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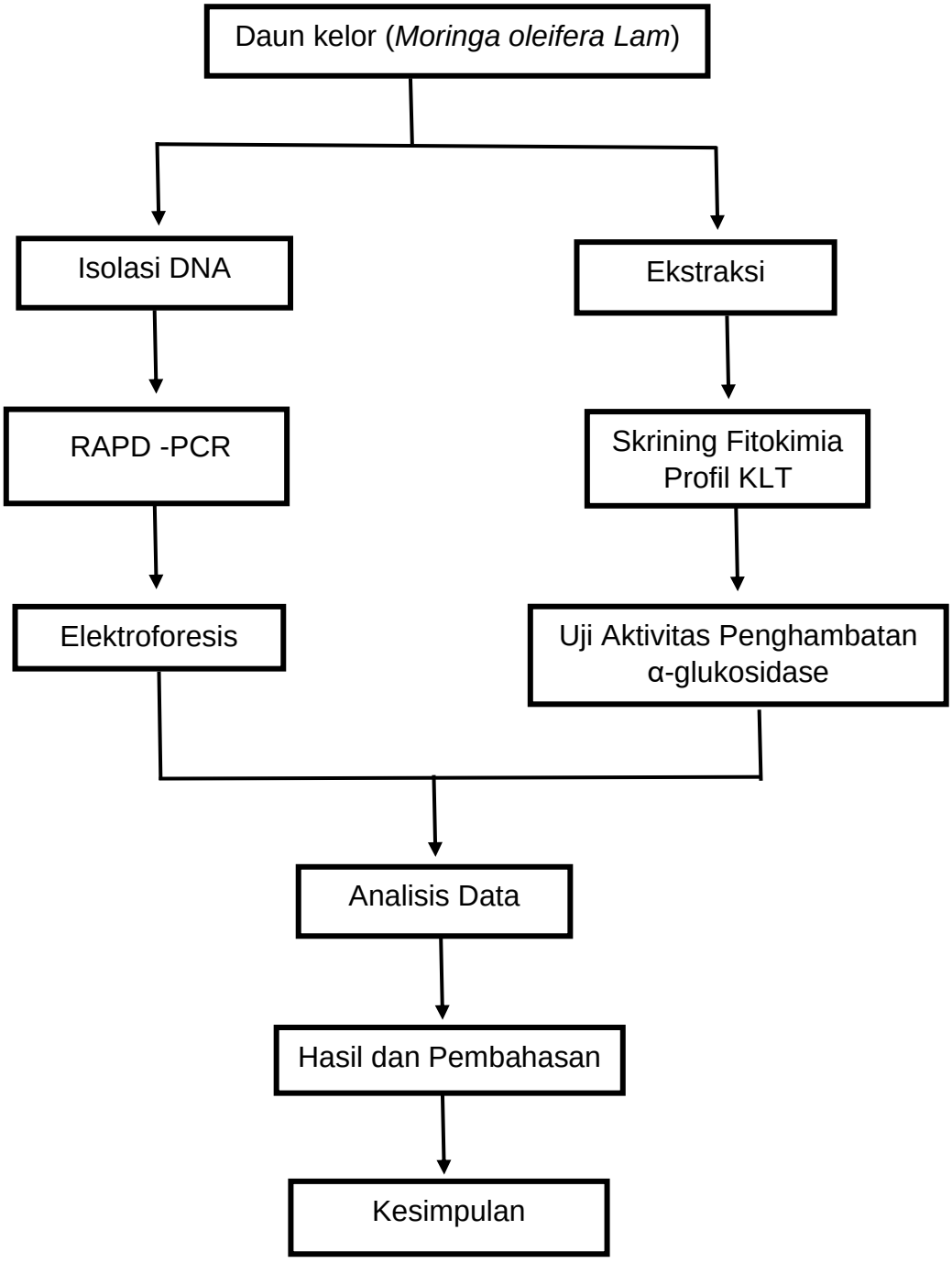
LAMPIRAN

Lampiran 1. Skema kerja



Gambar 12. Skema kerja penelitian

Lampiran 2. Perhitungan bahan-bahan yang digunakan pada penelitian

A. Pengujian inhibisi enzim α-glukosidase

1. Pembuatan dapar fosfat 0,1 M

$$\mathrm{pH} = \mathrm{Pka} + \mathrm{Log}\frac{[\mathrm{Na_2HPO_4.7H_2O}]}{[\mathrm{NaH_2PO_4.2H_2O}]}$$

$$7{,}0 = 7{,}2 + \mathrm{Log}\frac{[\mathrm{Na_2HPO_4.7H_2O}]}{[\mathrm{NaH_2PO_4.2H_2O}]}$$

$$\mathrm{Log}\frac{[\mathrm{Na_2HPO_4.7H_2O}]}{[\mathrm{NaH_2PO_4.2H_2O}]} = -0{,}2$$

$$\mathrm{Log}\frac{[\mathrm{Na_2HPO_4.7H_2O}]}{[\mathrm{NaH_2PO_4.2H_2O}]} = \frac{0{,}698}{1}$$

$$\%\ [\mathrm{Na_2HPO_4.7H_2O}] = \frac{[\mathrm{Na_2HPO_4.7H_2O}]}{[\mathrm{Na_2HPO_4.7H_2O}] + [\mathrm{NaH_2PO_4.2H_2O}]} \text{ x } 100\%$$

$$= \frac{0{,}698}{1{,}698} \text{ x } 100\%$$

$$\%\ [\mathrm{Na_2HPO_4.7H_2O}] = 41{,}10\%$$

$$\%\ [\mathrm{NaH_2PO_4.2H_2O}] = \frac{[\mathrm{NaH_2PO_4.2H_2O}]}{[\mathrm{Na_2HPO_4.7H_2O}] + [\mathrm{NaH_2PO_4.2H_2O}]} \text{ x } 100\%$$

$$= \frac{1}{1{,}698} \text{ x } 100\%$$

$$\%\ [\mathrm{NaH_2PO_4.2H_2O}] = 58{,}89\ \%$$

$$\mathrm{gr}\ [\mathrm{Na_2HPO_4.7H_2O}] = \%\ \text{x M x BM}$$

$$= 0{,}411 \text{ x } 0{,}1 \text{ mol x } 268{,}03 \text{ g/mol}$$

$\text{gr } [Na_2HPO_4.7H_2O] = 11{,}016 \text{ g/L}$

dibuat 500 ml ditimbang = 5,508 dilarutkan dengan Akua Proinjeksi.

$\text{gr } [NaH_2PO_4.2H_2O] = \% \text{ x M x BM}$

$$= 0{,}5889 \text{ x } 0{,}1 \text{ mol x } 156{,}02 \text{ g/mol}$$

$$\text{gr } [NaH_2PO_4.2H_2O] = 9{,}188 \text{ g/L}$$

dibuat 500 ml ditimbang = 4,594 dilarutkan dengan Akua Proinjeksi.

2. Larutan Na_2CO_3 200 mM

$$\text{M} = \frac{\text{gr}}{\text{Mr}} \text{ x } \frac{1000}{\text{mL}}$$

$$0{,}2 = \frac{\text{gr}}{106} \text{ x } \frac{1000}{1000}$$

$$\text{gr} = 21{,}2 \text{ gr/L}$$

yang dibuat 50 ml = ditimbang 1,06 g dilarutkan dalam aqua proinjeksi

3. Substrat 5 mM

$$\text{M} = \frac{\text{gr}}{\text{Mr}} \text{ x } \frac{1000}{\text{mL}}$$

$$\text{gr} = \frac{0{,}005 \text{ x } 301{,}25}{100}$$

$$\text{gr} = 0{,}015 \text{ g}$$

jadi yang dibuat 10 ml = ditimbang 15 mg dilarutkan dengan dapar Ph7

4. Enzim

12,74 u/mg solid

1 mg = 12,74 unit

1 unit = 1/12,74 = 0,078 mg => 1 unit/mL = 0,078 mg/mL

Jika ditimbang 0,078 mg/mL (1 unit)

0,039 mg/mL (0,5 unit)

yang dibuat 10 ml = ditimbang 0,39 mg dilarutkan dengan dapar Ph7

Lampiran 3. Hasil analisis sampel daun kelor

A. Profil KLT, menghitung nilai Rf dengan pereaksi H_2SO_4

$$\text{Rf} = \frac{\text{jarak yang ditempuh komponen}}{\text{jarak yang ditempuh pelarut}}$$

Sampel 1

$\text{Rf } 1 = \frac{3}{6} = 0{,}5$ $\text{Rf } 2 = \frac{5{,}4}{6} = 0{,}9$ $\text{Rf } 3 = \frac{5{,}5}{6} = 0{,}92$ $\text{Rf } 4 = \frac{5{,}6}{6} = 0{,}93$ $\text{Rf } 5 = \frac{5{,}8}{6} = 0{,}97$

Sampel 2

$\text{Rf } 1 = \frac{2{,}8}{6} = 0{,}47$ $\text{Rf } 2 = \frac{5{,}3}{6} = 0{,}88$ $\text{Rf } 3 = \frac{5{,}4}{6} = 0{,}9$ $\text{Rf } 4 = \frac{5{,}7}{6} = 0{,}95$ $\text{Rf } 5 = \frac{5{,}9}{6} = 0{,}98$

Sampel 3

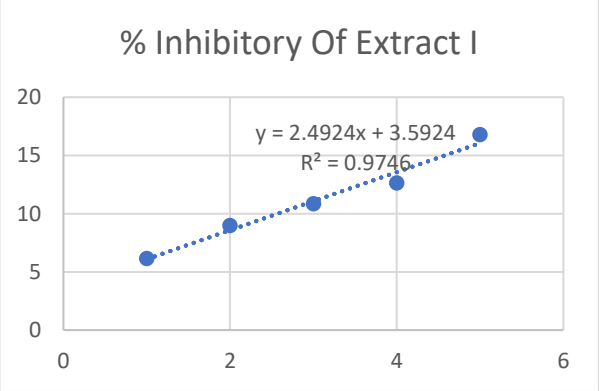
$\text{Rf } 1 = \frac{2,9}{6}$ $\text{Rf } 2 = \frac{5,2}{6}$ $\text{Rf } 3 = \frac{5,3}{6}$ $\text{Rf } 4 = \frac{5,6}{6}$ $\text{Rf } 5 = \frac{5,9}{6}$

$= 0,48$ $= 0,87$ $= 0,88$ $= 0,93$ $= 0,98$

B. Inhibisi α-glukosidase

Kurva hubungan antara log konsentrasi *versus* persentase inhibisi dan nilai IC_{50}

Sampel 1



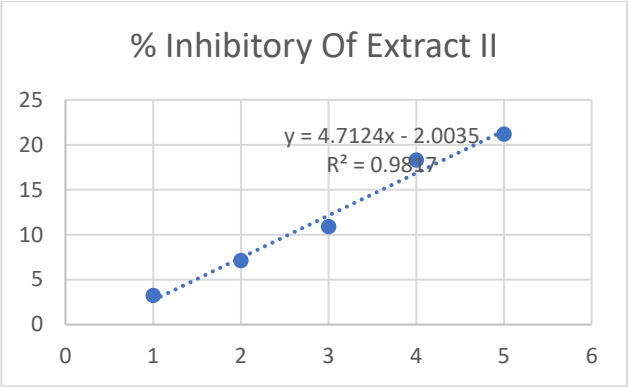
Gambar 13. Kurva sampel ekstrak 1

$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-3.5924}{2.4924}$

= 18.6196 µg/mL

Sampel 2



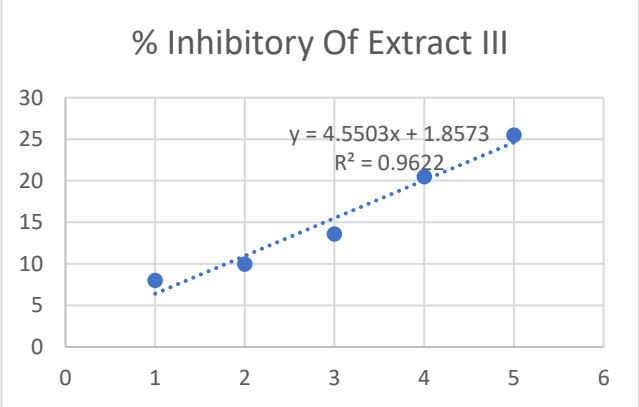
Gambar 14. Kurva sampel ekstrak 2

$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-(-2.0035)}{4.7124}$

= 10.1851 µg/mL

Sampel 3



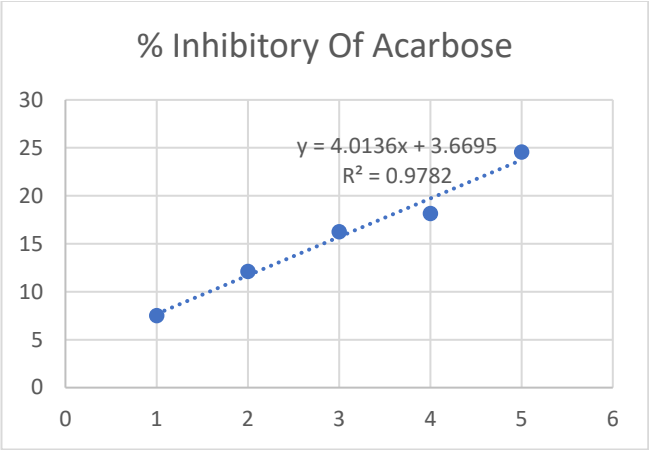
Gambar 15. Kurva sampel ekstrak 3

$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-1.8573}{4.5503}$

= 10.5801 µg/mL

Akarbose



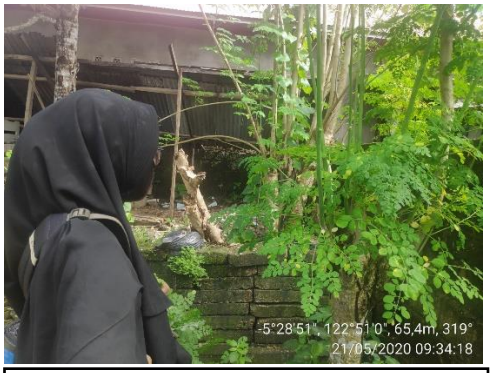
Gambar 16. Kurva sampel akarbose

$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-3.6695}{4.0136}$

= 11.5434 µg/mL

Lampiran 4. Dokumentasi penelitian



Gambar 17. Pengambilan sampel 1 (Saragi)

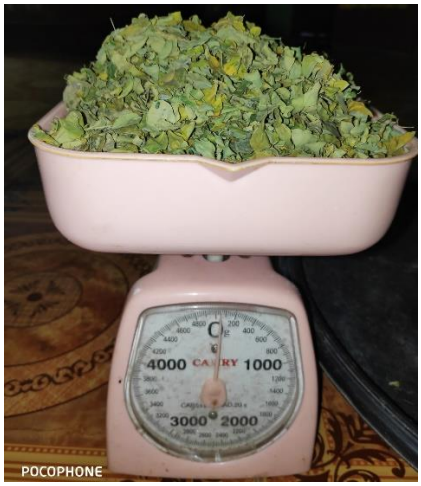
Gambar 18. Pengambilan sampel 2 (Bacuhau)

Gambar 19. Pengambilan sampel 3 (Batumatongka)

Gambar 20. Proses perajangan

Gambar 21. Penimbangan sampel sebelum pengeringan

Gambar 22. Proses pengeringan sampel



Gambar 23. Penimbangan sampel setelah kering

Gambar 24. Proses maserasi

Gambar 25. Preparasi sebelum penotolan sampel ekstrak

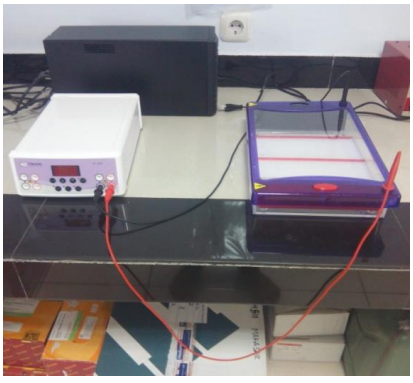
Gambar 26. Proses isolasi DNA kelor

Gambar 27. Proses preparasi sampel untuk diPCR

Gambar 28. Proses vortex sampel

Gambar 29. Proses memasukkan sampel dalam PCR

Gambar 30. Alat PCR yang digunakan



Gambar 31. Alat untuk Elektroforesis

Gambar 32. Alat PCR *UV Transiluminator*

Gambar 33. Dapar Fosfat PH7

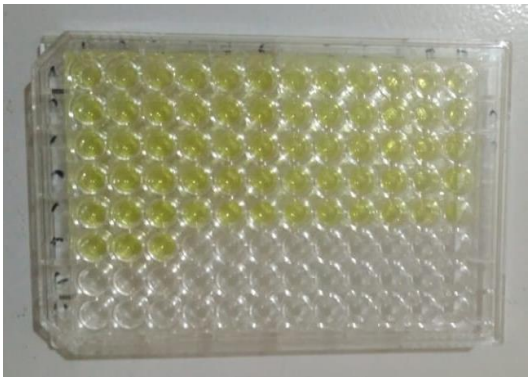
Gambar 34. Penimbangan dinatrium hydrogen fosfat

Gambar 35. Penimbangan natrium dihydrogen fosfat

Gambar 36. Penimbangan Natrium Karbonat

Gambar 37. Penimbangan substrat

Gambar 38. Preparasi sampel sebelum diuji elisa



Gambar 39. Hasil Elisa sampel