

LAMPIRAN

Lampiran 01. Perhitungan kadar asetil

Blanko $V_b = 10,9$ mL

Sampel $V_s = 2,0$ mL

NaOH = 0,1 N

Massa CA = 0,1 g

$\Delta V = 10,9 - 2,0 = 8,9$ mL

$$\begin{aligned}\%A &= \frac{(V_b - V_s) \times N \times 4,305}{W} \\ \%A &= \frac{8,9 \times 0,1 \times 4,305}{0,1} \\ \%A &= \frac{3,830}{0,1} = 38,30\%\end{aligned}$$

Lampiran 02 Perhitungan DS=

$$\begin{aligned}DS &= \frac{(162 \times \%A_{\text{asetil}})}{4300 - (42 \times \%A_{\text{asetil}})} \\ DS &= \frac{162 \times 38,3}{4300 - (42 \times 38,3)} \\ DS &= \frac{6199,74}{4300 - 1607,4} \\ DS &= \frac{6199,74}{2692,66} \\ DS &= 2,30\end{aligned}$$

Lampiran 03 hasil uji *swelling*

Konsentrasi	Berat kering	Berat basah	% <i>swelling</i>
Kontrol	0,0064	0,0091	42,19
5%	0,0066	0,0097	46,97
10%	0,0045	0,0065	44,44
15%	0,0045	0,0059	31,11

$$\% \text{ swelling} = \frac{W_{\text{basah}} - W_{\text{kering}}}{W_{\text{kering}}} \times 100\%$$

$$\text{a. kontrol} = \frac{0,0091 - 0,0064}{0,0064} \times 100\% = 42,19\%$$

$$\text{b. 5\%} = \frac{0,0097 - 0,0066}{0,0066} \times 100\% = 46,97\%$$

$$\text{c. 10\%} = \frac{0,0065 - 0,0045}{0,0045} \times 100\% = 44,44\%$$

$$d. 15\% = \frac{0.0059-0.0045}{0.0045} \times 100\% = 31.11\%$$

lampiran 04 hasil uji fluks

Konsentrasi SiO ₂ (%)	Volum Permeat (mL)	Waktu filtrasi (Jam)	Nilai fluks (L/m ² .jam)
kontrol	50	0,086	230,2
5	48	0,0528	236,1
10	46,3	0,0847	141,8
15	47,7	0,1189	104,1

$$J = \frac{V}{A \times t}$$

$$A = \pi r^2$$

$$= 3,14 \times (0,35)^2$$

$$= 0.00385 \text{ m}^2$$

a. Kontrol

$$J = \frac{0.05}{0.00385 \times 0.086} = 230,2 \text{ L/m}^2.\text{jam}$$

b. Konsentrasi 5%

$$J = \frac{0.048}{0.00385 \times 0.0528} = 236,1 \text{ L/m}^2.\text{jam}$$

c. Konsentrasi 10%

$$J = \frac{0.0477}{0.00385 \times 0.0847} = 141,8 \text{ L/m}^2.\text{jam}$$

d. Konsentrasi 15%

$$J = \frac{0.0477}{0.00385 \times 0.1189} = 104,1 \text{ L/m}^2.\text{jam}$$

Lampiran 05 Dokumentasi Sintesis Selulosa Asetat



Lampiran 06 dokumentasi Pembuatan Membran Selulosa Asetat





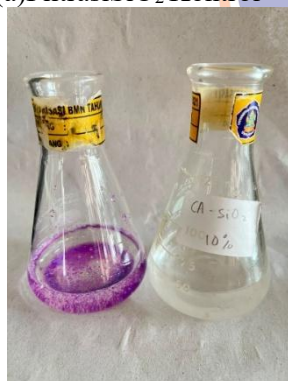
Lampiran 07 Dokumentasi hasil filtrasi



(a) Filtrasi SiO_2 Kontrol



(b) Filtrasi CA- SiO_2 5%



(c) Filtrasi CA- SiO_2 10%



(d) Filtrasi CA- SiO_2 15%