

LAMPIRAN I
DATA PENGAMATAN

Tabel 5. Volume Titran dan pH pada penentuan kadar ammonium

Perlakuan	Asam Humat (%)	Suhu (°C)	Volume titran (ml)	Kadar ammonium (%)	pH
Urea	0	28	120,5	21,69	8,25
SRF (A18)	2	18	163,2	28,32	9,38
SRF (A28)		28	175,7	30,57	9,45
SRF (A38)		38	152,1	26,32	9,30
SRF (A48)		48	145,8	25,19	9,16
SRF (B18)	4	18	169,3	29,42	9,41
SRF (B28)		28	192,1	33,53	9,53
SRF (B38)		38	157,5	27,30	9,32
SRF (B48)		48	150,4	26,02	9,29
SRF (C18)	6	18	149,7	25,89	9,27
SRF (C28)		28	162,8	28,25	9,36
SRF (C38)		38	137,6	23,71	8,94
SRF (C48)		48	125,2	21,48	8,75
SRF (D18)	8	18	135,1	23,26	8,87
SRF (D28)		28	140,3	24,20	9,05
SRF (D38)		38	128,2	22,02	8,82
SRF (D48)		48	125,7	21,57	8,76

LAMPIRAN II PERHITUNGAN

1. Penentuan Kadar Ammonium

$$\%NH_4 = \frac{V \text{ titrasi sampel} - V \text{ titrasi Blanko} \times 18,008 \times 0,1 \text{ N}}{\text{mg sampel}} \times 100\%$$

a. Urea

$$\begin{aligned}\%NH_4 &= \frac{120,5 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 21,69\%\end{aligned}$$

b. SRF (A18)

$$\begin{aligned}\%NH_4 &= \frac{163,2 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 28,32\%\end{aligned}$$

c. SRF (A28)

$$\begin{aligned}\%NH_4 &= \frac{175,7 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 30,57\%\end{aligned}$$

d. SRF (A38)

$$\begin{aligned}\%NH_4 &= \frac{152,1 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 26,32\%\end{aligned}$$

e. SRF (A48)

$$\begin{aligned}\%NH_4 &= \frac{145,8 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 25,19\%\end{aligned}$$

f. SRF (B18)

$$\begin{aligned}\%NH_4 &= \frac{169,3 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 29,42\%\end{aligned}$$

g. SRF (B28)

$$\begin{aligned}\%NH_4 &= \frac{192,1 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 33,53\%\end{aligned}$$

h. SRF (B38)

$$\begin{aligned}\%NH_4 &= \frac{157,5 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 27,30\%\end{aligned}$$

i. SRF (B48)

$$\begin{aligned}\%NH_4 &= \frac{150,4 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 26,02\%\end{aligned}$$

j. SRF (C18)

$$\begin{aligned}\%NH_4 &= \frac{149,7 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 25,89\%\end{aligned}$$

k. SRF (C28)

$$\begin{aligned}\%NH_4 &= \frac{162,8 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 28,25\%\end{aligned}$$

l. SRF (C38)

$$\begin{aligned}\%NH_4 &= \frac{137,6 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 23,71\%\end{aligned}$$

m. SRF (C48)

$$\begin{aligned}\%NH_4 &= \frac{125,2 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 21,48\%\end{aligned}$$

n. SRF (D18)

$$\begin{aligned}\%NH_4 &= \frac{135,1 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 23,26\%\end{aligned}$$

o. SRF (D28)

$$\begin{aligned}\%NH_4 &= \frac{140,3 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 24,20\%\end{aligned}$$

p. SRF (D38)

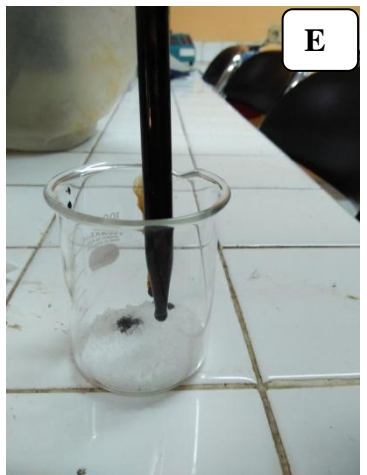
$$\begin{aligned}\%NH_4 &= \frac{128,2 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 22,02\%\end{aligned}$$

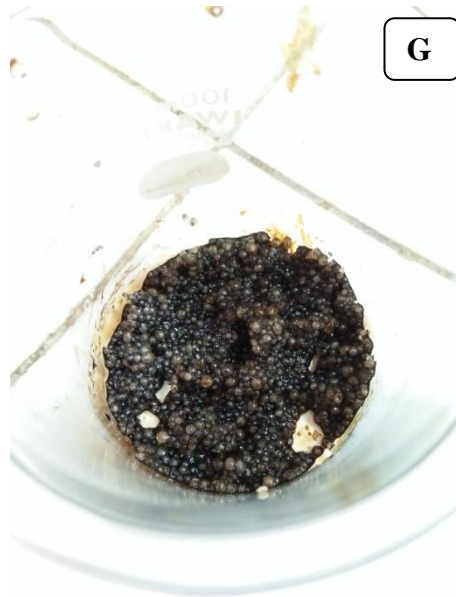
q. SRF (D48)

$$\begin{aligned}\%NH_4 &= \frac{125,7 \text{ ml} - 5,9 \text{ ml} \times 18,008 \text{ mg/ml} \times 0,1 \text{ N}}{1000 \text{ mg}} \times 100\% \\ &= 21,57\%\end{aligned}$$

LAMPIRAN III DOKUMENTASI PENELITIAN

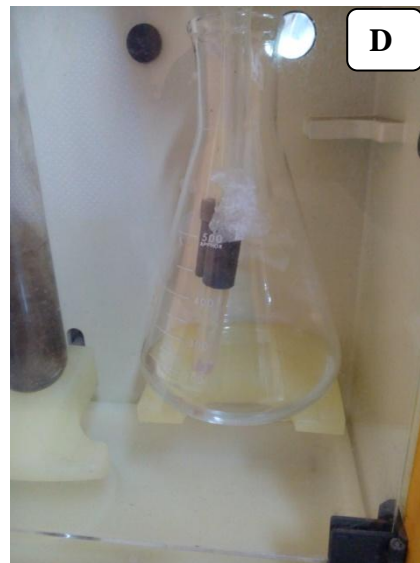
1. Pembuatan Campuran Urea-Humat





Gambar 11. A) Asam Humat, B) Urea, C) Menimbang urea sebanyak 10 gr, D) Memipet Asam Humat, E) Meneteskan Asam Humat ke dalam Urea sesuai dengan konsentrasi yang ditentukan, F) Menghomogenkan Campuran Urea-Asam Humat, G) Keadaan Campuran Urea-Asam Humat yang Sudah Homogen.

2. Analisa Kadar Ammonium pada Campuran





Gambar 12. A) Alat Desktruksi, B) Alat Distilasi, C) Proses Distilasi, D) Distilat, E) Pemberian Indikator pada Distilat, F) Distilat yang Sudah Diberi Indikator, G) Distilat yang Sudah Dititrasi dengan HCL 0,1 N