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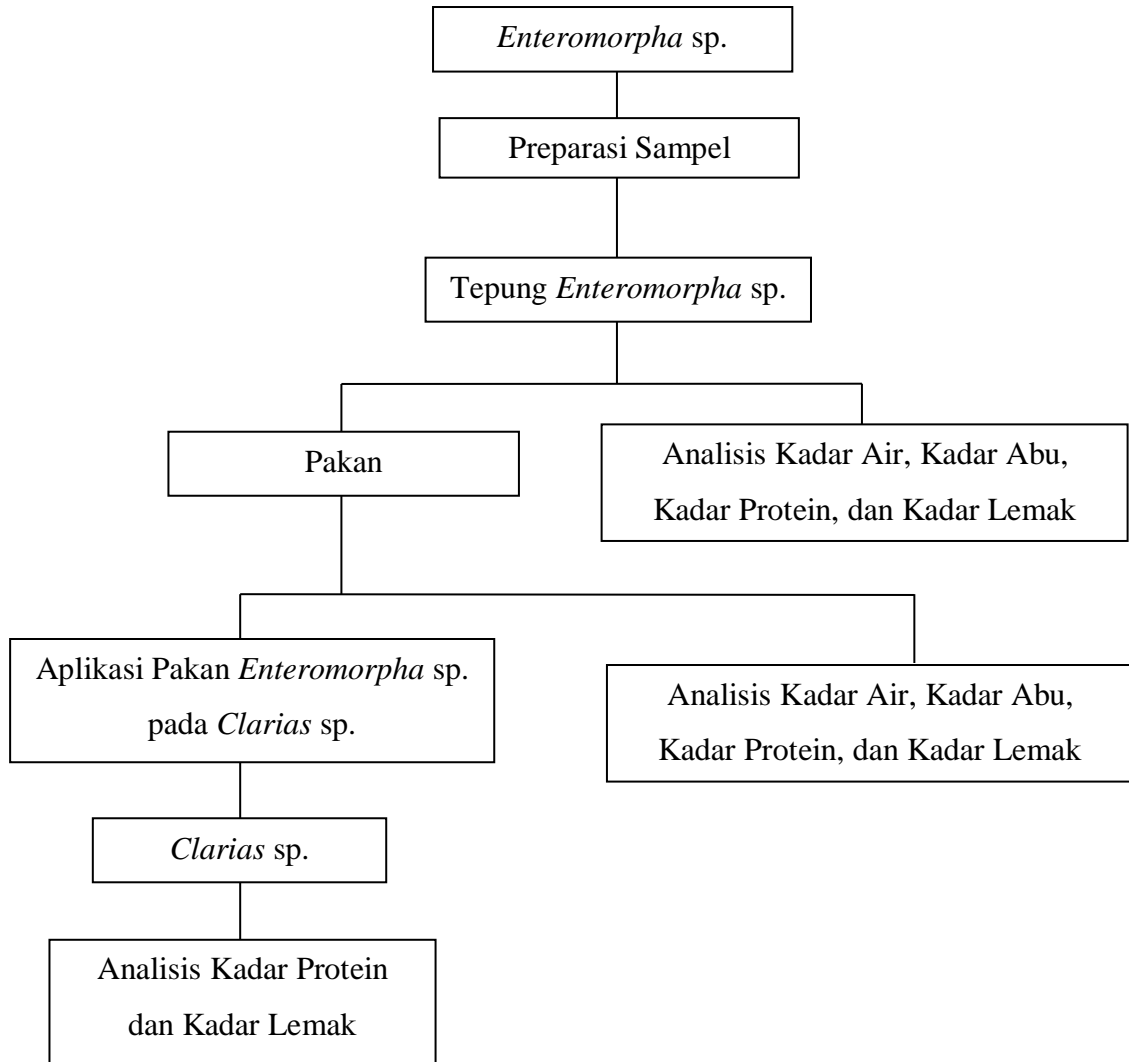


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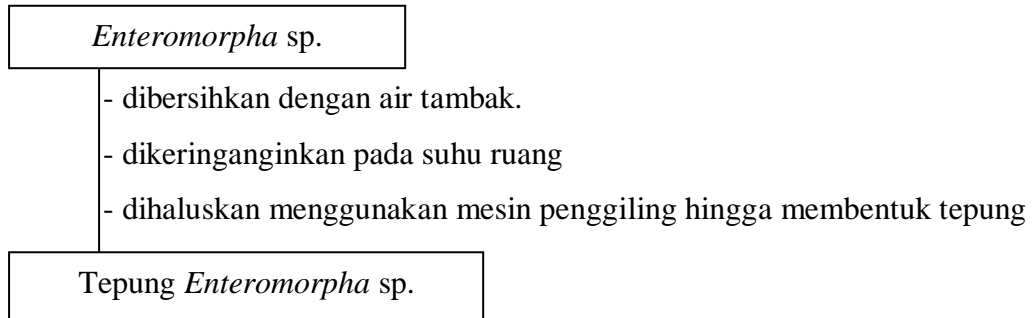


Lampiran 1. Skema Kerja

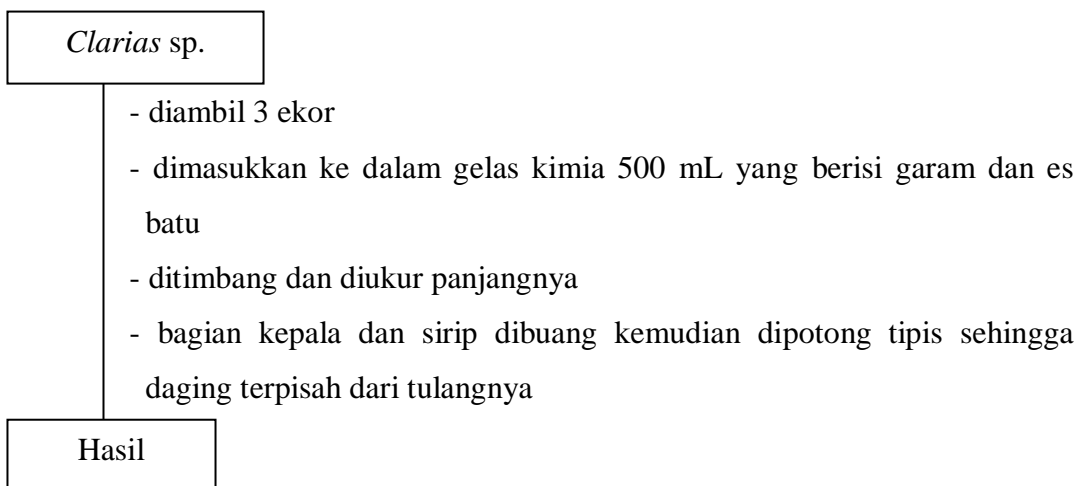


Lampiran 2. Bagan Kerja

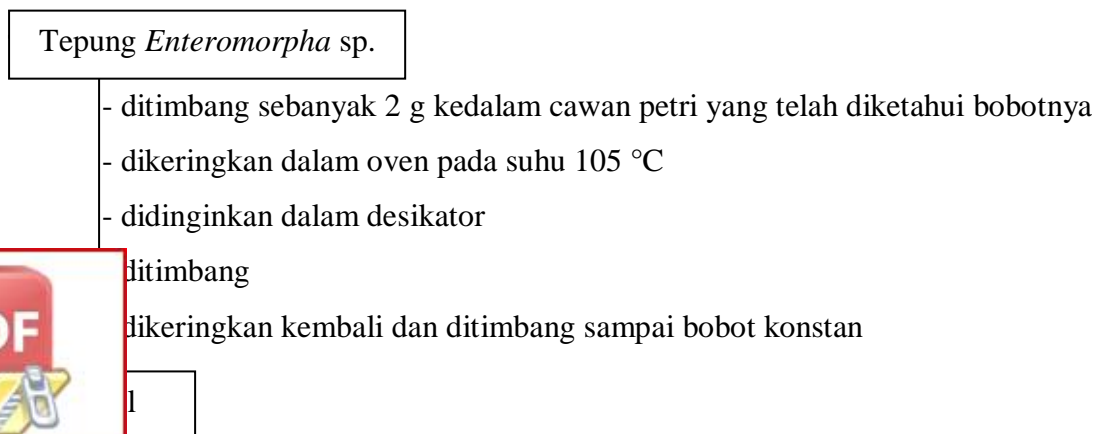
1. Preparasi Sampel *Enteromorpha* sp.



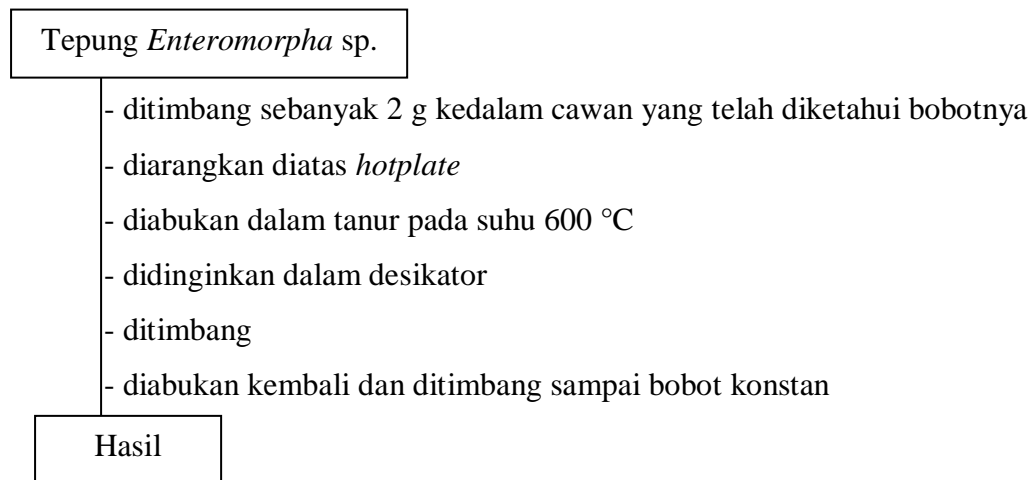
2. Preparasi Sampel *Clarias* sp.



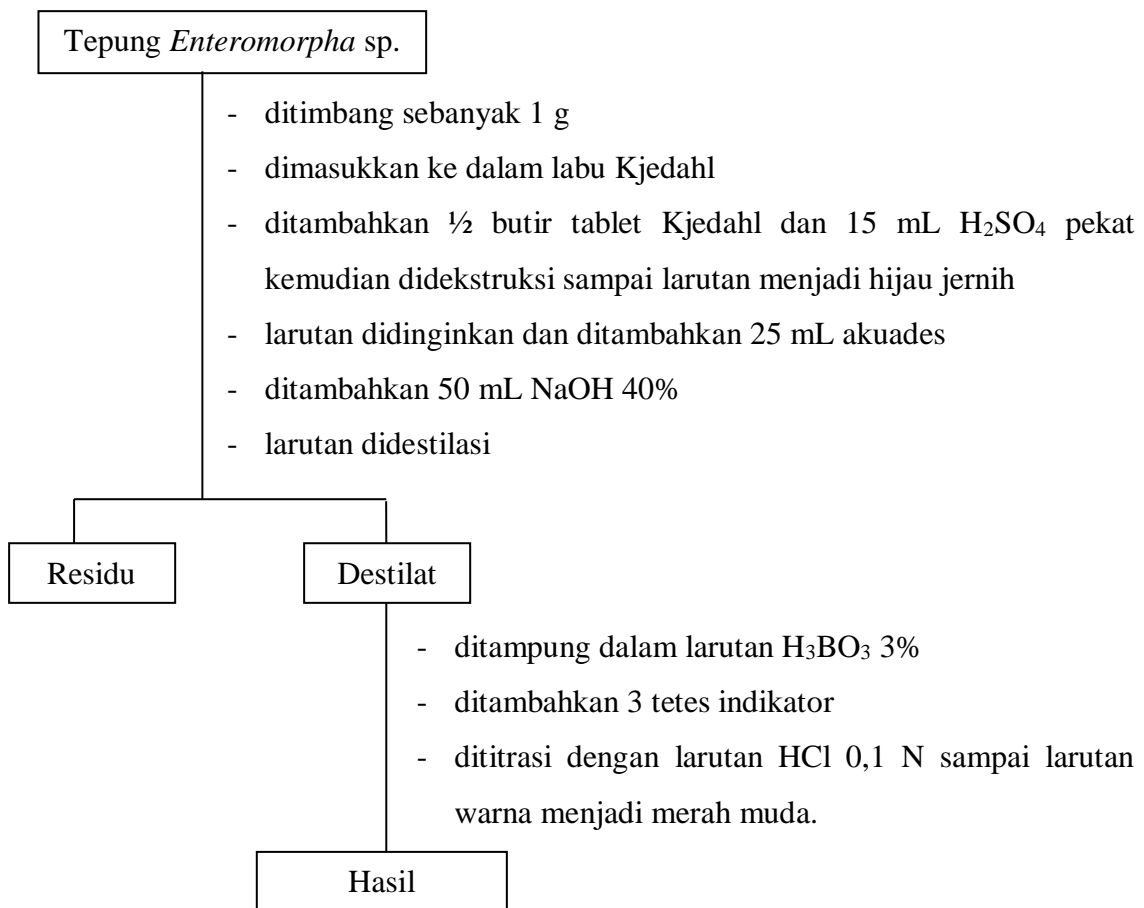
3. Pengukuran Kadar Air



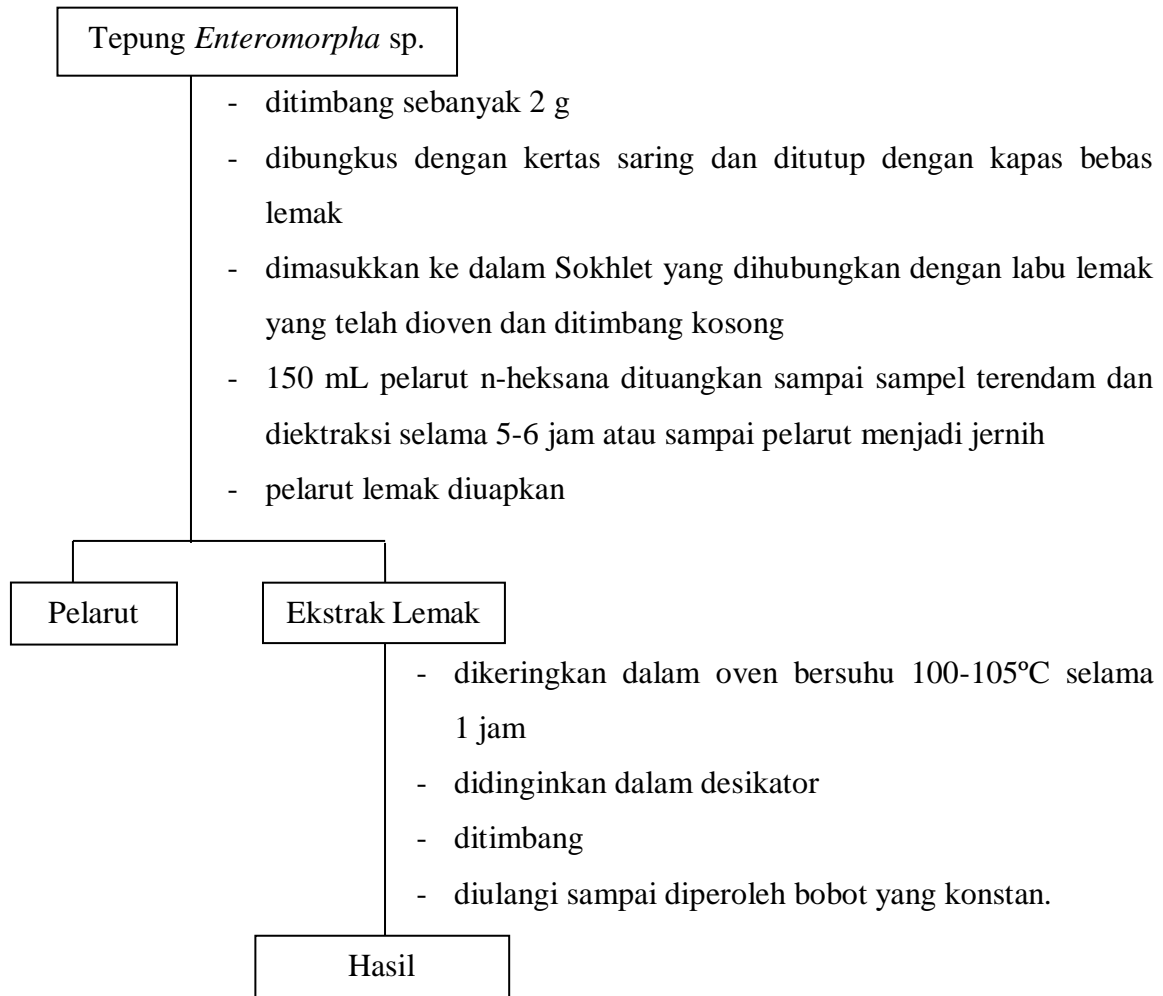
4. Pengukuran Kadar Abu



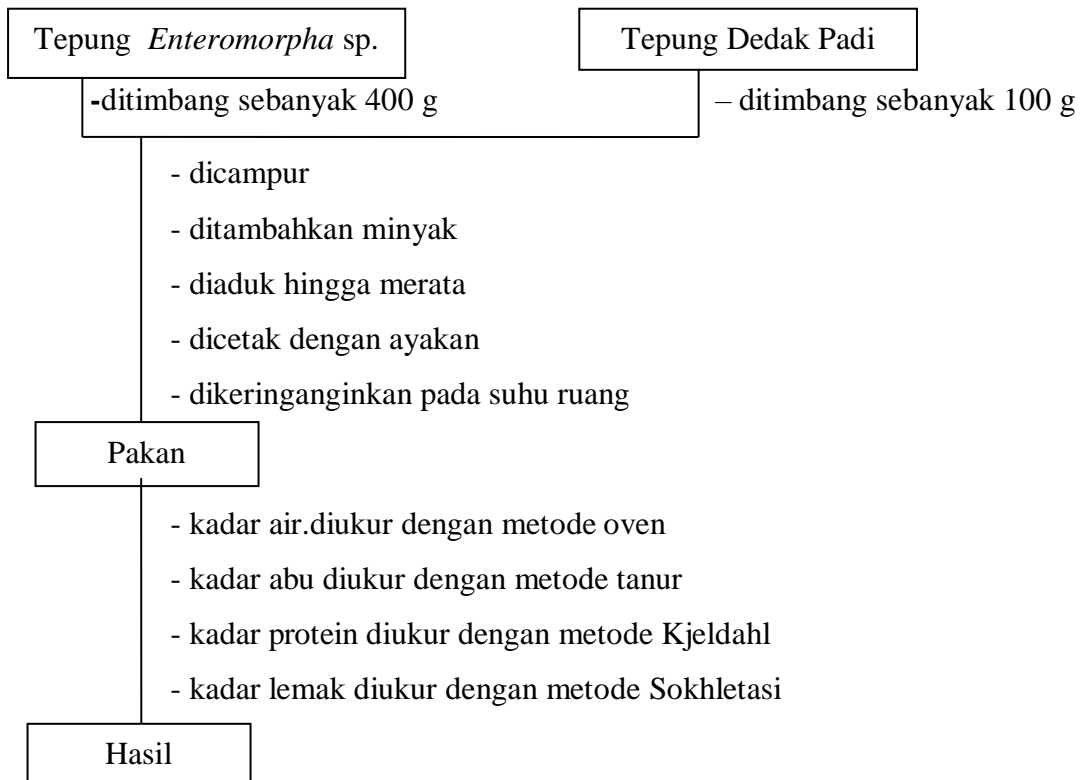
5. Pengukuran Kadar Protein



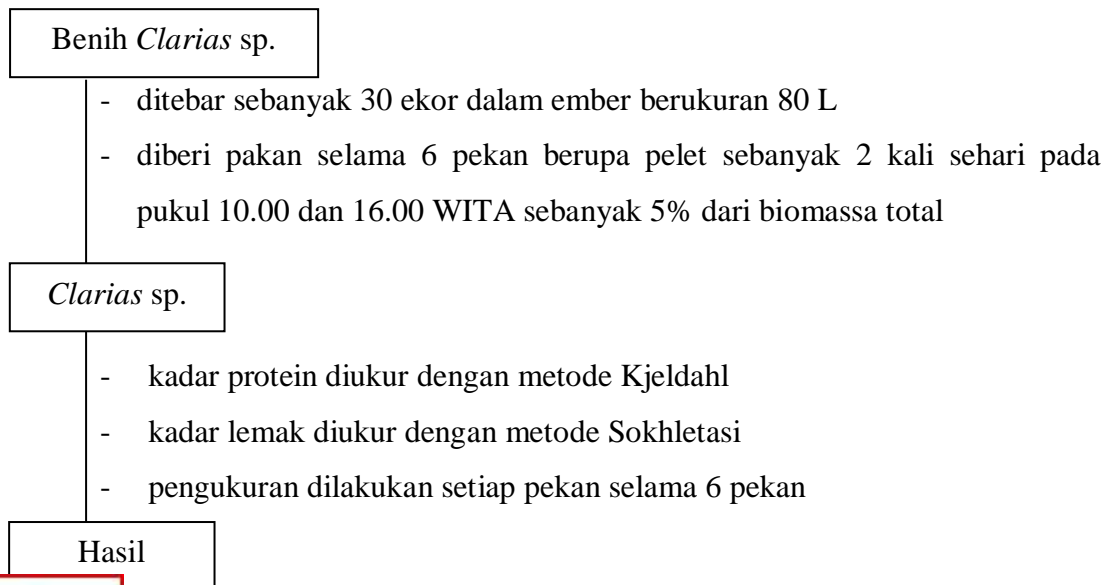
6. Pengukuran Kadar Lemak



7. Pengukuran Kandungan Gizi Pada Pakan



8. Aplikasi Pakan *Enteromorpha* sp.



Lampiran 3. Gambar Penelitian



Proses pengambilan sampel *Enteromorpha* sp.



Proses pengeringan sampel *Enteromorpha* sp.



Tepung *Enteromorpha* sp.



Pakan *Enteromorpha* sp.



Pakan VITE FF-999



Analisis kadar air





Analisis kadar abu



Tanur



Analisis kadar abu pada sampel *Enteromorpha* sp. dan pakan *Enteromorpha* sp.



Analisis kadar lemak



Proses destruksi (Analisis kadar protein metode *Kjeldahl*)



Proses destilasi (Analisis kadar protein metode *Kjeldahl*)





Proses titrasi (Analisis kadar protein metode Kjeldahl)



Penyiapan wadah pemeliharaan *Clarias* sp.



Proses pemindahan *Clarias* sp.



Pemberian pakan *Clarias* sp.



Proses pengambilan *Clarias* sp.



Proses pengukuran panjang *Clarias* sp.





Proses pengukuran bobot
Clarias sp.



Clarias sp. pekan ke-0



Clarias sp. pekan ke-1



Clarias sp. pekan ke-2



Clarias sp. pekan ke-3



Clarias sp. pekan ke-4





Clarias sp. pekan ke-5



Clarias sp. pekan ke-6



Lampiran 4. Perhitungan Hasil Analisis Sampel

1.Kadar Air

1.1 Sampel *Enteromorpha* sp.

Bobot cawan petri kosong (A) = 96,812 g

Bobot cawan petri + sampel tetap (C) = 98,294 g

Berat sampel awal (B) = 2,077 g

$$\% \text{Kadar air} = \frac{B - (C - A)}{B} \times 100\%$$

$$\begin{aligned} \% \text{Kadar air} &= \frac{2,077 - (98,294 - 96,812)}{2,077} \times 100\% \\ &= 28,64\% \end{aligned}$$

1.2 Pakan *Enteromorpha* sp.

Bobot cawan petri kosong (A) = 98,781 g

Bobot cawan petri + sampel tetap (C) = 100,284 g

Berat sampel awal (B) = 2,004 g

$$\% \text{Kadar air} = \frac{B - (C - A)}{B} \times 100\%$$

$$\begin{aligned} \% \text{Kadar air} &= \frac{2,004 - (100,284 - 98,781)}{2,004} \times 100\% \\ &= 25\% \end{aligned}$$

1.3 Pakan VITE FF-999

Bobot cawan petri kosong (A) = 82,978g

Bobot cawan petri + sampel tetap (C) = 84,775g

sampel awal (B) = 2,007g

$$\% \text{Kadar air} = \frac{B - (C - A)}{B} \times 100\%$$



$$\begin{aligned} \% \text{Kadar air} &= \frac{2,007 - (84,775 - 82,978)}{2,007} \times 100\% \\ &= 10,46\% \end{aligned}$$

2. Kadar Abu

2.1 Sampel *Enteromorpha* sp.

Bobot cawan porselin kosong (A) = 31,8876 g

Bobot cawan porselin + sampel awal (B) = 33,9479 g

Bobot cawan porselin + sampel tetap (C) = 33,4168 g

$$\% \text{ Kadar abu} = \frac{B - C}{B - A} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar abu} &= \frac{33,9479 - 33,4168}{33,9479 - 31,8876} \times 100\% \\ &= 25,77\% \end{aligned}$$

2.2 Pakan *Enteromorpha* sp.

Bobot cawan porselin kosong (A) = 25,6618 g

Bobot cawan porselin + sampel awal (B) = 27,6669 g

Bobot cawan porselin + sampel tetap (C) = 27,2067 g

$$\% \text{ Kadar abu} = \frac{B - C}{B - A} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar abu} &= \frac{27,6669 - 27,2067}{27,6669 - 25,6618} \times 100\% \\ &= 22,94\% \end{aligned}$$

2.3 Pakan VITE FF-999

Bobot cawan porselin kosong (A) = 28,3202g

Bobot cawan porselin + sampel awal (B) = 30,3211g

Bobot cawan porselin + sampel tetap (C) = 30,1004g



$$\% \text{ Kadar abu} = \frac{B - C}{B - A} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar abu} &= \frac{30,3211 - 30,1004}{30,3211 - 28,3202} \times 100\% \\ &= 11,03\% \end{aligned}$$

3. Kadar Protein

3.1 Sampel *Enteromorpha* sp.

Berat Sampel (W) = 1,003 g

Volume Titration (V) = 14,3 mL

Konsentrasi HCl(N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{14,3 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,003 \times 1000 \text{ mg}} \times 100\%$$

$$= 13,02\%$$

3.2 Dedak Padi

Berat Sampel (W) = 1,008 g

Volume Titration (V) = 8,9 mL

Konsentrasi HCl(N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$



$$\begin{aligned} \% \text{ Kadar protein} &= \frac{8,9\text{mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,008 \times 1000 \text{ mg}} \times 100\% \\ &= 8,08\% \end{aligned}$$

3.3 Pakan *Enteromorpha* sp.

Berat Sampel (W) = 1,001 g

Volume Titiasi (V) = 11,3 mL

Konsentrasi HCl(N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\begin{aligned} \% \text{ Kadar protein} &= \frac{11,3 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,001 \times 1000 \text{ mg}} \times 100\% \\ &= 10,31\% \end{aligned}$$

3.4 Pakan VITE FF-999

Berat Sampel (W) = 1,006 g

Volume Titiasi (V) = 43,9 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\begin{aligned} \% \text{ Kadar protein} &= \frac{43,9 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,006 \times 1000 \text{ mg}} \times 100\% \\ &= 39,86\% \end{aligned}$$



3.5 *Clarias* sp. yang diberi pakan Komerisal

3.5.1 Pekan 0

Berat Sampel (W) = 1,052 g

Volume Titration (V) = 17,5 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{17,5 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,052 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{15,19\%}{3} \\ &= 5,06\% \end{aligned}$$

3.5.2 Pekan 1

Berat Sampel (W) = 1,050g

Volume Titration (V) = 22,3 mL

Konsentrasi HCl (N) = 0,0880 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{22,3 \text{ mL} \times 0,0880 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,050 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{protein rata-rata} &= \frac{16,35\%}{3} \\ &= 5,45\% \end{aligned}$$



3.5.3 Pekan 2

Berat Sampel (W) = 1,096g

Volume Titration (V) = 21,2 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{21,2\text{mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,096 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{17,66\%}{3} \\ &= 5,88\% \end{aligned}$$

3.5.4 Pekan 3

Berat Sampel (W) = 1,001g

Volume Titration (V) = 23,1 mL

Konsentrasi HCl (N) = 0,0880 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{23,1 \text{ mL} \times 0,0880 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,001 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{17,76\%}{3} \\ &= 5,92\% \end{aligned}$$



3.5.5 Pekan 4

Berat Sampel (W) = 1,040g

Volume Titration (V) = 20 mL

Konsentrasi HCl (N) = 0,1191 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{20 \text{ mL} \times 0,1191 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,040 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{20,04\%}{3} \\ &= 6,68\% \end{aligned}$$

3.5.6 Pekan 5

Berat Sampel (W) = 1,012g

Volume Titration (V) = 22,8 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{22,8 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,012 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{20,58\%}{3} \\ &= 6,86\% \end{aligned}$$



3.5.7 Pekan 6

Berat Sampel (W) = 1,038g

Volume Titration (V) = 29,4 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{29,4 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,038 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{25,87\%}{3} \\ &= 8,62\% \end{aligned}$$

3.6 *Clarias* sp. yang diberi pakan *Enteromorpha* sp.

3.6.1 Pekan 0

Berat Sampel (W) = 1,052 g

Volume Titration (V) = 17,5 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{17,5 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,052 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{protein rata-rata} &= \frac{15,19\%}{3} \\ &= 5,06\% \end{aligned}$$



3.6.2 Pekan 1

Berat Sampel (W) = 1,062 g

Volume Titration (V) = 22,4 mL

Konsentrasi HCl (N) = 0,0880 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{22,4 \text{ mL} \times 0,0880 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,061 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{16,25\%}{3} \\ &= 5,41\% \end{aligned}$$

3.6.3 Pekan 2

Berat Sampel (W) = 1,045g

Volume Titration (V) = 20 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{20 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,045 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{17,50\%}{3} \\ &= 5,83\% \end{aligned}$$



3.6.4 Pekan 3

Berat Sampel (W) = 1,012 g

Volume Titration (V) = 22,8 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{20,1 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,040 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{17,56\%}{3} \\ &= 5,85\% \end{aligned}$$

3.6.5 Pekan 4

Berat Sampel (W) = 1,016g

Volume Titration (V) = 20,9 mL

Konsentrasi HCl (N) = 0,1044 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{20,9 \text{ mL} \times 0,1044 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,016 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{18,79\%}{3} \\ &= 6,26\% \end{aligned}$$



3.6.6 Pekan 5

Berat Sampel (W) = 1,023g

Volume Titration (V) = 20 mL

Konsentrasi HCl (N) = 0,1191 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{20 \text{ mL} \times 0,1191 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,023 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{20,37\%}{3} \\ &= 6,79\% \end{aligned}$$

3.6.7 Pekan 6

Berat Sampel (W) = 1,048g

Volume Titration (V) = 21,6 mL

Konsentrasi HCl (N) = 0,1191 mek/mL

BE Nitrogen = 14 mg/mek

Faktor konversi protein (Fk) = 6,25

$$\% \text{ Kadar protein} = \frac{V \times N \text{ HCl} \times \text{BE Nitrogen} \times \text{Fk}}{W \times 1000} \times 100 \%$$

$$\% \text{ Kadar protein} = \frac{21,6 \text{ mL} \times 0,1191 \frac{\text{mek}}{\text{mL}} \times 14 \frac{\text{mg}}{\text{mek}} \times 6,25}{1,048 \times 1000 \text{ mg}} \times 100\%$$

$$\begin{aligned} \text{Kadar protein rata-rata} &= \frac{21,47\%}{3} \\ &= 7,15\% \end{aligned}$$



4. Kadar Lemak

4.1 Sampel *Enteromorpha* sp.

Bobot labu lemak kosong + batu didih (A) = 101,080 g

Bobot labu lemak + sampel (B) = 101,121 g

Berat sampel (C) = 2,013 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar lemak} &= \frac{101,121 - 101,080}{2,013} \times 100\% \\ &= 2,03\% \end{aligned}$$

4.2 Dedak Padi

Bobot labu lemak kosong + batu didih (A) = 105,139 g

Bobot labu lemak + sampel (B) = 105,253 g

Berat sampel (C) = 2,009 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar lemak} &= \frac{105,253 - 105,139}{2,009} \times 100\% \\ &= 5,67\% \end{aligned}$$

4.3 Pakan *Enteromorpha* sp.

Bobot labu lemak kosong + batu didih (A) = 100,101 g

Bobot labu lemak + sampel (B) = 100,138 g

Berat sampel (C) = 2,0351 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\begin{aligned} \text{Kadar lemak} &= \frac{100,138 - 100,101}{2,0351} \times 100\% \\ &= 1,80\% \end{aligned}$$



4.4 Pakan VITE FF-999

Bobot labu lemak kosong + batu didih (A) = 105,139 g

Bobot labu lemak + sampel (B) = 105,253 g

Berat sampel (C) = 2,009 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\begin{aligned} \% \text{ Kadar lemak} &= \frac{105,253 - 105,139}{2,009} \times 100\% \\ &= 5,67\% \end{aligned}$$

4.5 *Clarias* sp. yang diberi pakan Komerisal

4.5.1 Pekan 0

Bobot labu lemak kosong + batu didih (A) = 105,492 g

Bobot labu lemak + sampel (B) = 105,549 g

Berat sampel (C) = 2,002 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{105,549 - 105,492}{2,002} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,84\%}{3} \\ &= 0,94\% \end{aligned}$$

4.5.2 Pekan 1

Bobot labu lemak kosong + batu didih (A) = 123,434g

Bobot labu lemak + sampel (B) = 123,499g

Berat sampel (C) = 2,170 g

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$



$$\% \text{ Kadar lemak} = \frac{123,499-123,434}{2,170} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,99\%}{3} \\ &= 0,99\% \end{aligned}$$

4.5.3 Pekan 2

$$\text{Bobot labu lemak kosong + batu didih (A)} = 105,007 \text{ g}$$

$$\text{Bobot labu lemak + sampel (B)} = 105,068 \text{ g}$$

$$\text{Berat sampel (C)} = 2,032\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{105,068-105,007}{2,032} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{3,00\%}{3} \\ &= 1\% \end{aligned}$$

4.5.4 Pekan 3

$$\text{Bobot labu lemak kosong + batu didih (A)} = 104,726\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 104,821\text{g}$$

$$\text{Berat sampel (C)} = 2,016\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{104,821-104,726}{2,016} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{4,71\%}{3} \\ &= 1,57\% \end{aligned}$$



Pekan 4

$$\text{Bobot labu lemak kosong + batu didih (A)} = 123,441\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 123,551\text{g}$$

$$\text{Berat sampel (C)} = 2,020\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{123,551 - 123,441}{2,020} \times 100\%$$

$$\text{Lemak Rata-rata} = \frac{5,44\%}{3}$$

$$= 1,81\%$$

4.5.6 Pekan 5

$$\text{Bobot labu lemak kosong + batu didih (A)} = 105,044\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 105,162\text{g}$$

$$\text{Berat sampel (C)} = 2,050\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{105,162 - 105,044}{2,050} \times 100\%$$

$$\text{Lemak Rata-rata} = \frac{5,75\%}{3}$$

$$= 1,91\%$$

4.5.7 Pekan 6

$$\text{Bobot labu lemak kosong + batu didih (A)} = 105,174\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 105,292\text{g}$$

$$\text{Berat sampel (C)} = 2,040\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{105,292 - 105,174}{2,040} \times 100\%$$



$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{5,78\%}{3} \\ &= 1,92\% \end{aligned}$$

4.6 *Clarias* sp. yang diberi pakan *Enteromorpha* sp.

4.6.1 Pekan 0

$$\text{Bobot labu lemak kosong + batu didih (A)} = 105,492\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 105,549\text{g}$$

$$\text{Berat sampel (C)} = 2,002\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{105,549 - 105,492}{2,002} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,84\%}{3} \\ &= 0,94\% \end{aligned}$$

4.6.2 Pekan 1

$$\text{Bobot labu lemak kosong + batu didih (A)} = 128,284\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 128,329\text{g}$$

$$\text{Berat sampel (C)} = 2,045\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{128,329 - 128,284}{2,045} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,20\%}{3} \\ &= 0,73\% \end{aligned}$$



Pekan 2

$$\text{Bobot labu lemak kosong + batu didih (A)} = 128,163\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 128,257\text{g}$$

$$\text{Berat sampel (C)} = 2,035\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{128,257 - 128,163}{2,035} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,40\%}{3} \\ &= 0,8\% \end{aligned}$$

4.6.4 Pekan 3

$$\text{Bobot labu lemak kosong + batu didih (A)} = 100,102\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 100,153\text{g}$$

$$\text{Berat sampel (C)} = 2,008\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{100,153 - 100,102}{2,008} \times 100\%$$

$$\begin{aligned} \text{Lemak Rata-rata} &= \frac{2,53\%}{3} \\ &= 0,84\% \end{aligned}$$

4.6.5 Pekan 4

$$\text{Bobot labu lemak kosong + batu didih (A)} = 128,451\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 128,505\text{g}$$

$$\text{Berat sampel (C)} = 2,042\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{128,505 - 128,451}{2,042} \times 100\%$$



$$\begin{aligned}\text{Lemak Rata-rata} &= \frac{2,64\%}{3} \\ &= 0,88\%\end{aligned}$$

4.6.6 Pekan 5

$$\text{Bobot labu lemak kosong + batu didih (A)} = 100,426\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 100,494\text{g}$$

$$\text{Berat sampel (C)} = 2,050\text{g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{100,494 - 100,426}{2,050} \times 100\%$$

$$\begin{aligned}\text{Lemak Rata-rata} &= \frac{3,31\%}{3} \\ &= 1,10\%\end{aligned}$$

4.6.7 Pekan 6

$$\text{Bobot labu lemak kosong + batu didih (A)} = 100,854\text{g}$$

$$\text{Bobot labu lemak + sampel (B)} = 100,950\text{g}$$

$$\text{Berat sampel (C)} = 2,083 \text{ g}$$

$$\% \text{ Kadar lemak} = \frac{B - A}{C} \times 100\%$$

$$\% \text{ Kadar lemak} = \frac{100,950 - 100,854}{2,083} \times 100\%$$

$$\begin{aligned}\text{Lemak Rata-rata} &= \frac{4,60\%}{3} \\ &= 1,53\%\end{aligned}$$



5. Perhitungan Panjang Rata-rata *Clarias* sp.

5.1 *Clarias* sp. yang diberi Pakan VITE FF-999

$$\begin{aligned}\text{Panjang Pekan 0} &= (10,06 + 10,3 + 10,6) \text{ cm} = \frac{31,5}{3} \times 100\% \\ &= 10,50 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 1} &= (12,2 + 11,8 + 12,09) \text{ cm} = \frac{36,09}{3} \times 100\% \\ &= 12,03 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 2} &= (12,6 + 12,75 + 12,84) \text{ cm} = \frac{38,19}{3} \times 100\% \\ &= 12,73 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 3} &= (12,8 + 12,75 + 12,94) \text{ cm} = \frac{38,49}{3} \times 100\% \\ &= 12,83 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 4} &= (13 + 13,5 + 13,55) \text{ cm} = \frac{40,05}{3} \times 100\% \\ &= 13,35 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 5} &= (14,1 + 13,9 + 14,15) \text{ cm} = \frac{42,15}{3} \times 100\% \\ &= 14,05 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 6} &= (14,8 + 15,1 + 15,1) \text{ cm} = \frac{45}{3} \times 100\% \\ &= 15 \text{ cm}\end{aligned}$$

5.2 *Clarias* sp. yang diberi Pakan *Enteromorpha* sp.

$$\begin{aligned}\text{Panjang Pekan 0} &= (10,06 + 10,3 + 10,6) \text{ cm} = \frac{31,5}{3} \times 100\% \\ &= 10,50 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 1} &= (11,9 + 10,8 + 11) \text{ cm} = \frac{33,7}{3} \times 100\% \\ &= 11,23 \text{ cm}\end{aligned}$$

$$\begin{aligned}\text{Panjang Pekan 2} &= (12,5 + 11 + 12) \text{ cm} = \frac{35,5}{3} \times 100\% \\ &= 11,83 \text{ cm}\end{aligned}$$



$$\begin{aligned} \text{Panjang Pekan 3} &= (12,05 + 12,2 + 11,9) \text{ cm} = \frac{36,15}{3} \times 100\% \\ &= 12,05 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Panjang Pekan 4} &= (13,2 + 12,5 + 12,85) \text{ cm} = \frac{38,55}{3} \times 100\% \\ &= 12,85 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Panjang Pekan 5} &= (13,5 + 13,7 + 13,6) \text{ cm} = \frac{40,8}{3} \times 100\% \\ &= 13,6 \text{ cm} \end{aligned}$$

$$\begin{aligned} \text{Panjang Pekan 6} &= (15 + 14,2 + 12,8) \text{ cm} = \frac{42}{3} \times 100\% \\ &= 14 \text{ cm} \end{aligned}$$

6. Perhitungan Bobot Rata-rata *Clarias* sp.

6.1 *Clarias* sp. yang diberi Pakan VITE FF-999

$$\begin{aligned} \text{Bobot Pekan 0} &= (10,02 + 9,2 + 13,21) \text{ g} = \frac{32,61}{3} \times 100\% \\ &= 10,87 \text{ g} \end{aligned}$$

$$\begin{aligned} \text{Bobot Pekan 1} &= (12 + 13,2 + 13,56) \text{ g} = \frac{38,76}{3} \times 100\% \\ &= 12,92 \text{ g} \end{aligned}$$

$$\begin{aligned} \text{Bobot Pekan 2} &= (14,5 + 16 + 15,19) \text{ g} = \frac{45,66}{3} \times 100\% \\ &= 15,23 \text{ g} \end{aligned}$$

$$\begin{aligned} \text{Bobot Pekan 3} &= (15,7 + 16,2 + 15,08) \text{ g} = \frac{46,98}{3} \times 100\% \\ &= 15,66 \text{ g} \end{aligned}$$

$$\begin{aligned} \text{Bobot Pekan 4} &= (16,4 + 15,2 + 16,28) \text{ g} = \frac{47,88}{3} \times 100\% \\ &= 15,96 \text{ g} \end{aligned}$$

$$\text{Bobot Pekan 5} = (21 + 22,5 + 22,5) \text{ g} = \frac{66}{3} \times 100\%$$



$$= 22 \text{ g}$$

$$\begin{aligned}\text{Bobot Pekan 6} &= (23 + 24,3 + 24,07) \text{ g} = \frac{71,37}{3} \times 100\% \\ &= 23,79 \text{ g}\end{aligned}$$

6.2 *Clarias* sp. yang diberi Pakan *Enteromorpha* sp.

$$\begin{aligned}\text{Bobot Pekan 0} &= (10,02 + 9,2 + 13,21) \text{ g} = \frac{32,61}{3} \times 100\% \\ &= 10,87 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 1} &= (10,69 + 11,50 + 10,96) \text{ g} = \frac{33,15}{3} \times 100\% \\ &= 11,052 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 2} &= (11,70 + 12,05 + 11,89) \text{ g} = \frac{35,64}{3} \times 100\% \\ &= 11,88 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 3} &= (14,43 + 9,61 + 12,02) \text{ g} = \frac{36,06}{3} \times 100\% \\ &= 12,02 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 4} &= (17,04 + 12,98 + 15,01) \text{ g} = \frac{45,03}{3} \times 100\% \\ &= 15,01 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 5} &= (17,69 + 18,86 + 18,26) \text{ g} = \frac{54,81}{3} \times 100\% \\ &= 18,27 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{Bobot Pekan 6} &= (20,70 + 19,62 + 18,6) \text{ g} = \frac{58,92}{3} \times 100\% \\ &= 19,64 \text{ g}\end{aligned}$$



7. Perhitungan Persentase Kenaikan

7.1 Perhitungan Persentase Kenaikan Panjang

7.1.1 *Clarias* sp. Pakan *Enteromorpha* sp.

$$\begin{aligned}\text{Persentase kenaikan panjang 1} &= \frac{(11,23-10,50) \text{ cm}}{10,50 \text{ cm}} \times 100\% \\ &= 6,95\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 2} &= \frac{(11,83-11,23) \text{ cm}}{11,23 \text{ cm}} \times 100\% \\ &= 5,34\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 3} &= \frac{(12,05-11,83) \text{ cm}}{11,83 \text{ cm}} \times 100\% \\ &= 1,85\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 4} &= \frac{(12,85-12,05) \text{ cm}}{12,05 \text{ cm}} \times 100\% \\ &= 6,63\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 5} &= \frac{(13,6-12,85) \text{ cm}}{12,85 \text{ cm}} \times 100\% \\ &= 5,83\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 6} &= \frac{(14-13,6) \text{ cm}}{13,6 \text{ cm}} \times 100\% \\ &= 2,94\%\end{aligned}$$

7.1.2 *Clarias* sp. Pakan VITE FF-999

$$\begin{aligned}\text{Persentase kenaikan panjang 1} &= \frac{(12,03-10,50) \text{ cm}}{10,50 \text{ cm}} \times 100\% \\ &= 14,57\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 2} &= \frac{(12,73-12,03) \text{ cm}}{12,03 \text{ cm}} \times 100\% \\ &= 5,81\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan panjang 3} &= \frac{(12,83-12,73) \text{ cm}}{12,73 \text{ cm}} \times 100\% \\ &= 0,78\%\end{aligned}$$

$$\text{Persentase kenaikan panjang 4} = \frac{(13,35-12,83) \text{ cm}}{12,83 \text{ cm}} \times 100\%$$



$$= 4,05\%$$

$$\text{Persentase kenaikan panjang 5} = \frac{(14,05-13,35) \text{ cm}}{13,35 \text{ cm}} \times 100\%$$

$$= 5,24\%$$

$$\text{Persentase kenaikan panjang 6} = \frac{(15-14,05) \text{ cm}}{14,05 \text{ cm}} \times 100\%$$

$$= 6,76\%$$

7.2 Perhitungan Persentase Kenaikan Bobot

7.2.1 *Clarias* sp. Pakan *Enteromorpha* sp.

$$\text{Persentase kenaikan bobot 1} = \frac{(11,05-10,87) \text{ g}}{10,87 \text{ g}} \times 100\%$$

$$= 1,62\%$$

$$\text{Persentase kenaikan bobot 2} = \frac{(11,88-11,05) \text{ g}}{11,05 \text{ g}} \times 100\%$$

$$= 7,50\%$$

$$\text{Persentase kenaikan bobot 3} = \frac{(12,02-11,88) \text{ g}}{11,88 \text{ g}} \times 100\%$$

$$= 1,22\%$$

$$\text{Persentase kenaikan bobot 4} = \frac{(15,01-12,02) \text{ g}}{12,02 \text{ g}} \times 100\%$$

$$= 24,85\%$$

$$\text{Persentase kenaikan bobot 5} = \frac{(18,27-15,01) \text{ g}}{15,01 \text{ g}} \times 100\%$$

$$= 21,73\%$$

$$\text{Persentase kenaikan bobot 6} = \frac{(19,64-18,27) \text{ g}}{18,27 \text{ g}} \times 100\%$$

$$= 7,45\%$$

7.2.2 *Clarias* sp. Pakan VITE FF-999

$$\text{Persentase kenaikan bobot 1} = \frac{(12,92-10,87) \text{ g}}{10,87 \text{ g}} \times 100\%$$

$$= 18,85\%$$

$$\text{Persentase kenaikan bobot 2} = \frac{(15,23-12,92) \text{ g}}{12,92 \text{ g}} \times 100\%$$



$$= 17,87\%$$

$$\text{Persentase kenaikan bobot 3} = \frac{(15,66-15,23) \text{ g}}{15,23 \text{ g}} \times 100\%$$

$$= 2,82\%$$

$$\text{Persentase kenaikan bobot 4} = \frac{(15,96-15,66) \text{ g}}{15,66 \text{ g}} \times 100\%$$

$$= 1,91\%$$

$$\text{Persentase kenaikan bobot 5} = \frac{(22,00-15,96) \text{ g}}{15,96 \text{ g}} \times 100\%$$

$$= 37,84\%$$

$$\text{Persentase kenaikan bobot 6} = \frac{(23,79-22,00) \text{ g}}{22,00 \text{ g}} \times 100\%$$

$$= 8,13\%$$

7.3 Perhitungan Persentase Kenaikan Kadar Protein

7.3.1 *Clarias* sp. Pakan *Enteromorpha* sp.

$$\text{Persentase kenaikan protein 1} = \frac{(5,41-5,06)\%}{5,06\%} \times 100\%$$

$$= 6,97\%$$

$$\text{Persentase kenaikan protein 2} = \frac{(5,83-5,41)\%}{5,41\%} \times 100\%$$

$$= 7,69\%$$

$$\text{Persentase kenaikan protein 3} = \frac{(5,85-5,83)\%}{5,83\%} \times 100\%$$

$$= 0,34\%$$

$$\text{Persentase kenaikan protein 4} = \frac{(6,26-5,85)\%}{5,85\%} \times 100\%$$

$$= 7,00\%$$

$$\text{Persentase kenaikan protein 5} = \frac{(6,79-6,26)\%}{6,26\%} \times 100\%$$

$$= 8,40\%$$

$$\text{Persentase kenaikan protein 6} = \frac{(7,15-6,79)\%}{6,79\%} \times 100\%$$

$$= 5,40\%$$



7.3.2 *Clarias* sp. Pakan VITE FF-999

$$\begin{aligned}\text{Persentase kenaikan protein 1} &= \frac{(5,45-5,06)\%}{5,06\%} \times 100\% \\ &= 7,70\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan protein 2} &= \frac{(5,88-5,45)\%}{5,45\%} \times 100\% \\ &= 7,88\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan protein 3} &= \frac{(5,92-5,88)\%}{5,88\%} \times 100\% \\ &= 0,68\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan protein 4} &= \frac{(6,68-5,92)\%}{5,92\%} \times 100\% \\ &= 12,83\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan protein 5} &= \frac{(6,86-6,68)\%}{6,68\%} \times 100\% \\ &= 2,69\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan protein 6} &= \frac{(8,62-6,86)\%}{6,86\%} \times 100\% \\ &= 25,65\%\end{aligned}$$

7.4 Perhitungan Persentase Kenaikan Kadar Lemak

7.4.1 *Clarias* sp. Pakan *Enteromorpha* sp.

$$\begin{aligned}\text{Persentase kenaikan lemak 1} &= \frac{(0,73-0,94)\%}{0,94\%} \times 100\% \\ &= -22,5\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan lemak 2} &= \frac{(0,8-0,73)\%}{0,73\%} \times 100\% \\ &= 9,09\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan lemak 3} &= \frac{(0,84-0,8)\%}{0,8\%} \times 100\% \\ &= 5,41\%\end{aligned}$$

$$\begin{aligned}\text{Persentase kenaikan lemak 4} &= \frac{(0,88-0,84)\%}{0,84\%} \times 100\% \\ &= 4,34\%\end{aligned}$$



$$\begin{aligned} \text{Persentase kenaikan lemak 5} &= \frac{(1,10-0,88)\%}{0,88\%} \times 100\% \\ &= 25,3\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 6} &= \frac{(1,53-1,10)\%}{1,10\%} \times 100\% \\ &= 38,97\% \end{aligned}$$

7.4.2 *Clarias* sp. Pakan VITE FF-999

$$\begin{aligned} \text{Persentase kenaikan lemak 1} &= \frac{(0,99-0,94)\%}{0,94\%} \times 100\% \\ &= 5,31\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 2} &= \frac{(1,00-0,99)\%}{0,99\%} \times 100\% \\ &= 1,01\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 3} &= \frac{(1,57-1,00)\%}{1,00\%} \times 100\% \\ &= 57\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 4} &= \frac{(1,81-1,57)\%}{1,57\%} \times 100\% \\ &= 15,28\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 5} &= \frac{(1,91-1,81)\%}{1,81\%} \times 100\% \\ &= 5,52\% \end{aligned}$$

$$\begin{aligned} \text{Persentase kenaikan lemak 6} &= \frac{(1,92-1,91)\%}{1,91\%} \times 100\% \\ &= 0,52\% \end{aligned}$$



Lampiran 5. Perhitungan Pembuatan Larutan

1. Pembuatan NaOH 40% dalam 100 mL

$$\% = \frac{\text{massa NaOH}}{V} \times 100\%$$

$$40\% = \frac{\text{massa NaOH}}{100 \text{ mL}} \times 100\%$$

$$m = \frac{4000}{100}$$

$$m = 40 \text{ g}$$

2. Pembuatan H₃BO₃ 3% dalam 100 mL

$$\% = \frac{\text{massa H}_3\text{BO}_3}{V} \times 100\%$$

$$3\% = \frac{\text{massa H}_3\text{BO}_3}{100 \text{ mL}} \times 100\%$$

$$m = \frac{300}{100}$$

$$m = 3 \text{ g}$$

3. Pembuatan Na₂CO₃ dalam 100 mL

$$N = \frac{G}{V \times BE}$$

$$= \frac{0,537 \text{ g}}{0,1 \text{ L} \times 53}$$

$$= \frac{0,537}{53}$$

$$= 0,1013 \text{ N}$$

4. Larutan HCl 0,1 N dari HCl Pekat 37%

$$\text{Volume} = \frac{\% \times BJ \times 1000}{BE}$$

$$\text{Volume} = \frac{37/100 \times 1,19 \text{ g/mL} \times 1000 \text{ mL/L}}{36,5 \text{ g/ek}}$$



Normalitas = 12,06 ek/L

$$V_1 \times C_1 = V_2 \times C_2$$

$$V_1 \times 12,06 \text{ N} = 500 \text{ mL} \times 0,1 \text{ N}$$

$$V_1 = 4,14 \text{ mL}$$

5. Standarisasi HCl 0,1 N dengan Na₂CO₃

a. Konsentrasi HCl 0,1044 N

$$V \text{ HCl} \times N \text{ HCl} = V \text{ Na}_2\text{CO}_3 \times N \text{ Na}_2\text{CO}_3$$

$$9,7 \text{ mL} \times N \text{ HCl} = 10 \text{ mL} \times 0,1013 \text{ N}$$

$$N = \frac{1,013 \text{ N}}{9,7}$$

$$N \text{ HCl} = 0,1044 \text{ N}$$

b. Konsentrasi HCl 0,0880 N

$$V \text{ HCl} \times N \text{ HCl} = V \text{ Na}_2\text{CO}_3 \times N \text{ Na}_2\text{CO}_3$$

$$11,5 \text{ mL} \times N \text{ HCl} = 10 \text{ mL} \times 0,1013 \text{ N}$$

$$N = \frac{1,013 \text{ N}}{11,5}$$

$$N \text{ HCl} = 0,0880 \text{ N}$$

c. Konsentrasi HCl 0,1191 N

$$V \text{ HCl} \times N \text{ HCl} = V \text{ Na}_2\text{CO}_3 \times N \text{ Na}_2\text{CO}_3$$

$$8,5 \text{ mL} \times N \text{ HCl} = 10 \text{ mL} \times 0,1013 \text{ N}$$

$$N = \frac{1,013 \text{ N}}{8,5}$$

$$N \text{ HCl} = 0,1191 \text{ N}$$

an Indikator BCG 0,1%

$$\frac{\text{g}}{\text{mL}} \times 100\%$$



$$\% \frac{b}{v} = \frac{\text{massa BCG (g)}}{\text{volume larutan (mL)}} \times 100\%$$

$$0,1\% = \frac{\text{massa BCG}}{10 \text{ mL}} \times 100\%$$

$$m = 0,01 \text{ gram}$$

7. Larutan Indikator MM 0,1%

$$\% \frac{b}{v} = \frac{g}{\text{mL}} \times 100\%$$

$$\% \frac{b}{v} = \frac{\text{massa MM (g)}}{\text{volume larutan (mL)}} \times 100\%$$

$$0,1\% = \frac{\text{massa MM}}{5 \text{ mL}} \times 100\%$$

$$m = 0,005 \text{ gram}$$



Lampiran 6. Tabel

Kandungan nutrisi pakan

Sampel	(%)			
	Kadar air	Kadar abu	Kadar protein	Kadar lemak
<i>Enteromorpha</i> sp.	28,64	25,77	13,02	2,03
Pakan <i>Enteromorpha</i> sp.	25	22,94	10,31	1,80
Pakan VITE FF-999	10,46	11,03	39,86	5,67

