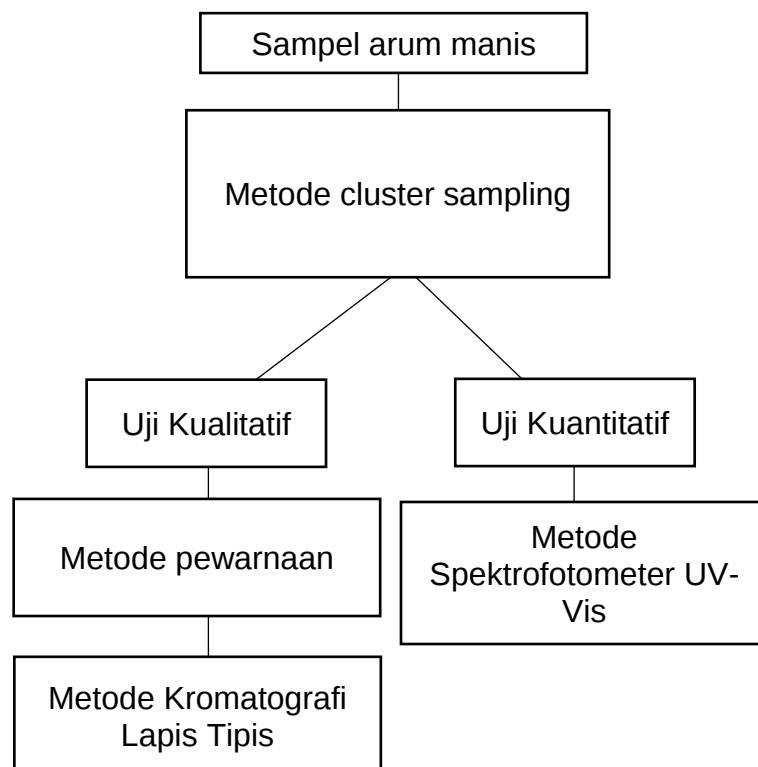


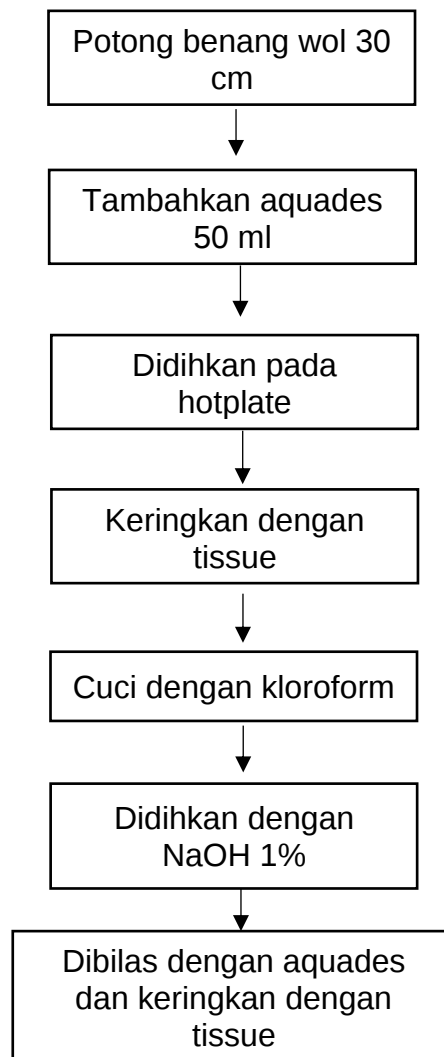
LAMPIRAN

Lampiran 1. Skema kerja sampel arum manis



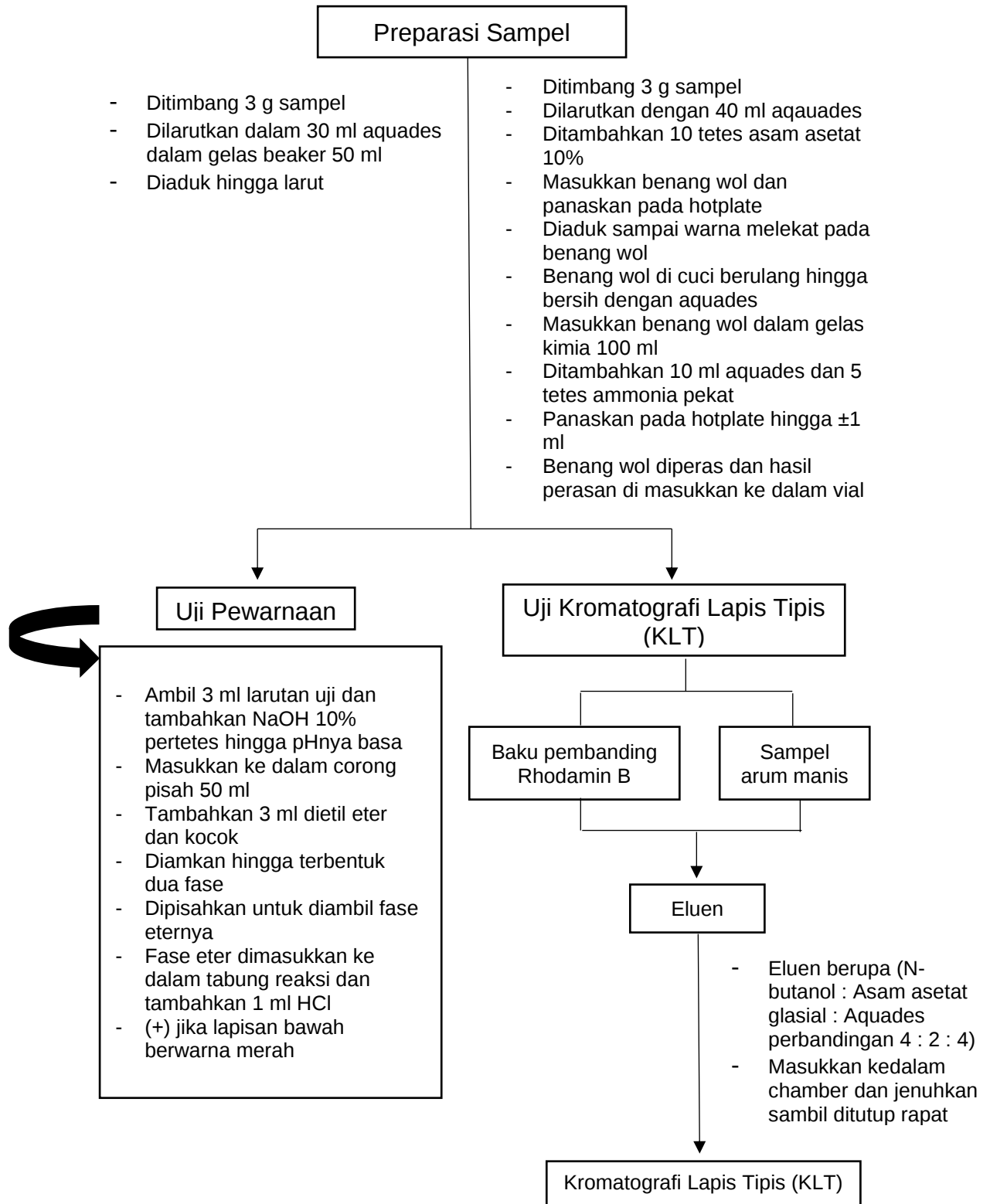
Gambar 3. Skema kerja sampel arum manis

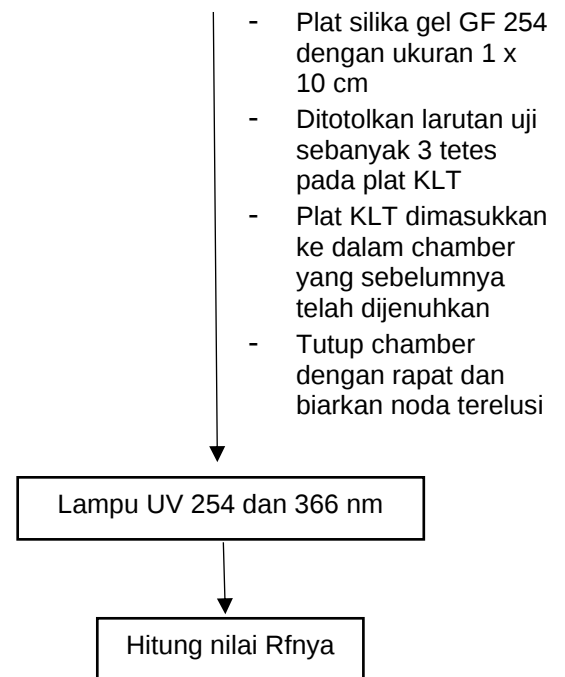
Lampiran 2. Skema kerja pembebasan lemak pada benang wol



Gambar 4. Skema kerja pembebasan lemak pada benang wol

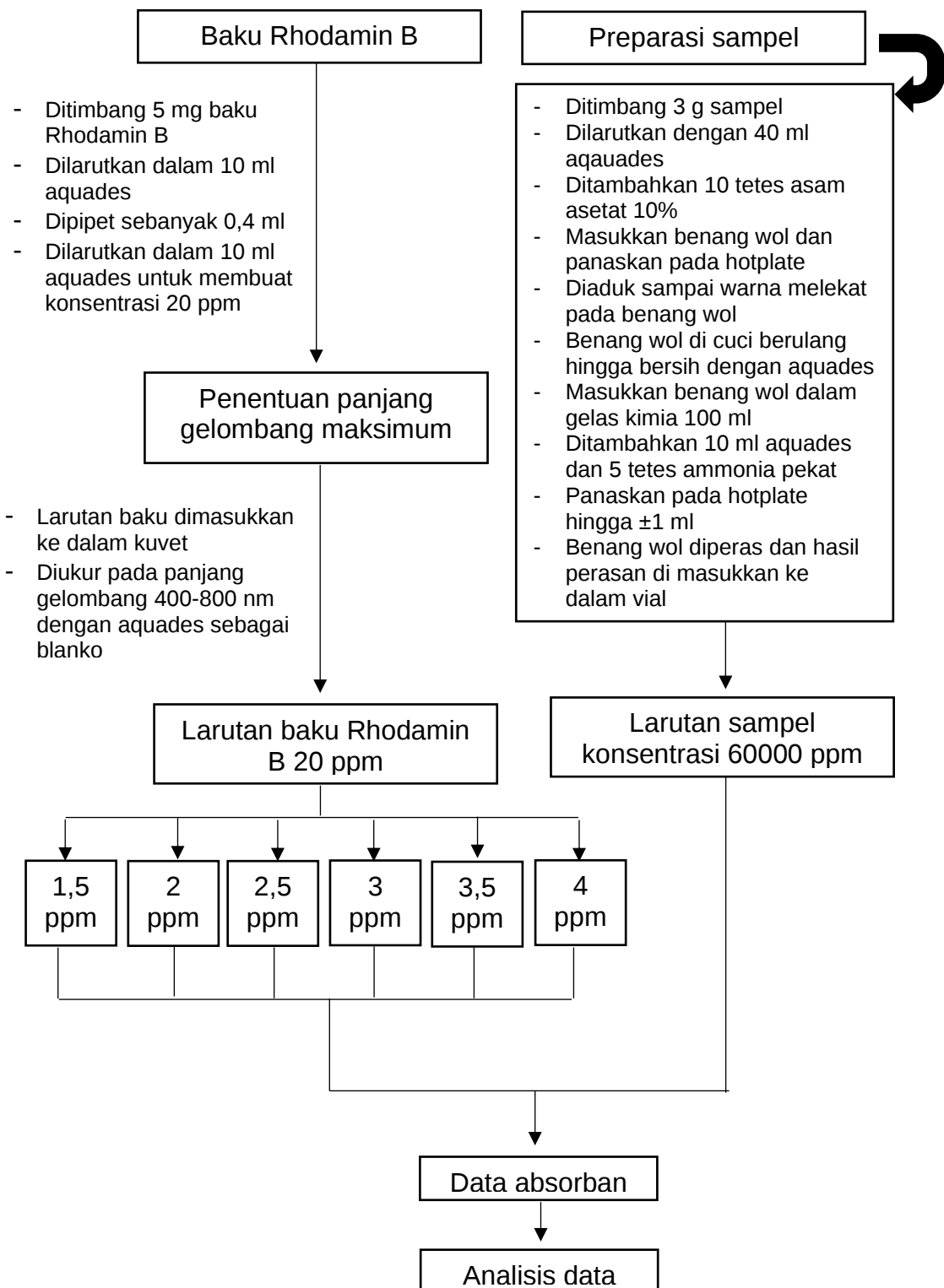
Lampiran 3. Skema kerja analisis kualitatif





Gambar 5. Skema kerja analisis kualitatif

Lampiran 4. Skema kerja analisis kuantitatif



Gambar 6. Skema kerja analisis kuantitatif

Lampiran 5. Perhitungan Bahan

Perhitungan sampel penelitian

No	Kacamatan	Jumlah populasi arum manis
1	Bontoala	5
2	Biringkanaya	3
3	Tamalanrea	2
4	Ujung Pandang	3
		13

Tabel 9. sumber data arum manis yang beredar di kota

Makassar berdasarkan hasil observasi langsung.

Jumlah sampel yang akan digunakan, yaitu :

$$\begin{aligned}
 \text{Rumus} &= \sqrt{N} + 1 \\
 &= \sqrt{13} + 1 \\
 &= 4,60 \\
 &= 5
 \end{aligned}$$

Jadi, jumlah sampel yang ditentukan akan digunakan yaitu sebanyak 5 sampel

$$n = \frac{\text{Populasi kelompok (Stratum)}}{\text{Jumlah populasi keseluruhan}} \times \text{Jumlah sampel yang ditentukan}$$

$$\text{Kacamatan Bontoala} = \frac{5}{13} \times 5 = 1,9 = 2 \text{ sampel}$$

$$\text{Kacamatan Biringkanaya} = \frac{3}{13} \times 5 = 1,15 = 1 \text{ sampel}$$

$$\text{Kacamatan Tamalanrea} = \frac{2}{13} \times 5 = 0,76 = 1 \text{ sampel}$$

$$\text{Kacamatan Ujung pandang} = \frac{3}{13} \times 5 = 1,15 = 1 \text{ sampel}$$

Perhitungan pembuatan larutan baku Rhodamin B

$$\text{Ppm} = \frac{\text{mg}}{\text{L}} = \frac{5 \text{ mg}}{0,01 \text{ L}} = 500 \text{ ppm}$$

$$M1.V1 = M2.V2$$

$$500 \text{ ppm} \cdot 0,4 \text{ ml} = M2 \cdot 10 \text{ ml}$$

$$200 = M2 \cdot 10 \text{ ml}$$

$$M2 = 20 \text{ ppm}$$

Perhitungan nilai KLT

$$R_f = \frac{\text{Jarak tempuh noda}}{\text{jarak tempuh eluen}}$$

Dimana jarak yang ditempuh pelarut yaitu

$$= 10 \text{ cm} - (1,5 \text{ cm} + 0,5 \text{ cm})$$

$$= 10 \text{ cm} - 2 \text{ cm}$$

$$= 8 \text{ cm}$$

Perhitungan sampel pembanding Rhodamin B

$$R_f = \frac{6,5}{8} = 0,812$$

Perhitungan pembuatan larutan sampel

$$\text{Ppm} = \frac{3000 \text{ mg}}{0,05 \text{ L}} = 60000 \text{ ppm}$$

Perhitungan kurva baku standar Rhodamin B dibuat dengan 5 mg sampel

a) 1,5 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 1,5 \cdot 5$$

$$20.V1 = 7,5$$

$$V1 = \frac{7,5}{20} = 0,375 \text{ ml} = 375 \mu\text{l}$$

b) 2 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 2 . 5$$

$$20.V1 = 10$$

$$V1 = \frac{10}{20} = 0,5 \text{ ml} = 500 \mu\text{l}$$

c) 2,5 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 2,5 . 5$$

$$20.V1 = 12,5$$

$$V1 = \frac{12,5}{20} = 0,625 \text{ ml} = 625 \mu\text{l}$$

d) 3 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 3 . 5$$

$$20.V1 = 15$$

$$V1 = \frac{15}{20} = 0,75 \text{ ml} = 750 \mu\text{l}$$

e) 3,5 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 3,5 . 5$$

$$20.V1 = 17,5$$

$$V1 = \frac{17,5}{20} = 0,875 \text{ ml} = 875 \mu\text{l}$$

f) 4 ppm

$$M1.V1 = M2.V2$$

$$20.V1 = 4 . 5$$

$$20.V1 = 20$$

$$V1 = \frac{20}{20} = 1 \text{ ml} = 1000 \mu\text{l}$$

Perhitungan kadar Rhodamin B

Hasil persamaan regresi diperoleh :

$$y = a + bx$$

$$y = -0,0085 + 0,1888x$$

Perhitungan kadar sampel menggunakan persamaan Lambert-Beer :

$$\text{Kadar} = \frac{x \text{ (ppm)} \cdot \text{pelarut (L)} \times Fp}{\text{Bobot sampel (mg)}}$$

Sampel Bontoala S1

$$x = \frac{y+0,0085}{0,1888}$$

$$x = \frac{0,566+0,0085}{0,1888} = 3,042 \text{ ppm}$$

$$\text{Kadar} = \frac{3,042 \text{ mg/L} \times 0,05 \text{ L} \times 1}{3000 \text{ mg}} = 0,0000507 \text{ mg/L}$$

Sampel Tamalanrea S4

$$x = \frac{y+0,0085}{0,1888}$$

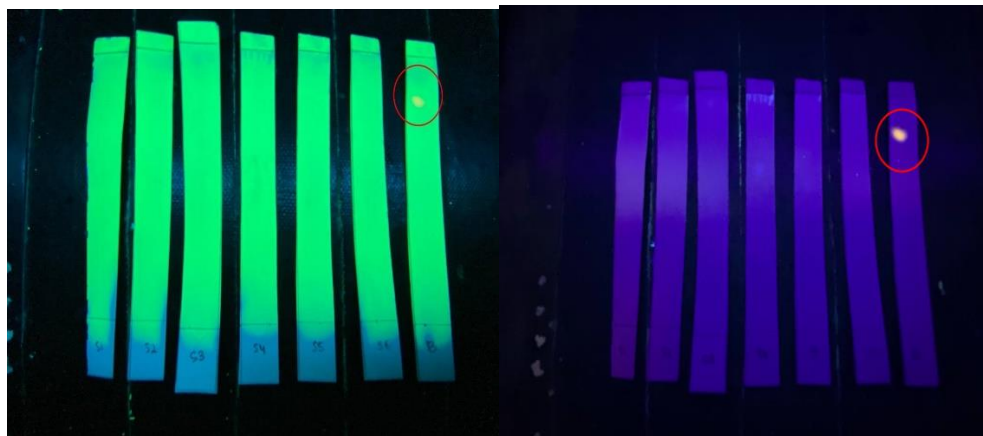
$$x = \frac{0,343+0,0085}{0,1888} = 1,861 \text{ ppm}$$

$$\text{Kadar} = \frac{1,861 \text{ mg/L} \times 0,05 \text{ L} \times 1}{3000 \text{ mg}} = 0,0000310 \text{ mg/L}$$

Lampiran 6. Gambar pendukung



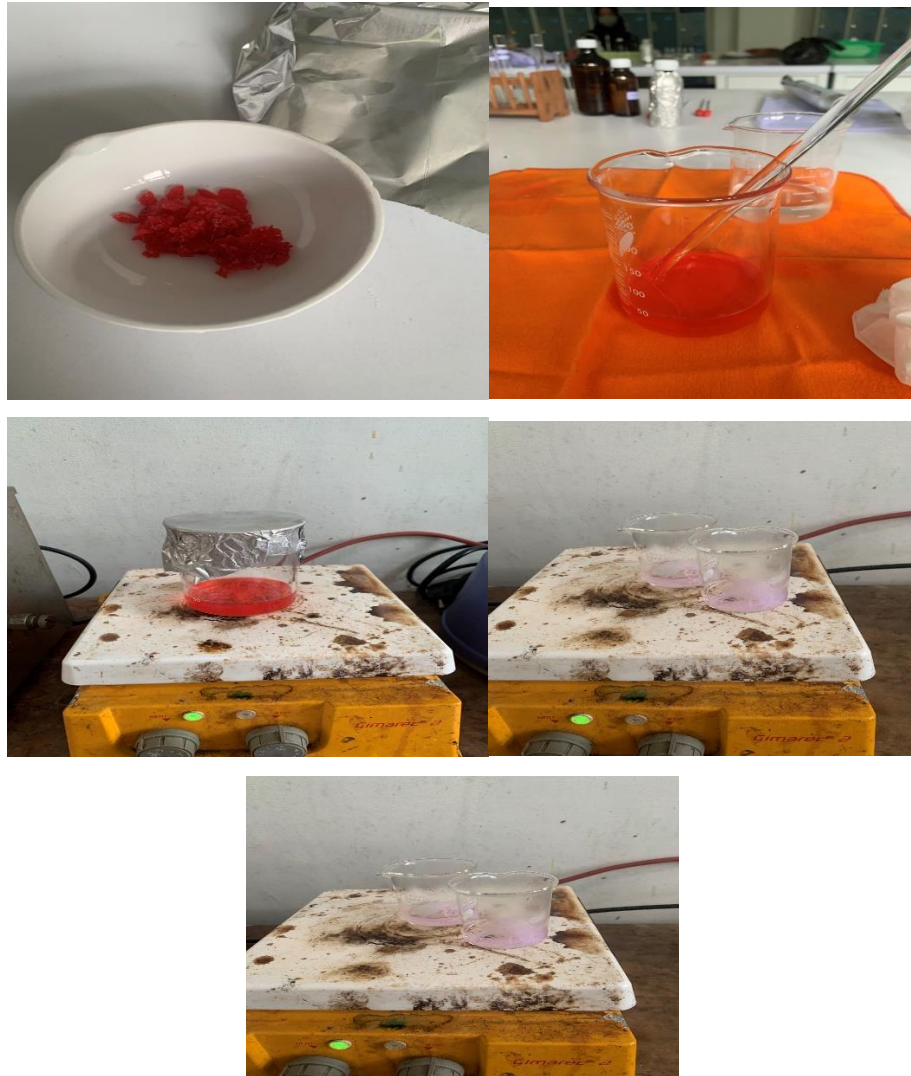
Gambar 7. Foto sampel arum manis (dokumentasi pribadi)



Gambar 8. Foto lempeng KLT dibawah sinar UV 254 nm dan 366 nm (dokumentasi pribadi)



Gambar 9. Proses pemanasan benang wol untuk pembebasan lemak(dokumentasi pribadi)



Gambar 10. Proses preparasi sampel (dokumentasi pribadi)



Gambar 11. Hasil preparasi sampel (dokumentasi pribadi)



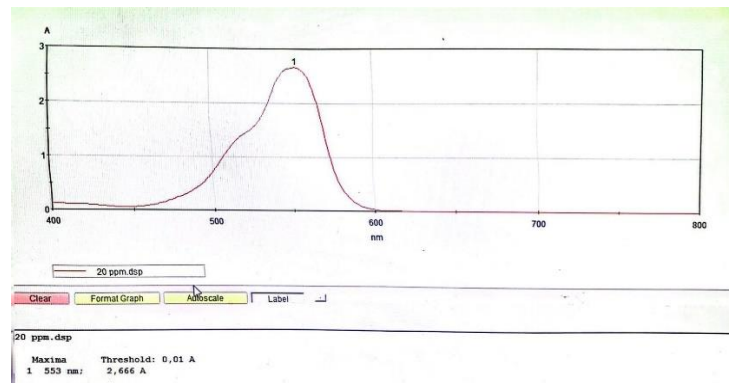
Gambar 12. Proses penjuanan dan sampel terelusi (dokumentasi pribadi)



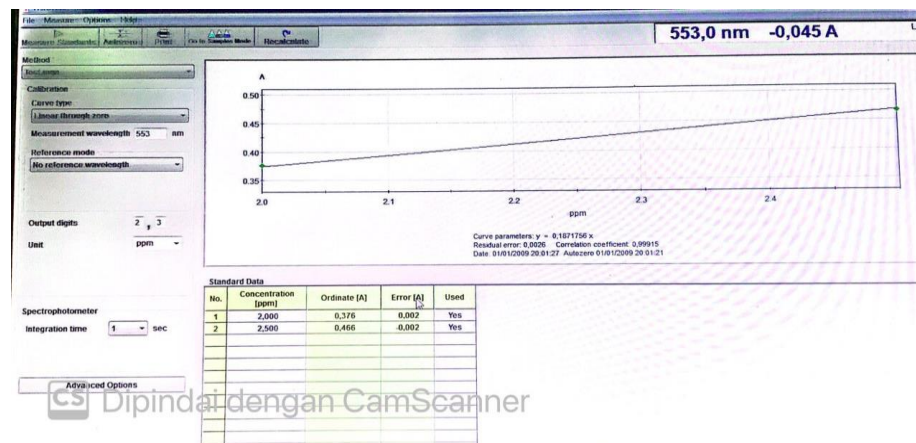
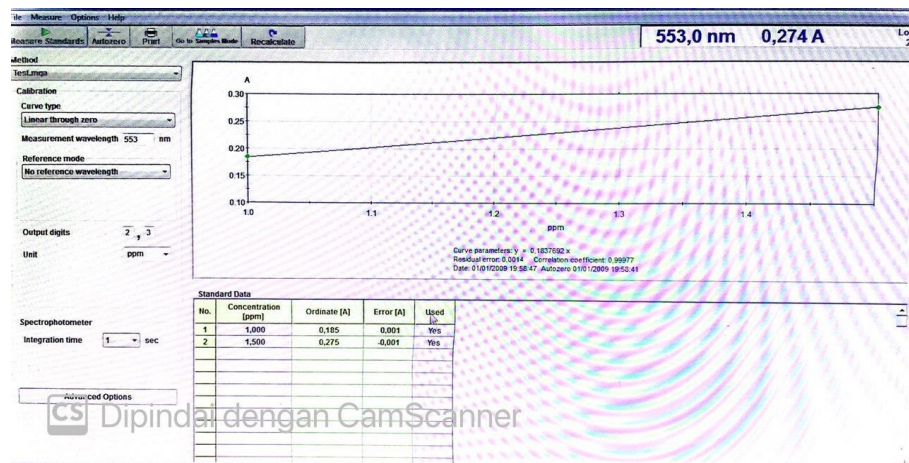
Gambar 13. Proses uji pewarnaan (dokumentasi pribadi)

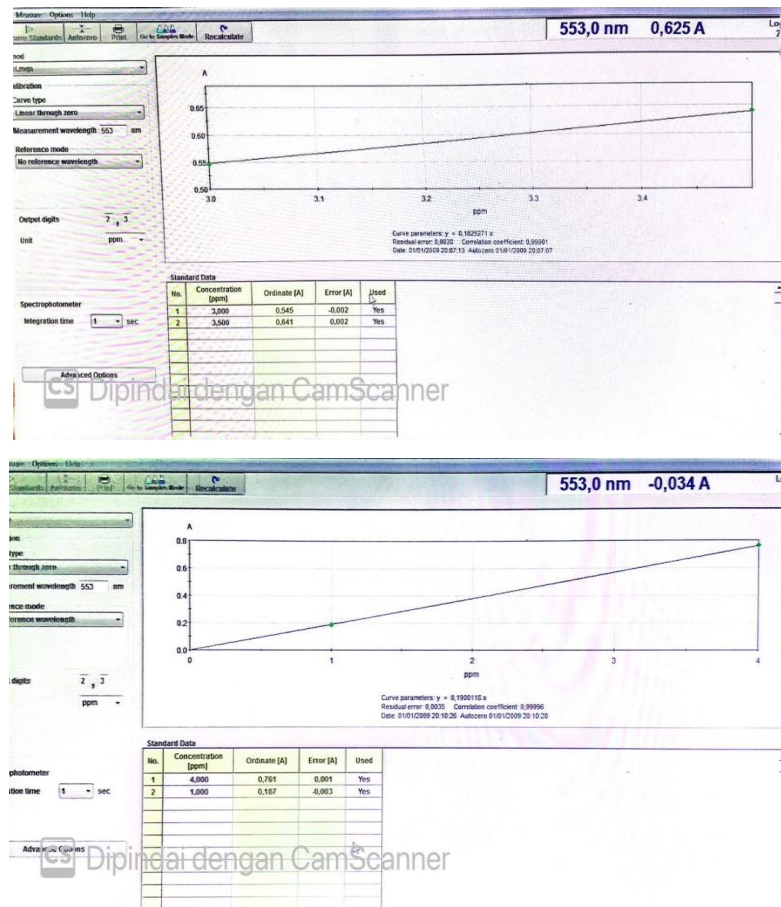


Gambar 14. Proses pembuatan larutan baku (dokumentasi pribadi)



Gambar 15. Hasil pengukuran Panjang gelombang maksimum larutan baku Rhodamin B 20 ppm (dokumentasi pribadi)





Gambar 16. Hasil pengukuran seri baku konsentrasi 1,5; 2; 2,5; 3; 3,5; dan 4 ppm (dokumentasi pribadi)

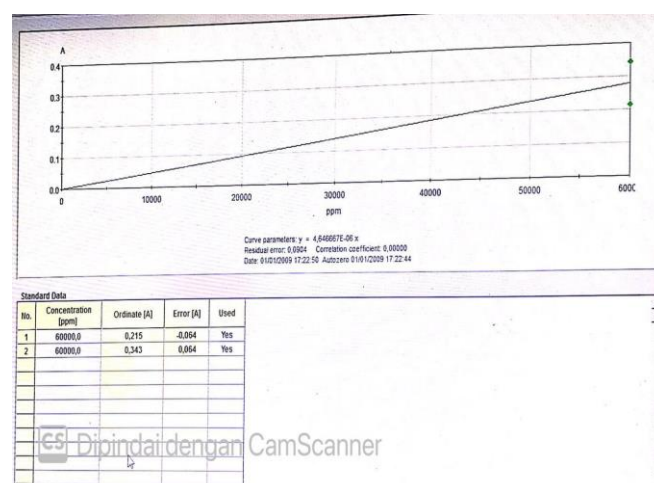


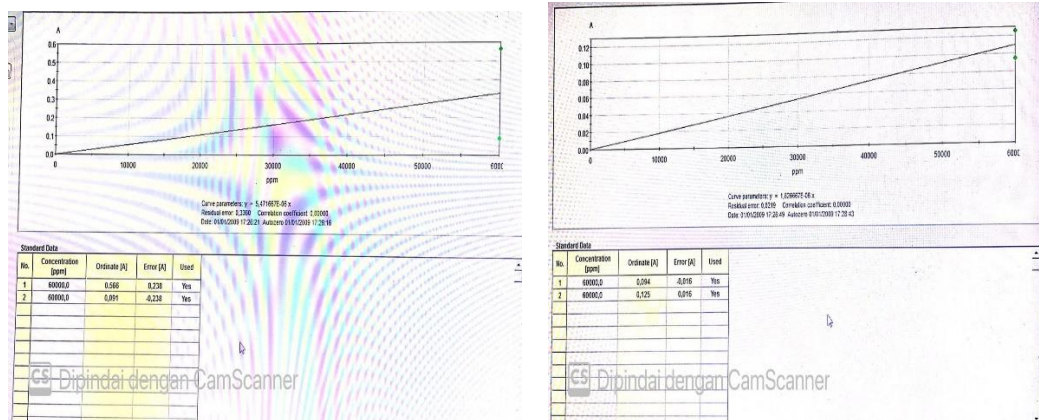


Gambar 17. Bahan HCl, NaOH, Asam asetat dan Amonia pekat (dokumentasi pribadi)



Gambar 18. Alat mikropipet dan sinar UV 254 nm (dokumentasi pribadi)





Gambar 19. Hasil pengukuran sampel pada panjang gelombang maksimum 553 nm (dokumentasi pribadi)