dan Koefisien Korelasi Vitamin C

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NO | Konsentrasi (µ/ml)  (X) | Serapan  (Y) | XY | X2 | Y2 |
| 1 | 0,0000 | 0,0000 | 0 | 0 | 0 |
| 2 | 2,0000 | 0,162 | 0,324 | 4 | 0,026 |
| 3 | 4,0000 | 0,308 | 1,232 | 16 | 0,095 |
| 4 | 6,0000 | 0,461 | 2,766 | 36 | 0,213 |
| 5 | 8,0000 | 0,627 | 5,016 | 64 | 0,393 |
| 6 | 10,0000 | 0,769 | 7,69 | 100 | 0,591 |
| ∑ | 30 | 2,327 | 17,028 | 220 | 1,318 |
|  | X = 5 | Y = 0,3878 |  |  |  |

Y = aX + b

a =

=

=

= = 0,07704

b =  *- a*

= 0,3878 – (0,07704).(5)

= 0,3878 – 0,3852

= 0,0026

Maka persamaan regresi yang didapat : Y = 0,00704X + 0,0026

**Lampiran 11.** (Lanjutan)

Koefisien korelasi :

r =

r =

r =

r =

r =

r = 0,99975

**Lampiran 12.** Data perhitungan Kadar Sampel Ekstrak Etanol

Tabel Data Sampel Pada Ekstrak Etanol Buah Labu Siam Tua

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Berat sampel  (gr) | Serapan (A) | Konsentrasi (µg/ml) | Volume Labu (ml) | FP | Kadar yang diperoleh (mg/ml) |
| 1 | 10,0121 | 0,495 | 6,39 | 100 | 50 | 319,113 |
| 2 | 10,0119 | 0,497 | 6,42 | 100 | 50 | 320,618 |
| 3 | 10,0118 | 0,497 | 6,42 | 100 | 50 | 320,621 |
| 4 | 10,0122 | 0,498 | 6,43 | 100 | 50 | 321,108 |
| 5 | 10,0114 | 0,494 | 6,38 | 100 | 50 | 318,636 |
| 6 | 10,0110 | 0,495 | 6,39 | 100 | 50 | 319,148 |

**Perhitungan**

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,495 = 0,07704X + 0,0026

X =

X = 6,39 µg/ml

.

Kadar mg/gr =

=

=

= 3191,13 = =

**Lampiran 12.** (Lanjutan)

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,497 = 0,07704 X + 0,0026

X =

X = 6,42 µg/ml

.

Kadar mg/gr =

=

=

= 3206,18 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,497 = 0,07704 X + 0,0026

X =

X = 6,42 µg/ml

.

Kadar mg/gr =

=

=

**Lampiran 12.** (Lanjutan)

= 3206,21 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,498 = 0,07704 X + 0,0026

X =

X = 6,43 µg/ml

.

Kadar mg/gr =

=

=

= 3211,08 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,494 = 0,07704 X + 0,0026

X =

X = 6,38 µg/ml

.

Kadar mg/gr =

=

**Lampiran 12.** (Lanjutan)

=

= 3186,36 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,495 = 0,07704 X + 0,0026

X =

X = 6,39 µg/ml

.

Kadar mg/gr =

=

=

= 3191,48 = =

=

=

=53,51

**Lampiran 13.** Data perhitungan Kadar Sampel Ekstrak Sari

Tabel Data Sampel Pada Ekstrak Sari Buah Labu Siam Tua

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Berat sampel  (gr) | Serapan (A) | Konsentrasi (µg/ml) | Volume Labu (ml) | FP | Kadar yang diperoleh (mg/ml) |
| 1 | 10,0353 | 0,358 | 4,62 | 100 | 33,33 | 153,442 |
| 2 | 10,0351 | 0,358 | 4,62 | 100 | 33,33 | 153,446 |
| 3 | 10,0350 | 0,357 | 4,60 | 100 | 33,33 | 152,783 |
| 4 | 10,0348 | 0,360 | 4,64 | 100 | 33,33 | 154,114 |
| 5 | 10,0347 | 0,356 | 4,59 | 100 | 33,33 | 152,455 |
| 6 | 10,0345 | 0,360 | 4,64 | 100 | 33,33 | 154,119 |

**Perhitungan**

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,358 = 0,07704 X + 0,0026

X =

X = 4,62 µg/ml

.

Kadar mg/gr =

=

=

= 1534,42 = =

**Lampiran 13.** (Lanjutan)

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,358 = 0,07704 X + 0,0026

X =

X = 4,62 µg/ml

.

Kadar mg/gr =

=

=

= 1534,46 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,357 = 0,07704 X + 0,0026

X =

X = 4,60 µg/ml

.

Kadar mg/gr =

=

=

= 1527,83 = =

**Lampiran 13.** (Lanjutan)

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,360 = 0,07704 X + 0,0026

X =

X = 4,64 µg/ml

.

Kadar mg/gr =

=

=

= 1541,14 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,356 = 0,07704 X + 0,0026

X =

X = 4,59 µg/ml

.

Kadar mg/gr =

=

=

**Lampiran 13.** (Lanjutan)

= 1524,55 = =

1. Konsentrasi terukur (X)

Y = 0,07704 X + 0,0026

0,360 = 0,07704 X + 0,0026

X =

X = 4,64 µg/ml

.

Kadar mg/gr =

=

=

= 1541,19 = =

=

=

= 25,56

**Lampiran 14.** Data Penimbangan dan Kadar Vitamin C pada Labu Siam Tua Secara Spektrofotometri Ultraviolet

Tabel Data Penimbangan Kadar Vitamin C Pada Labu Siam Tua

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Nama Sampel | Berat Sampel (gr) | Serapan (A) | Konsetrasi ( | Volume Labu (ml) | FP | Kadar (mg/100 gr) |
| Ekstrak Sari Buah Labu Siam Tua | 10,0353 | 0,358 | 4,62 | 100 | 33,33 | 153,442 |
| 10,0351 | 0,358 | 4,62 | 100 | 153,446 |
| 10,0350 | 0,357 | 4,60 | 100 | 152,783 |
| 10,0348 | 0,360 | 4,64 | 100 | 154,114 |
| 10,0347 | 0,356 | 4,59 | 100 | 152,455 |
| 10,0345 | 0,360 | 4,64 | 100 | 154,119 |
| Ekstrak Etanol Buah Labu Siam Tua | 10,0121 | 0,495 | 6,39 | 100 | 50 | 319,113 |
| 10,0119 | 0,497 | 6,42 | 100 | 320,618 |
| 10,0118 | 0,497 | 6,42 | 100 | 320,621 |
| 10,0122 | 0,498 | 6,43 | 100 | 321,108 |
| 10,0114 | 0,494 | 6,38 | 100 | 318,636 |
| 10,0110 | 0,495 | 6,39 | 100 | 319,148 |

**Lampiran 15.** Perhitungan Statistik Kadar Sebenarnya pada Sampel Ekstrak Etanol Buah Labu Siam Tua

Tabel Kadar Ekstrak Etanol Buah Labu Siam Tua

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Kadar (X) (µg/100g) | X- |  |
| 1 | 319,113 | 0,761 | 0,579121 |
| 2 | 320,618 | 0,744 | 0,553536 |
| 3 | 320,621 | 0,747 | 0,558009 |
| 4 | 321,108 | 1,234 | 1,522756 |
| 5 | 318,636 | 1,238 | 1,532644 |
| 6 | 319,148 | 0,0726 | 0,527076 |
|  | 1919,244  = 319,874 |  | )2 = 5,273142 |
|  |

SD = = = = = 1,0269 µg/100g

Dasar penolakan data adalah apabila dengan tingkat kepercayaan 99% maka nilai α = 0,01; n = 6 (dk = 5), = 4,0321

=

1. = = = 1,816
2. 2 = = = 1,775
3. = = = 1,782
4. = = = 2,945
5. = = = 2,954
6. = = = 1,732

**Lampiran 15.** (Lanjutan)

Semua data dapat diterima karena > maka rentang kadar vitamin C :

µ =±

= 319,874 ±

= 319,874 ± 1,70 mg/100 g

**Lampiran 16.** Perhitungan Statistik Kadar Sebenarnya pada Sampel Ekstrak Sari Buah Labu Siam Tua

Tabel Kadar Ekstrak Sari Buah Labu Siam Tua

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Kadar (X) (µg/100g) | X- |  |
| 1 | 153,442 | 0,049 | 0,002401 |
| 2 | 153,446 | 0,053 | 0,002809 |
| 3 | 152,783 | 0,61 | 0,3721 |
| 4 | 154,114 | 0,721 | 0,519841 |
| 5 | 152,455 | 0,938 | 0,879844 |
| 6 | 154,119 | 0,726 | 0,527076 |
|  | = 153,393 |  | )2 = 2,304071 |
|  |

SD = = = = = 0,6788 µg/100g

Dasar penolakan data adalah apabila dengan tingkat kepercayaan 99% maka nilai α = 0,01; n = 6 (dk = 5), = 4,0321

=

1. = = = 0,1768
2. 2 = = = 0,1913
3. = = = 2,202
4. = = = 2,602
5. = = = 3,386
6. = = = 2,620

**Lampiran 16.** (Lanjutan)

Semua data dapat diterima karena > maka rentang kadar vitamin C :

µ =±

= 153,393 ±

= 153,393 ± 1,117 mg/100 g

**Lampiran 17.** Data Distribusi t

Tabel Data Distribusi t

