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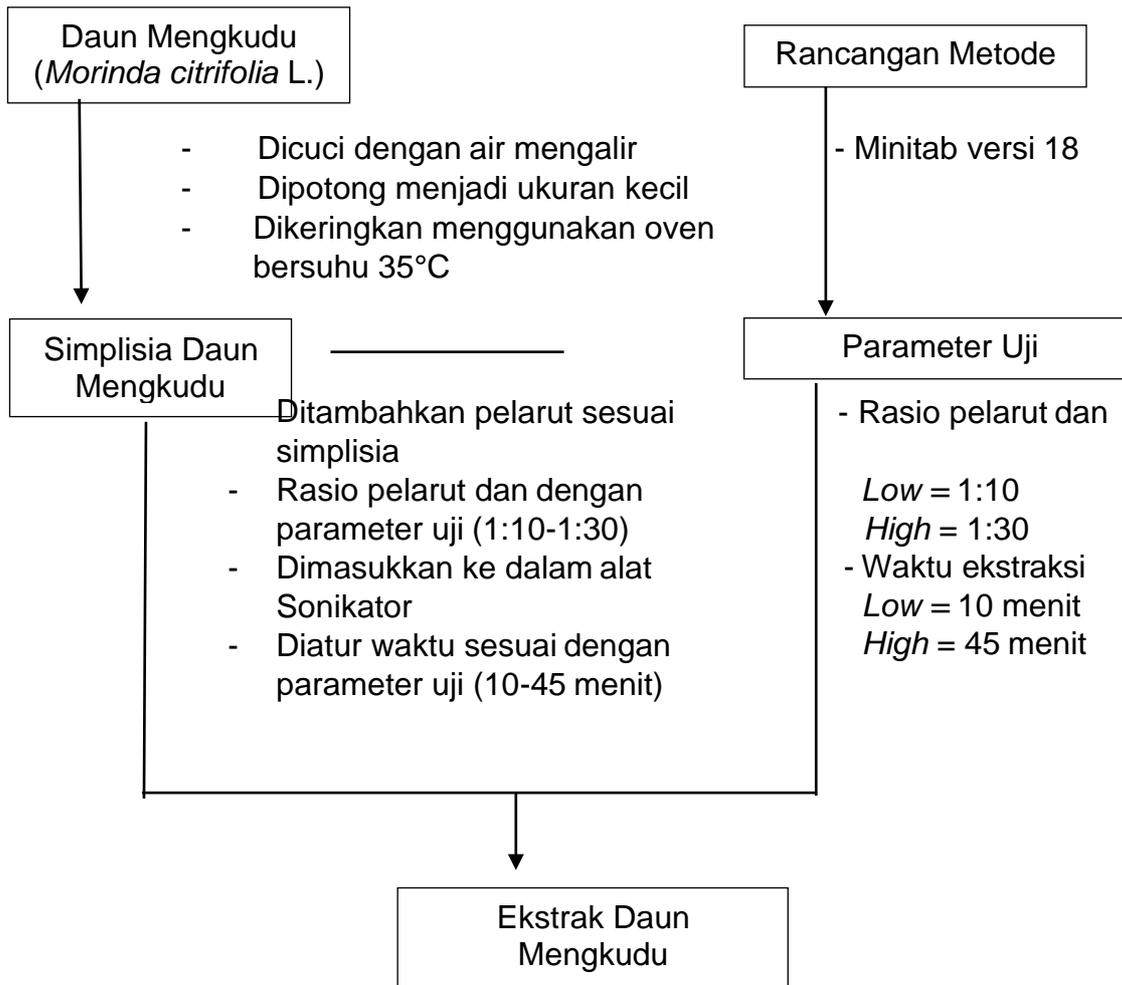
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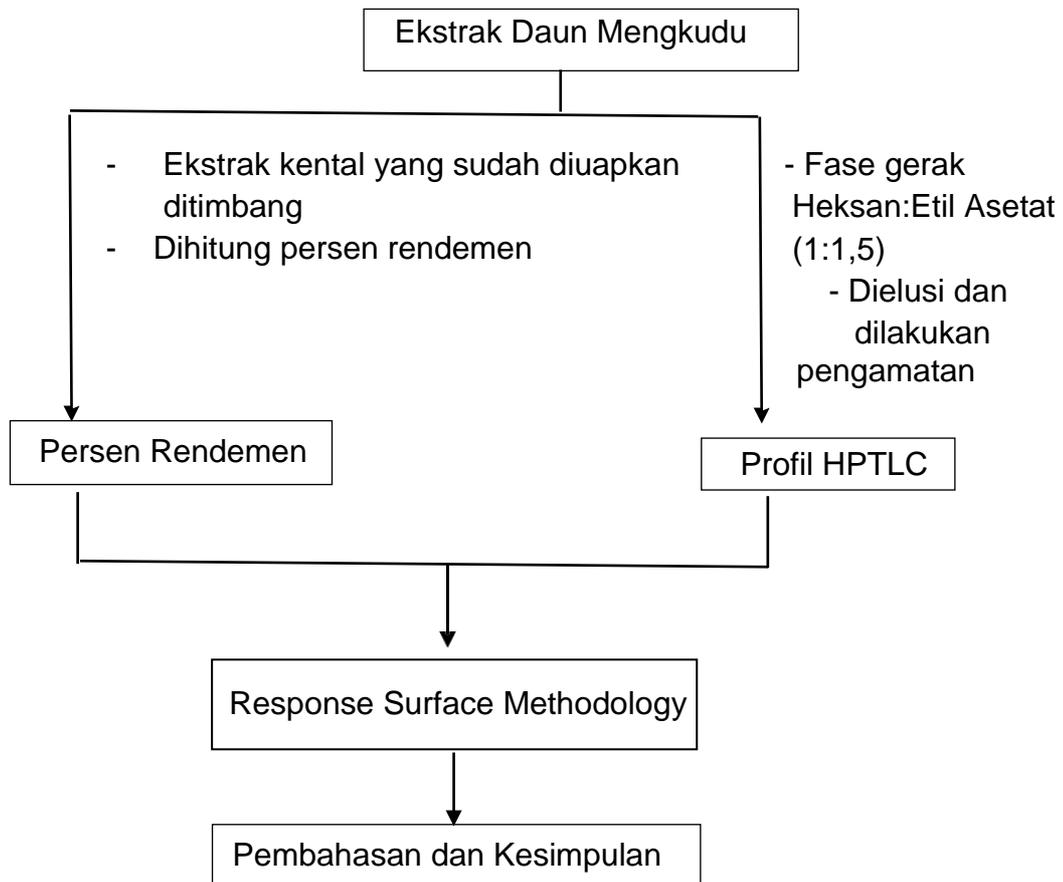
LAMPIRAN

Lampiran 1. Skema Kerja

1. Ekstraksi Daun Mengkudu (*M. citrifolia* L.)



2. Persen Rendemen dan KLT-Densitometri



Lampiran 2. Perhitungan

A. Perhitungan %Rendemen

$$\% \text{ Rendemen} = \frac{\text{Bobot akhir}}{\text{Bobot awal}} \times 100$$

1. Rasio perbandingan pelarut 1:10/15 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{0,81 \text{ g}}{10 \text{ g}} \times 100 \\ &= 8,1\% \end{aligned}$$

2. Rasio perbandingan pelarut 1:10/30 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{0,97 \text{ g}}{10 \text{ g}} \times 100 \\ &= 9,7\% \end{aligned}$$

3. Rasio perbandingan pelarut 1:10/45 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{1,16 \text{ g}}{10 \text{ g}} \times 100 \\ &= 11,6\% \end{aligned}$$

4. Rasio perbandingan pelarut 1:20/9 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{0,46 \text{ g}}{10 \text{ g}} \times 100 \\ &= 4,6\% \end{aligned}$$

5. Rasio perbandingan pelarut 1:20/15 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{1,08 \text{ g}}{10 \text{ g}} \times 100 \\ &= 10,8\% \end{aligned}$$

6. Rasio perbandingan pelarut 1:20/30 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{1,14 \text{ g}}{10 \text{ g}} \times 100 \\ &= 11,4\% \end{aligned}$$

7. Rasio perbandingan pelarut 1:30/15 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{1,61 \text{ g}}{10 \text{ g}} \times 100 \\ &= 16,1\% \end{aligned}$$

8. Rasio perbandingan pelarut 1:20/51 menit

$$\begin{aligned} \% \text{ Rendemen} &= \frac{2,02 \text{ g}}{10 \text{ g}} \times 100 \\ &= 20,2\% \end{aligned}$$

9. Rasio perbandingan pelarut 1:30/15 menit

$$\begin{aligned}\% \text{ Rendemen} &= \frac{1,10 \text{ g}}{10 \text{ g}} \times 100 \\ &= 11\%\end{aligned}$$

10. Rasio perbandingan pelarut 1:30/45 menit

$$\begin{aligned}\% \text{ Rendemen} &= \frac{0,82 \text{ g}}{10 \text{ g}} \times 100 \\ &= 8,2\%\end{aligned}$$

11. Rasio perbandingan pelarut 1:34/30 menit

$$\begin{aligned}\% \text{ Rendemen} &= \frac{1,14 \text{ g}}{10 \text{ g}} \times 100 \\ &= 11,4\%\end{aligned}$$

B. Perhitungan konsentrasi skopoletin

Kurva baku $y=47,333x - 605,37$

1. Rasio perbandingan pelarut 1:10/15 menit

$$\begin{aligned}y &= 47,333x - 605,37 \\ 7257 &= 47,333x - 605,37 \\ 7257 + 605,37 &= 47,333x \\ X &= 166,10 \mu\text{g/mL}\end{aligned}$$

2. Rasio perbandingan pelarut 1:10/30 menit

$$\begin{aligned}y &= 47,333x - 605,37 \\ 1991,9 &= 47,333x - 605,37 \\ 1991,9 + 605,37 &= 47,333x \\ X &= 54,87 \mu\text{g/mL}\end{aligned}$$

3. Rasio perbandingan pelarut 1:10/45 menit

$$\begin{aligned}y &= 47,333x - 605,37 \\ 2702,6 &= 47,333x - 605,37 \\ 2702,6 + 605,37 &= 47,333x \\ X &= 69,89 \mu\text{g/mL}\end{aligned}$$

4. Rasio perbandingan pelarut 1:20/9 menit

$$\begin{aligned}y &= 47,333x - 605,37 \\ 2168,7 &= 47,333x - 605,37 \\ 2168,7 + 605,37 &= 47,333x\end{aligned}$$

$$X = 58,61 \mu\text{g/mL}$$

5. Rasio perbandingan pelarut 1:20/30 menit (1)

$$y = 47,333x - 605,37$$

$$815,3 = 47,333x - 605,37$$

$$815,3 + 605,37 = 47,333x$$

$$X = 30,01 \mu\text{g/mL}$$

6. Rasio perbandingan pelarut 1:20/30 menit (2)

$$y = 47,333x - 605,37$$

$$1169,0 = 47,333x - 605,37$$

$$1169,0 + 605,37 = 47,333x$$

$$X = 37,49 \mu\text{g/mL}$$

7. Rasio perbandingan pelarut 1:20/51 menit

$$y = 47,333x - 605,37$$

$$1884,4 = 47,333x - 605,37$$

$$1884,4 + 605,37 = 47,333x$$

$$X = 52,60 \mu\text{g/mL}$$

8. Rasio perbandingan pelarut 1:30/45 menit

$$y = 47,333x - 605,37$$

$$1956,2 = 47,333x - 605,37$$

$$1956,2 + 605,37 = 47,333x$$

$$X = 54,12 \mu\text{g/mL}$$

9. Rasio perbandingan pelarut 1:34/ 30 menit

$$y = 47,333x - 605,37$$

$$2275 = 47,333x - 605,37$$

$$2275 + 605,37 = 47,333x$$

$$X = 60,85 \mu\text{g/mL}$$

C. Perhitungan persen kadar skopoletin

$$\% = \frac{s}{\text{bobot praktek}} \times 100$$

1. Rasio perbandingan pelarut 1:10/5

$$\% = \frac{166,10}{50.000} \times 100$$

$$\% = 0,332\%$$

2. Rasio perbandingan pelarut 1:10/30 menit

$$\% = \frac{54,87}{50.000} \times 100$$

$$\% = 0,109\%$$

3. Rasio perbandingan pelarut 1:10/45 menit

$$\% = \frac{69,89}{50.000} \times 100$$

$$\% = 0,139\%$$

4. Rasio perbandingan pelarut 1:20/9 menit

$$\% = \frac{58,61}{50.000} \times 100$$

$$\% = 0,117\%$$

5. Rasio perbandingan pelarut 1:20/30 menit (1)

$$\% = \frac{30,01}{50.000} \times 100$$

$$\% = 0,060\%$$

6. Rasio perbandingan pelarut 1:20/30 menit (2)

$$\% = \frac{37,49}{50.000} \times 100$$

$$\% = 0,074\%$$

7. Rasio perbandingan pelarut 1:20/51 menit

$$\% = \frac{52,60}{50.000} \times 100$$

$$\% = 0,105\%$$

8. Rasio perbandingan pelarut 1:30/45 menit

$$\% = \frac{54,12}{50.000} \times 100$$

$$\% = 0,108\%$$

9. Rasio perbandingan pelarut 1:34/30 menit

$$\% = \frac{60,85}{50.000} \times 100$$

$$\% = 0,121\%$$

Lampiran 3. Gambar Penelitian



Gambar 10. Daun Mengkudu (*Morinda citrifolia* L.)



Gambar 11. Simplisia daun mengkudu



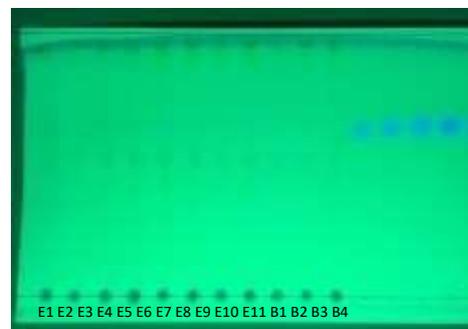
Gambar 12. Proses sonikasi



Gambar 13. Penyaringan Ekstrak



Gambar 14. Penguapan menggunakan *Rotary Evaporator*



Gambar 15. Profil KLT-Densitometri. E1,2,3=ekstrak 1:10 (15,30,45 menit); E4=ekstrak 1:20 (9 menit); E5,6,7,8=ekstrak 1:20 (30 dan 51 menit); E9,10=ekstrak 1:30 (15, 45 menit); E11= ekstrak 1:34 (30 menit); B1,2,3,4,5 = seri pengenceran

baku skopoletin (50,100,150,200) dan diamati pada UV 254

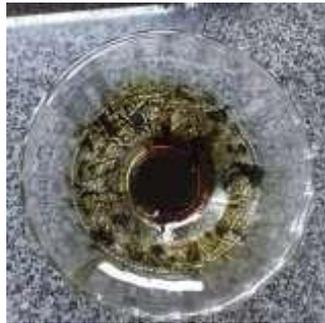
Gambar 16. Ekstrak kental 1:10(15 menit)



Gambar 18. Ekstrak kental 1:10(45 menit)



Gambar 20. Ekstrak kental 1:20(30 menit) (1)



Gambar 19. Ekstrak kental 1:20 (9 menit)



Gambar 19. Ekstrak kental 1:20 (9 menit)





Gambar 22. Ekstrak kental 1:20 (51 menit)



Gambar 23. Ekstrak kental 1:30 (45 menit)



Gambar 24. Ekstrak kental 1:34 (30 menit)