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

Muda

****

Labu Siam Muda

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



Ekstrak kental etanol menggunakan rotary evaporator



Ekstrak kental air menggunakan penangas air

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

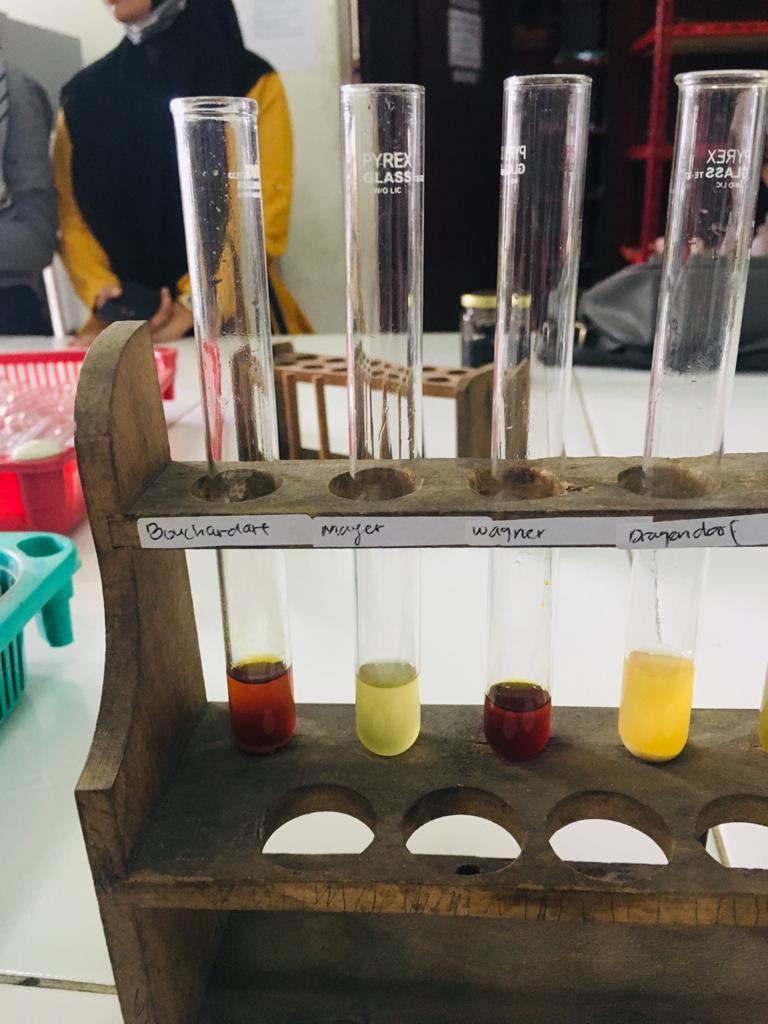


Ekstrak Kental Etanol

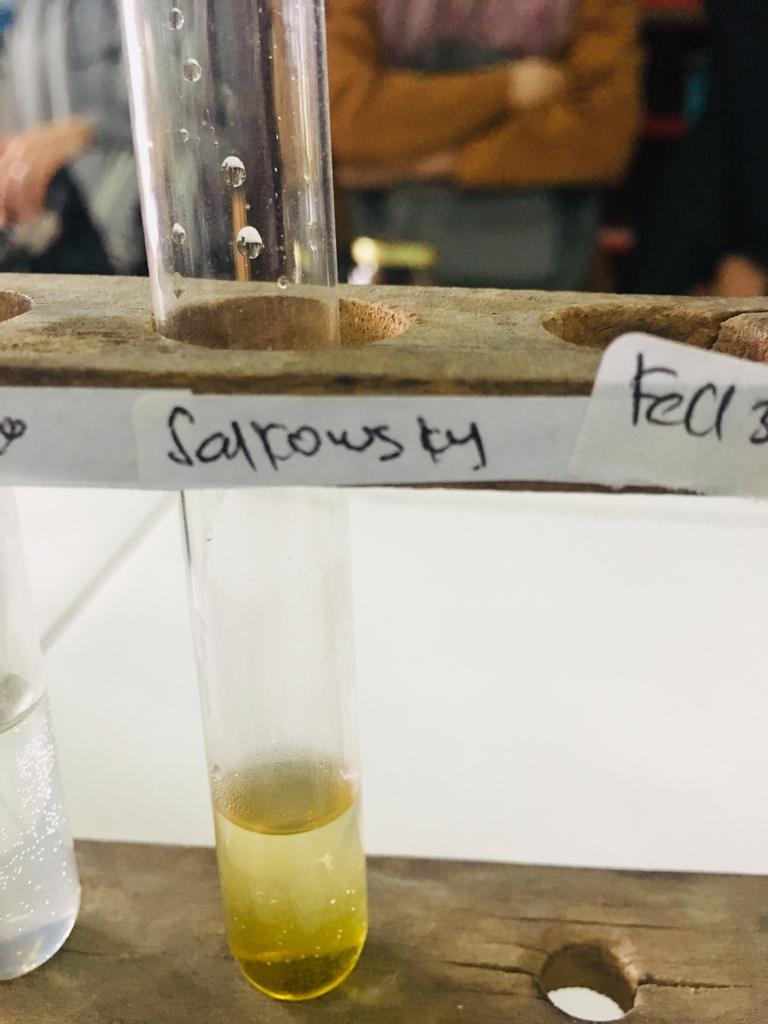
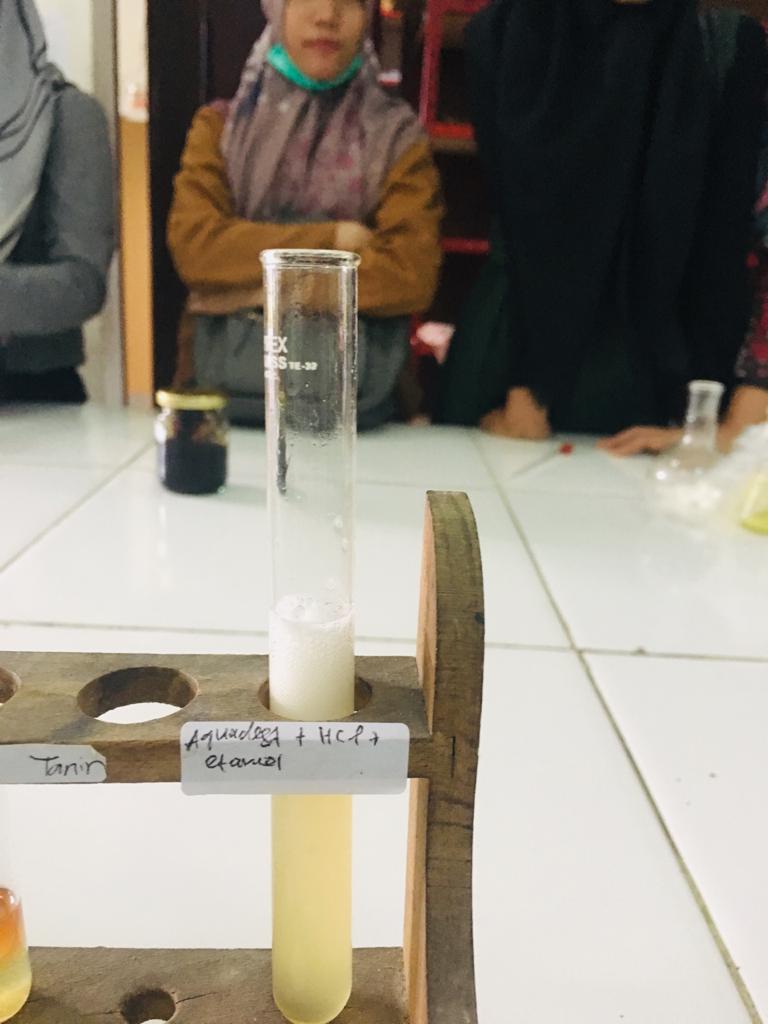
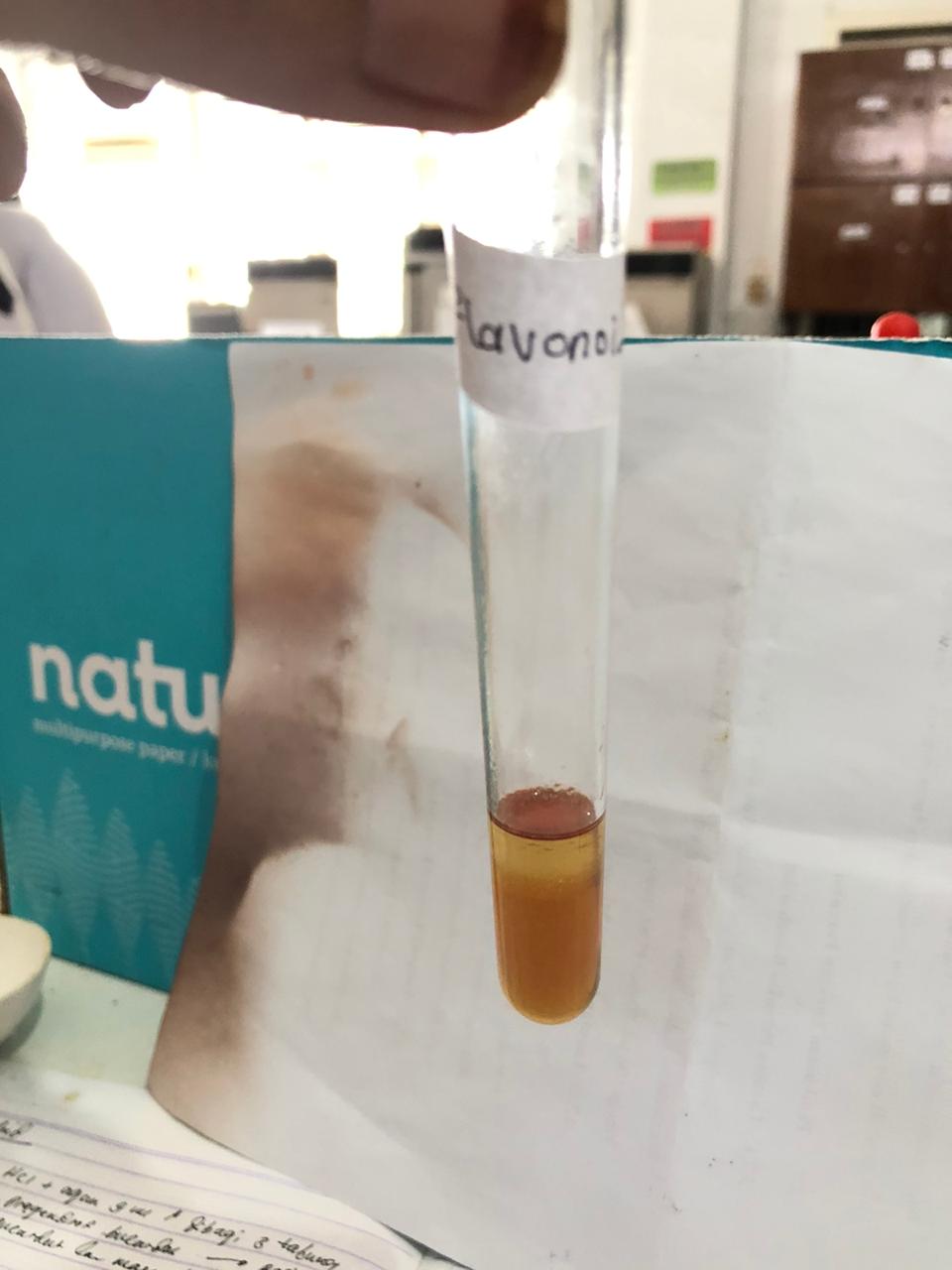


Ekstrak Kental Air

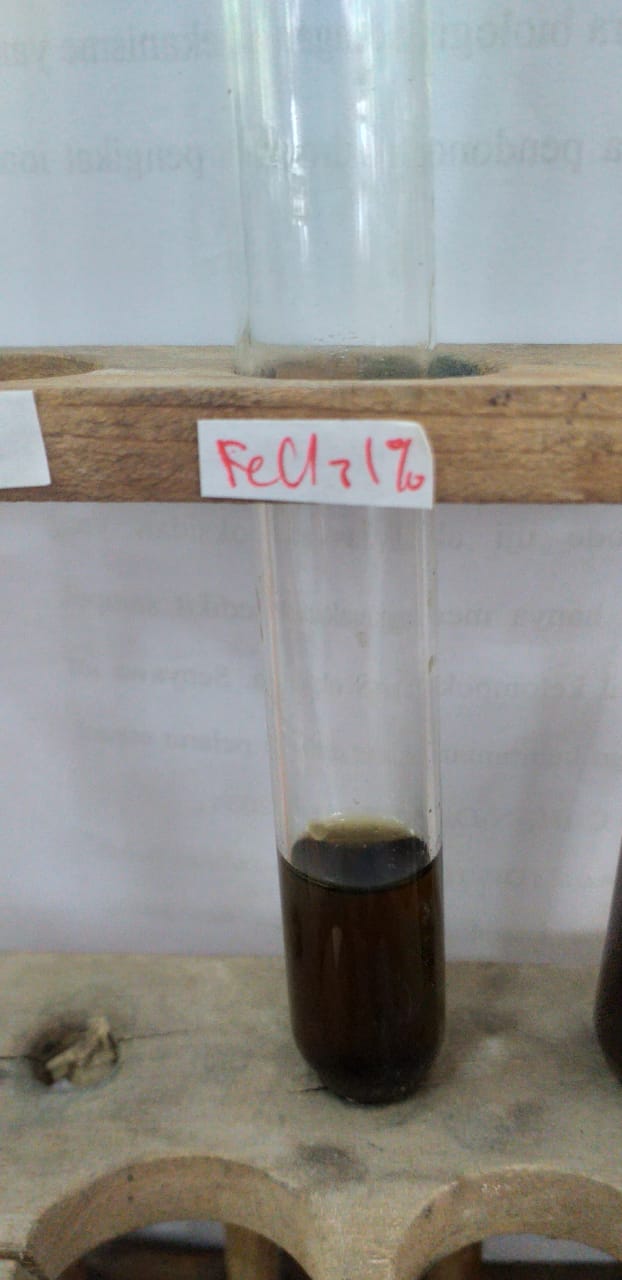
**Lampiran 4.** Skrining Fitokimia Ekstrak Etanol Labu Siam Muda



Alkaloid (+)

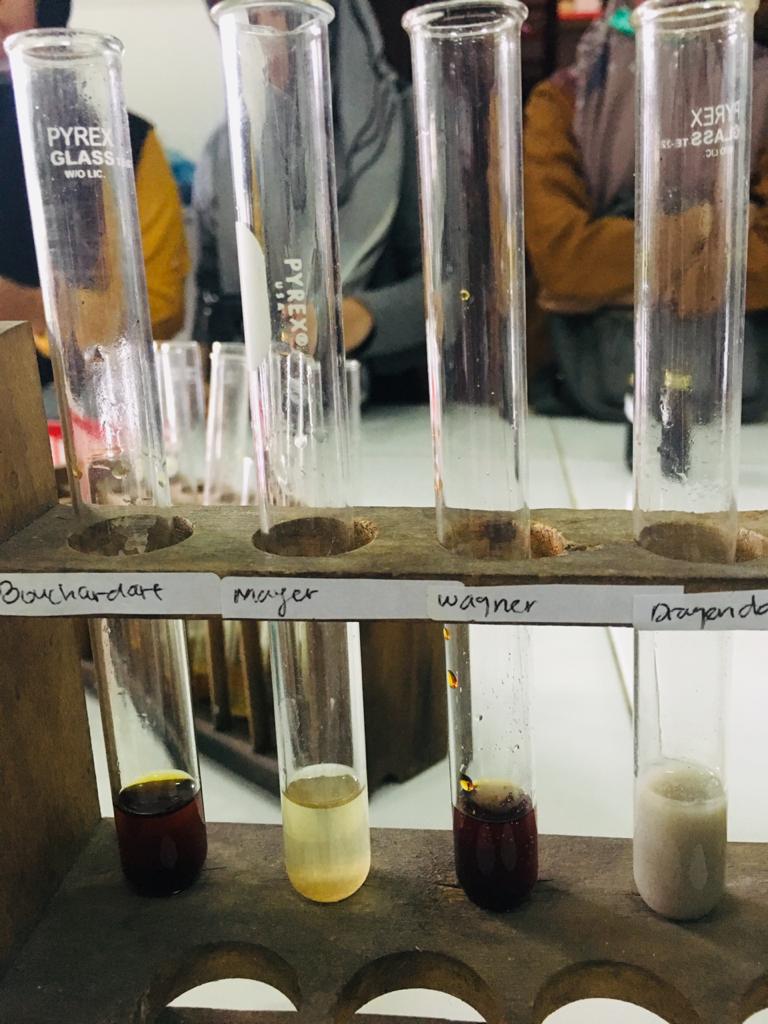
  

Steroid (-) Saponin (+) Flavonoid (+)

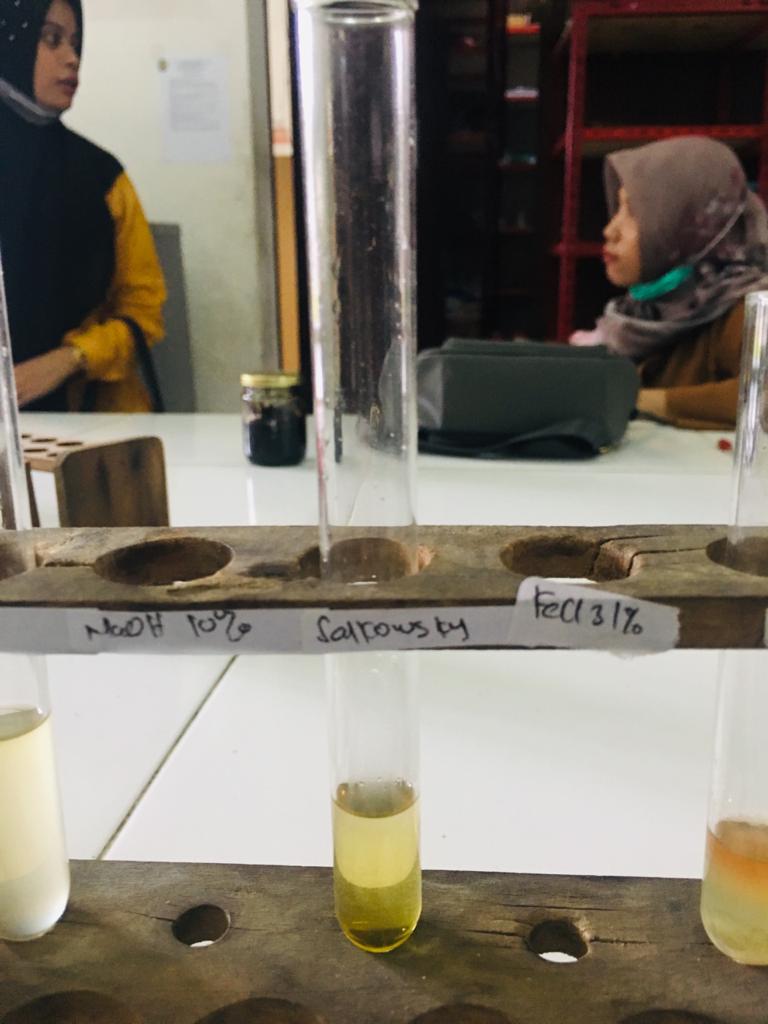
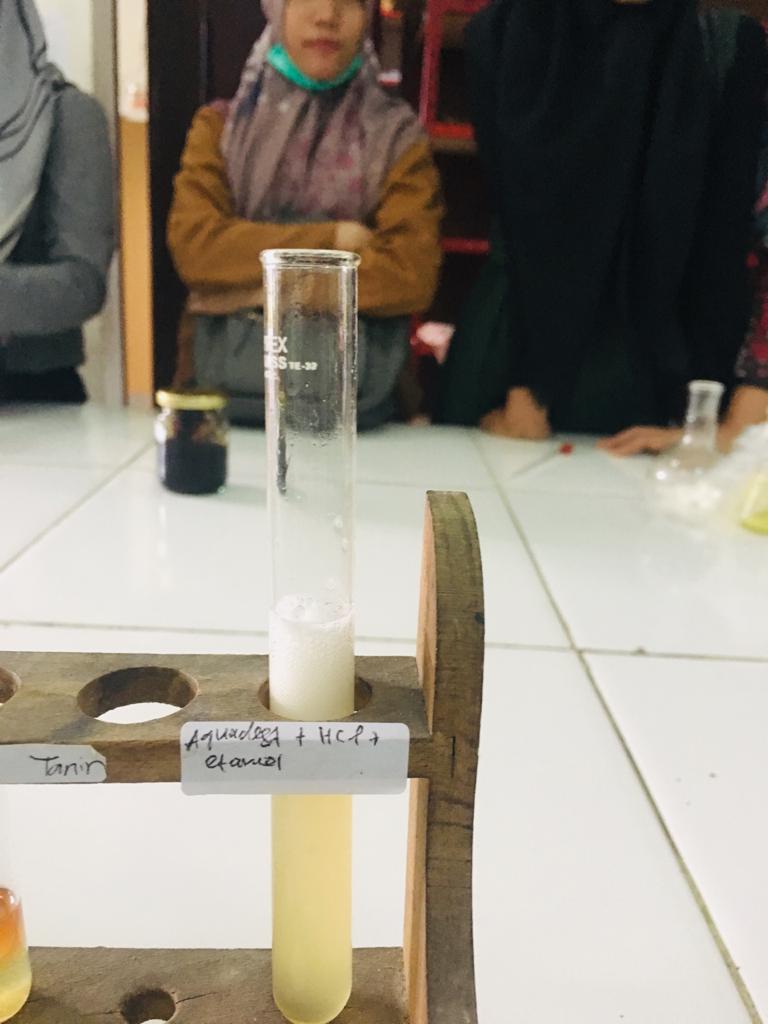
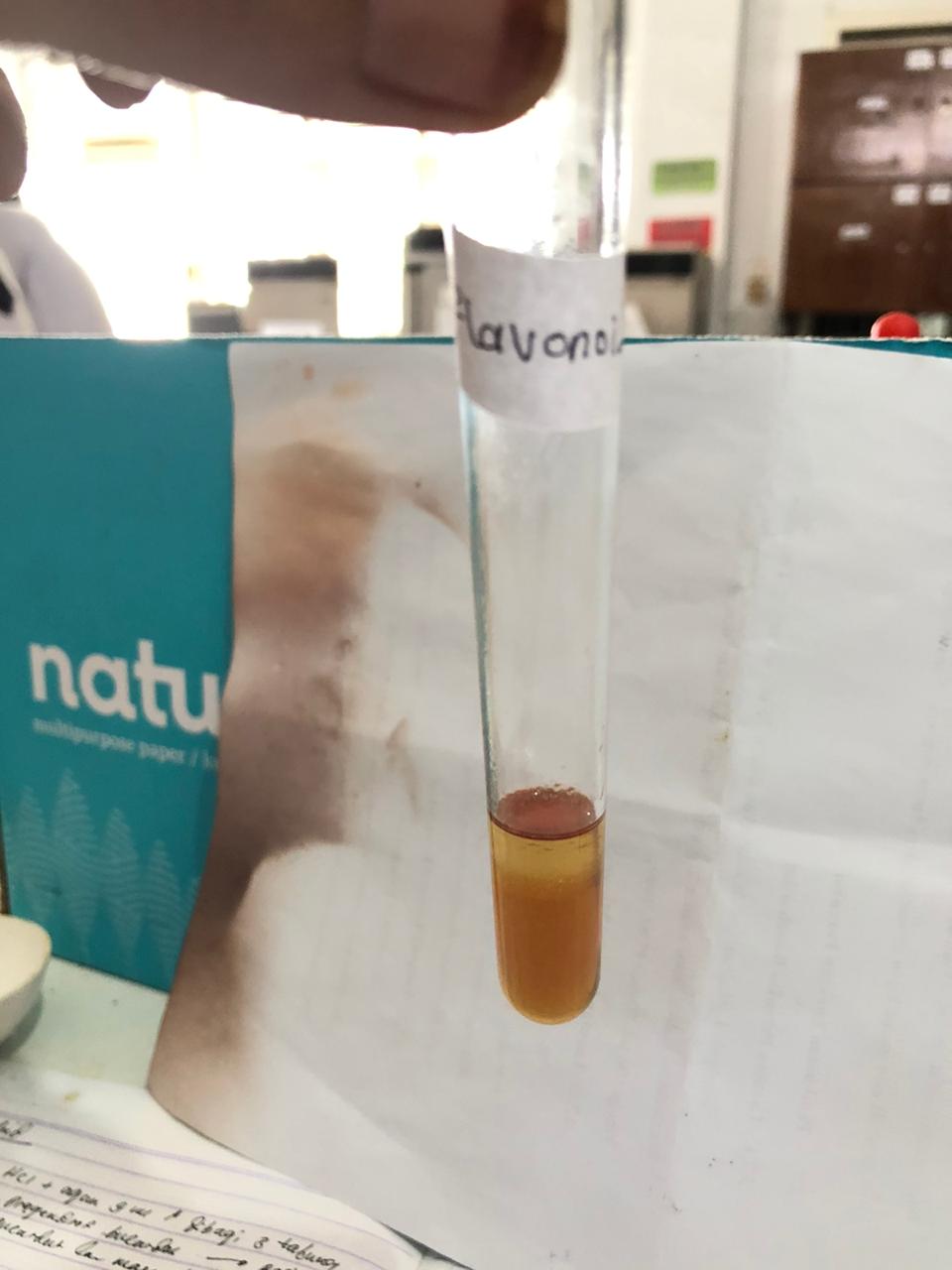
 

Tanin (+) Glikosida (+)

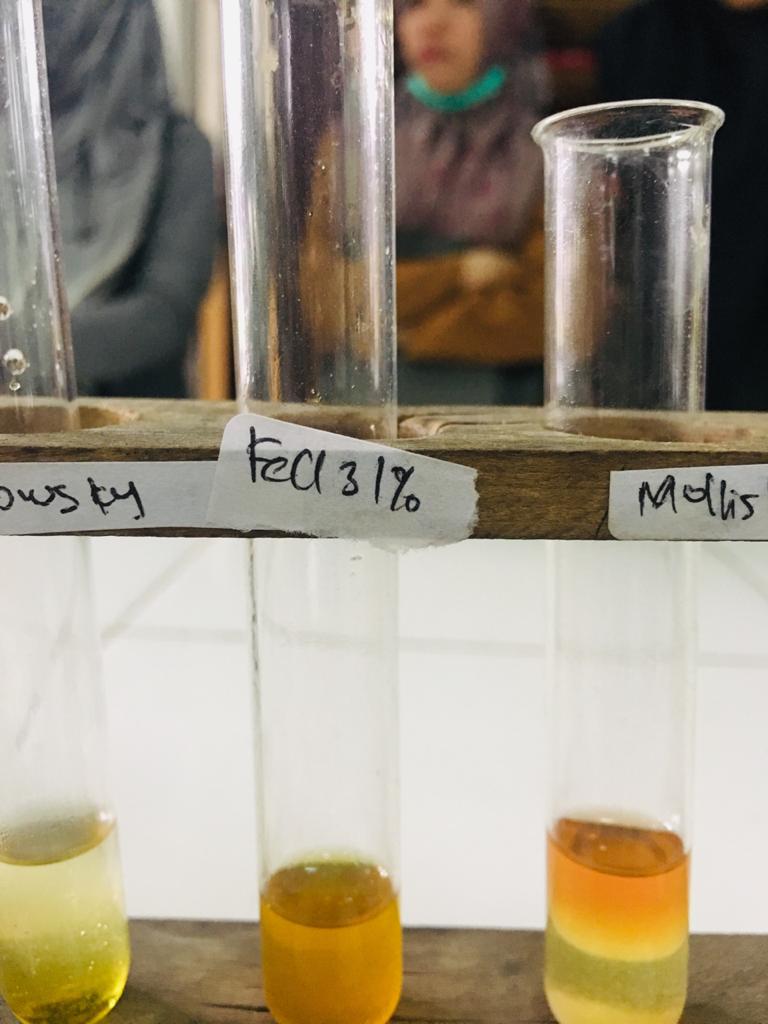
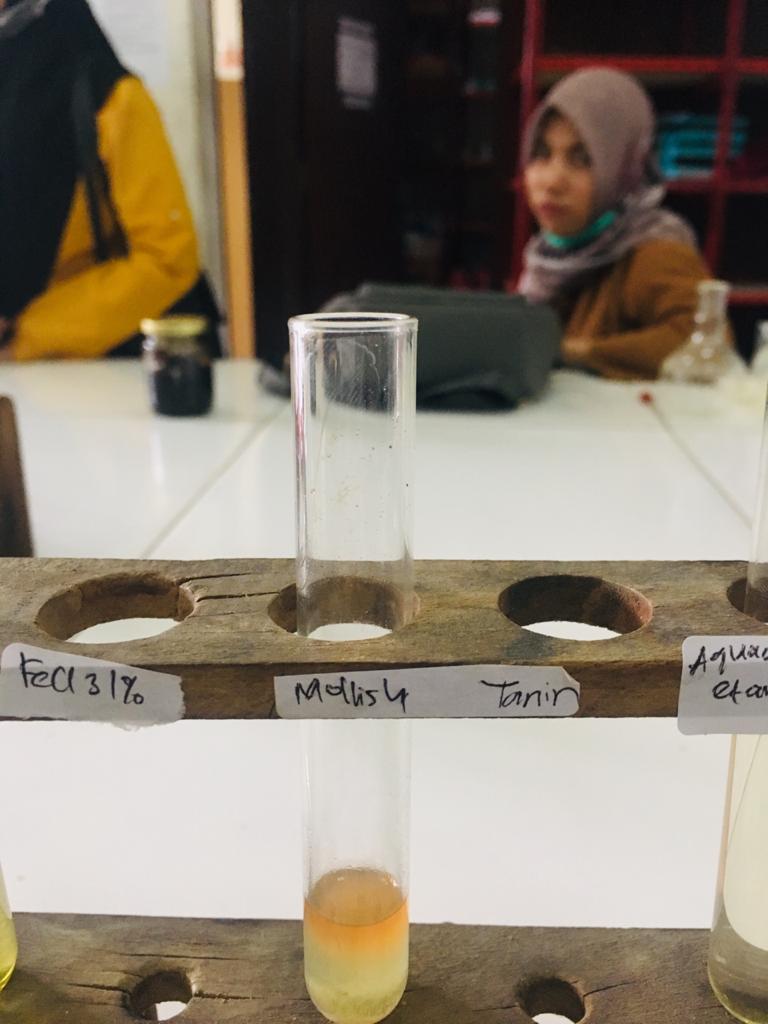
**Lampiran 5.** Skrining Fitokimia Ekstrak Sari Labu Siam Muda



Alkaloid (+)

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

Tanin (-) Glikosida (-)

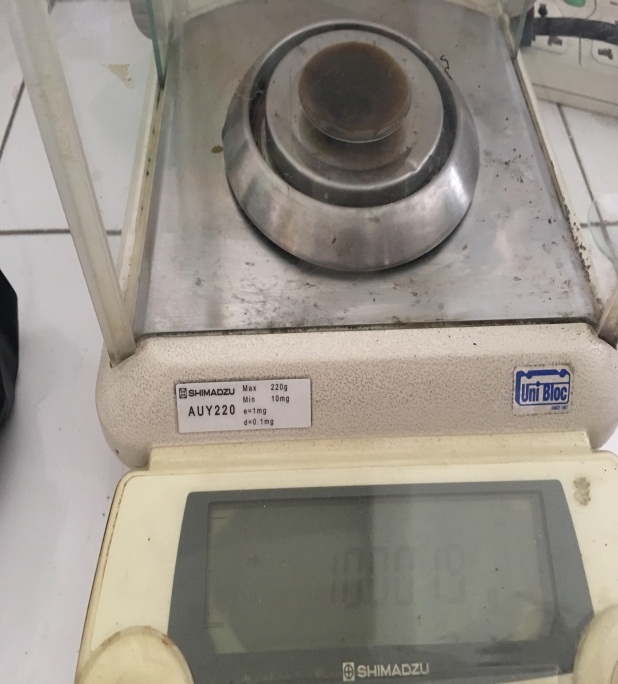
**Lampiran 6.** Alat Instrument Penelitian



Spektrofotometri UV-VIS

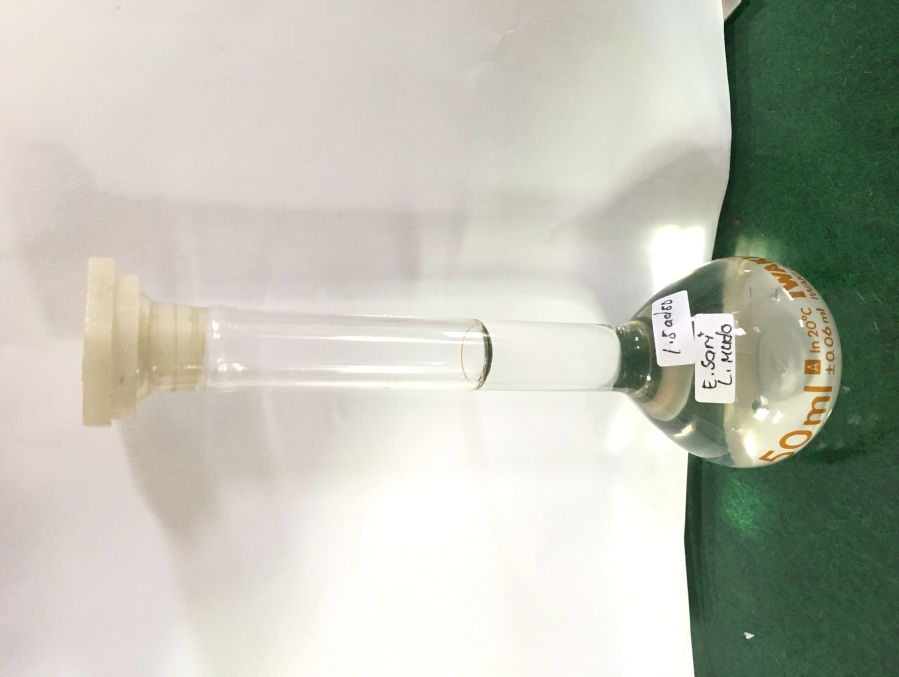


LIB Baku Asam Ascorbat



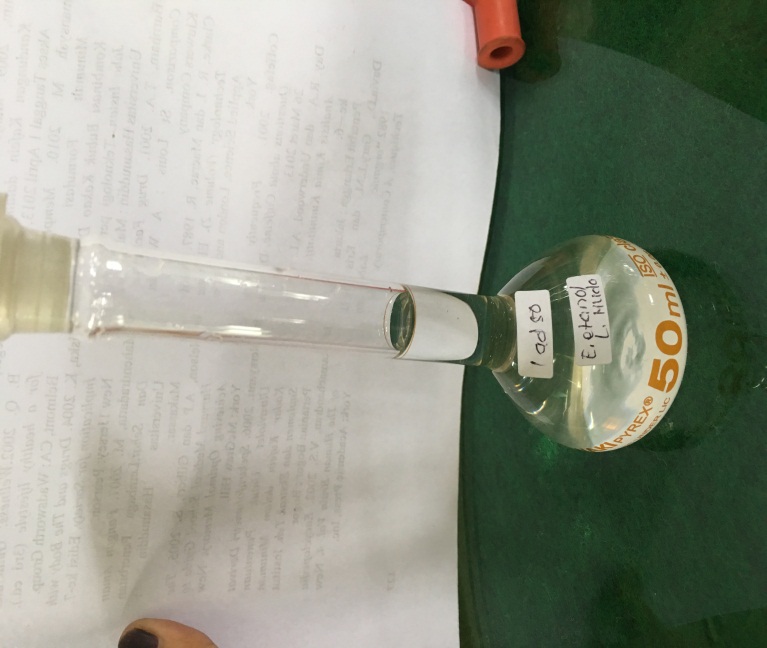
Timbangan

**Lampiran 6.** (Lanjutan)



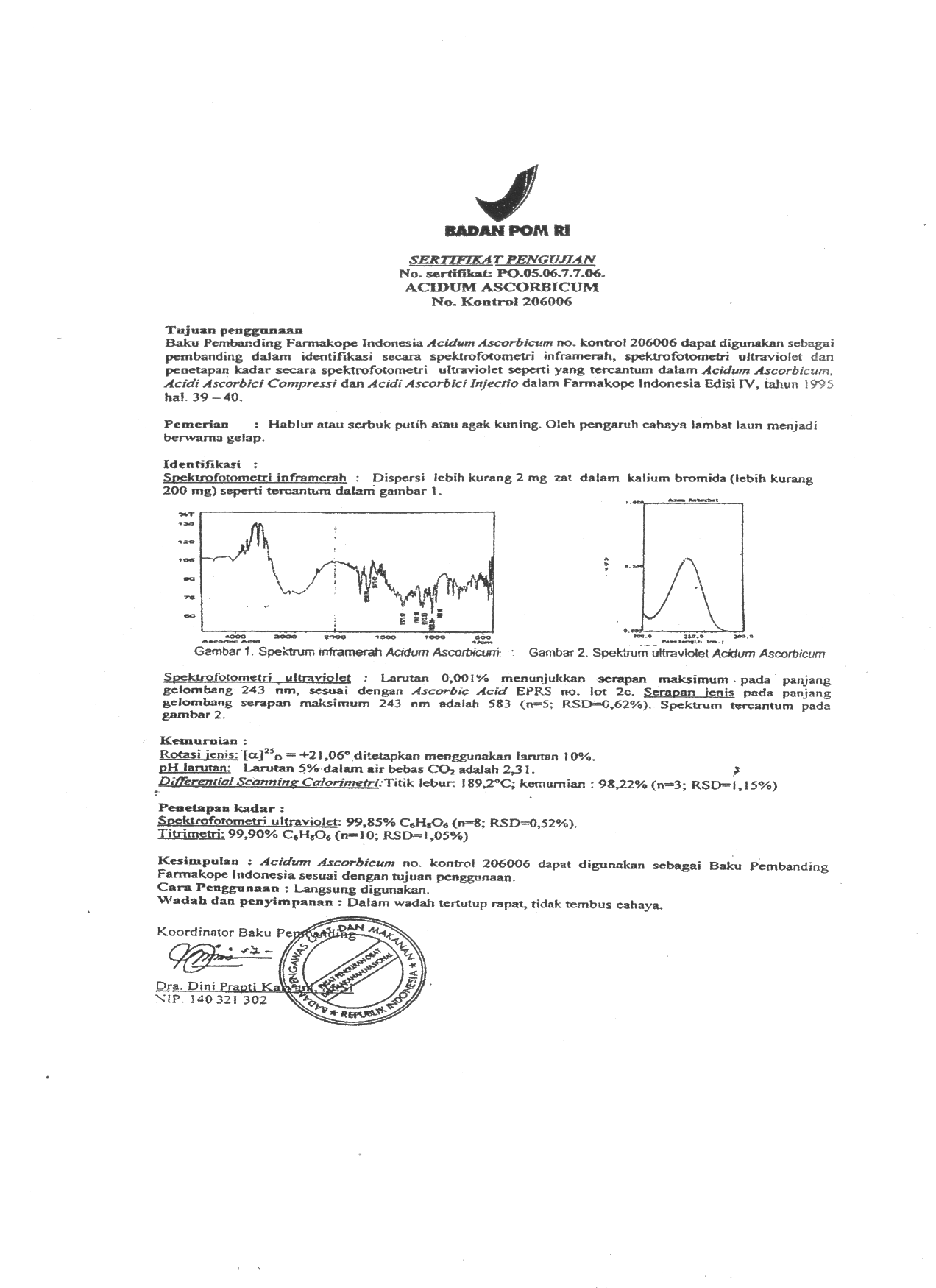
Larutan Ekstrak Sari Labu Muda

**Lampiran 6.** (Lanjutan)



Larutan Ekstrak Etanol Labu Muda

**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

2 ml dalam 50 ml 4µg/ml

5 ml dalam 50 ml 10µg/ml

3 ml dalam 50 ml 6µg/ml

4 ml dalam 50 ml 8µg/ml

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

Sampel

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

Kemudian dicukupkan sampai batas tanda dengan 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**. Data Kurva Kalibrasi Vitamin C BPFI

TabelData Pengukuran Kurva Kalibrasi Vitamin C BPFI dalam Pelarut

Aquadest.

|  |  |  |
| --- | --- | --- |
| No | Konsentrasi  (µ/ml) | Serapan  A |
| 1 | 0,000 | 0,000 |
| 2 | 2,000 | 0,162 |
| 3 | 4,000 | 0,308 |
| 4 | 6,000 | 0,461 |
| 5 | 8,000 | 0,627 |
| 6 | 10,000 | 0,769 |

**Lampiran 11**.Perhitungan Persamaan Regresi dan Koefisien Korelasi Vitamin C

Tabel Persamaan Regresi dan Koefisien Kolerasi

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 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*

**Lampiran 11.** (Lanjutan)

= 0,3878 – (0,07704).(5)

= 0,3878 – 0,3852

= 0,0026

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

Koefisien korelasi :

r =

r =

r =

r =

r =

r = 0,99975

**Lampiran 12.** Data perhitungan Kadar Sampel

TabelData Sampel Pada Ekstrak Etanol Buah Labu Muda

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Berat sampel  (gr) | Serapan (A) | Konsentrasi (µg/ml) | Volume Labu (ml) | FP | Kadar yang diperoleh (mg/ml) |
| 1 | 10,0019 | 0,325 | 4,19 | 100 | 50 | 209,46 |
| 2 | 10,0020 | 0,328 | 4,23 | 100 | 50 | 211,457 |
| 3 | 10,0022 | 0,328 | 4,23 | 100 | 50 | 211,453 |
| 4 | 10,0028 | 0,327 | 4,21 | 100 | 50 | 210,441 |
| 5 | 10,0010 | 0,322 | 4,15 | 100 | 50 | 207,479 |
| 6 | 10,0021 | 0,325 | 4,19 | 100 | 50 | 209,456 |

**Perhitungan**

Konsentrasi terukur (X)

**I.Konsentrasi**

Y = 0,07704 X + 0,0026

0,325 = 0,07704 X + 0,0026

X =

X =

X = 4,19 µg/ml

.

Kadar mg/gr =

=

=

= 2094,60 = =

**Lampiran 12.** (Lanjutan)

**II.Konsentrasi**

Y = 0,07704 X + 0,0026

0,328 = 0,07704 X + 0,0026

X =

X =

X = 4,23 µg/ml

.

Kadar mg/gr =

=

=

= 2114,57 = =

**III.Konsentrasi**

Y = 0,07704 X + 0,0026

0,328 = 0,07704 X + 0,0026

X =

X =

X = 4,23 µg/ml

.

Kadar mg/gr =

**Lampiran 12.** (Lanjutan)

=

=

= 2114,53 = =

**IV.Konsentrasi**

Y = 0,07704 X + 0,0026

0,327 = 0,07704 X + 0,0026

X =

X =

X = 4,21 µg/ml

.

Kadar mg/gr =

=

=

= 2104,41 = =

**V.Konsentrasi**

Y = 0,07704 X + 0,0026

0,322 = 0,07704 X + 0,0026

**Lampiran 12.** (Lanjutan)

X =

X =

X = 4,15 µg/ml

.

Kadar mg/gr =

=

=

= 2074,79 = =

**VI.Konsentrasi**

Y = 0,07704 X + 0,0026

0,325 = 0,07704 X + 0,0026

X =

X =

X = 4,19 µg/ml

.

Kadar mg/gr =

=

=

**Lampiran 12.** (Lanjutan)

= 2094,56 = =

=

=

=209,957

**Lampiran 13.** Data perhitungan Kadar Sampel

Tabel Data Sampel Pada Ekstrak Sari Buah Labu Muda

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Berat sampel  (gr) | Serapan (A) | Konsentrasi (µg/ml) | Volume Labu (ml) | FP | Kadar yang diperoleh (mg/ml) |
| 1 | 10,0350 | 0,384 | 4,95 | 100 | 33,33 | 164,408 |
| 2 | 10,0352 | 0,388 | 5,01 | 100 | 33,33 | 166,397 |
| 3 | 10,0354 | 0,385 | 4,97 | 100 | 33,33 | 165,065 |
| 4 | 10,0356 | 0,386 | 4,98 | 100 | 33,33 | 165,394 |
| 5 | 10,0353 | 0,387 | 4,99 | 100 | 33,33 | 165,731 |
| 6 | 10,0351 | 0,383 | 4,94 | 100 | 33,33 | 164,074 |

**Perhitungan**

Konsentrasi terukur (X)

**I.Konsentrasi**

Y = 0,07704 X + 0,0026

0,384 = 0,07704 X + 0,0026

X =

X =

X = 4,95 µg/ml

.

Kadar mg/gr =

=

=

= 1644,08 = =

**Lampiran 13.** (Lanjutan)

**II.Konsentrasi**

Y = 0,07704 X + 0,0026

0,388 = 0,07704 X + 0,0026

X =

X =

X = 5,01 µg/ml

.

Kadar mg/gr =

=

=

= 1663,97 = =

**III.Konsentrasi**

Y = 0,07704 X + 0,0026

0,385 = 0,07704 X + 0,0026

X =

X =

X = 4,97 µg/ml

.

Kadar mg/gr =

**Lampiran 13.** (Lanjutan)

=

=

= 1650,65 = =

**IV.Konsentrasi**

Y = 0,07704 X + 0,0026

0,386 = 0,07704 X + 0,0026

X =

X =

X = 4,98 µg/ml

.

Kadar mg/gr =

=

=

= 1653,94 = =

**V.Konsentrasi**

Y = 0,07704 X + 0,0026

0,387 = 0,07704 X + 0,0026

X =

**Lampiran 13.** (Lanjutan)

X =

X = 4,99 µg/ml

.

Kadar mg/gr =

=

=

= 1657,31 = =

**VI.Konsentrasi**

Y = 0,07704 X + 0,0026

0,383 = 0,07704 X + 0,0026

X =

X =

X = 4,94 µg/ml

.

Kadar mg/gr =

=

=

= 1640,74 = =

**Lampiran 13.** (Lanjutan)

=

=

= 165,178

**Lampiran 14**. Data Penimbangan dan Kadar Vitamin C pada Labu Siam Muda

Secara Spektrofotometri Ultraviolet

Tabel Data Penimbangan Kadar Vitamin C Pada Labu Siam Muda

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Nama Sampel | Berat Sampel (gr) | Serapan (A) | Konsetrasi ( | Volume Labu (ml) | FP | Kadar (mg/100gr) |
| Ekstrak Etanol Buah Labu Siam Muda | 10,0019 | 0,325 | 4,19 | 100 | 50 | 209,46 |
| 10,0020 | 0,328 | 4,23 | 100 | 211,457 |
| 10,0022 | 0,328 | 4,23 | 100 | 211,453 |
| 10,0028 | 0,327 | 4,21 | 100 | 210,441 |
| 10,0010 | 0,322 | 4,15 | 100 | 207,479 |
| 10,0021 | 0,325 | 4,19 | 100 | 209,456 |
| Ekstrak Sari Buah Labu Siam Muda | 10,0350 | 0,384 | 4,95 | 100 | 33,33 | 164,408 |
| 10,0352 | 0,388 | 5,01 | 100 | 166,397 |
| 10,0354 | 0,385 | 4,97 | 100 | 165,065 |
| 10,0356 | 0,386 | 4,98 | 100 | 165,394 |
| 10,0353 | 0,387 | 4,99 | 100 | 165,731 |
| 10,0351 | 0,383 | 4,94 | 100 | 164,074 |

**Lampiran 15**. Perhitungan Statistik Kadar Sebenarnya pada Sampel Buah Labu

Siam Muda

Tabel Kadar Ekstrak Etanol Buah Labu Siam Muda

|  |  |  |  |
| --- | --- | --- | --- |
| No | Kadar (%) (X) | *X-* |  |
| 1 | 209,46 | 0,497 | 0,247009 |
| 2 | 211,457 | 1,5 | 2,25 |
| 3 | 211,453 | 1,496 | 2,238016 |
| 4 | 210,441 | 0,484 | 0,234256 |
| 5 | 209,479 | 2,478 | 6,140484 |
| 6 | 209,456 | 0,501 | 0,251001 |
|  | 1259,746  = 209,957 |  | )2= 11,360766 |
|  |

SD = = = = 1,5073 mg/100g

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

=

1. = = = 0,808
2. 2 = = = 2,439
3. = = = 2,432
4. = = = 0,787
5. = = = 4,029
6. = = = 0,815

**Lampiran 15.** (Lanjutan)

Semua data dari keenam pengulangan diterima karena >

µ = ±

= 209,957 ±

= 209,957 ± 2,479 mg/100 g

**Lampiran 16**. Perhitungan Statistik Kadar Sebenarnya pada Sampel Buah Labu

Siam Muda

Tabel Kadar Ekstrak Sari Buah Labu Siam Muda

|  |  |  |  |
| --- | --- | --- | --- |
| No | Kadar (%) (X) | *X-* |  |
| 1 | 164,408 | 0,77 | 0,5929 |
| 2 | 166,397 | 1,219 | 1,485961 |
| 3 | 165,065 | 0,113 | 0,012769 |
| 4 | 165,394 | 0,216 | 0,046656 |
| 5 | 165,731 | 0,553 | 0,305809 |
| 6 | 164,074 | 1,104 | 1,218816 |
|  | 991,069  = 165,178 |  | )2= 3,662911 |
|  |

SD = = = = 0,8559 mg/100g

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

=

1. = = =2,206
2. 2 = = = 3,492
3. = = = 0,232
4. = = = 0,619
5. = = = 1,584
6. = = = 3,163

**Lampiran 16.** (Lanjutan)

Semua data dari keenam pengulangan diterima karena >

µ = ±

= 165,178 ±

= 165,178 ± 1,407 mg/100 g

**Lampiran 17.** Data Distribusi t

Tabel Data Distribusi t

