

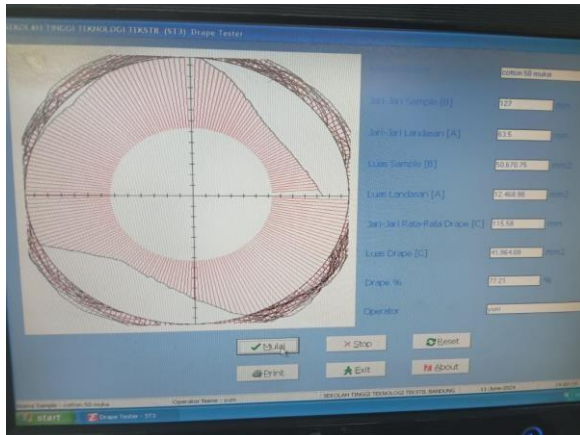
DAFTAR LAMPIRAN

Dokumentasi pengerjaan penyempurnaan pelepasan

Gambar	Keterangan	Lokasi
	Proses Penimbangan kebutuhan kebutuhan variasi <i>Amino Modified Polysiloxane</i>	Laboratorium PT X
	Proses <i>padding</i> kain sampel kain yang telah dilakukan proses perendaman <i>Amino Modified Polysiloxane</i>	Laboratorium PT X
	Proses <i>drying</i> kain sampel uji kekakuan kain yang telah dilakukan proses perendaman <i>Amino Modified Polysiloxane</i>	Laboratorium PT X

	Dokumentasi pengujian <i>handfeel</i> dengan indera peraba oleh responden	Laboratorium PT X
	Dokumentasi pengujian <i>handfeel</i> dengan indera peraba oleh responden	Laboratorium PT X
	Dokumentasi pengujian <i>handfeel</i> dengan indera peraba oleh responden	Laboratorium PT X
	Dokumentasi pengerjaan pengujian kelangsaan kain dengan mesin <i>drape test</i>	Laboratorium fisika Politeknik STTT Bandung

Data hasil pengujian kelangsiaan kain variasi 50 g/l :



Tampak depan



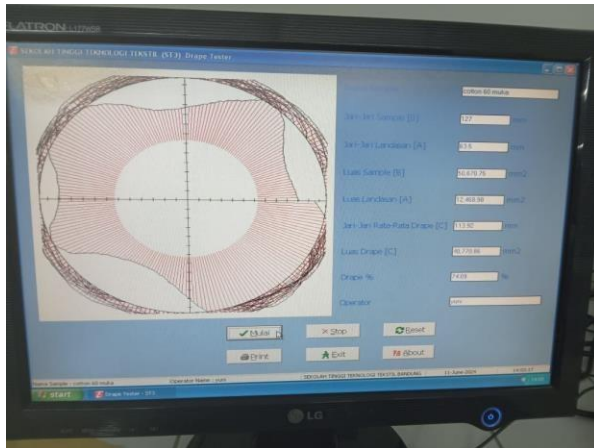
Tampak belakang

No.	Nama	Depan	Belakang
1	Jari-jari sampel	127 mm	127 mm
2	Jari-jari landasan (A)	63,5 mm	63,5 mm
3	Luas sampel (B)	50,670.75 mm ₂	50,670.75 mm ₂
4	Luas landasan (A)	12,468.98 mm ₂	12,468.98 mm ₂
5	Jari-jari rata-rata drape (C)	115.58 mm	121,41 mm
6	Luas drape	41,964.08 mm ₂	68,304.48 mm ₂
7	Drape (%)	77.21 %	88.57 %

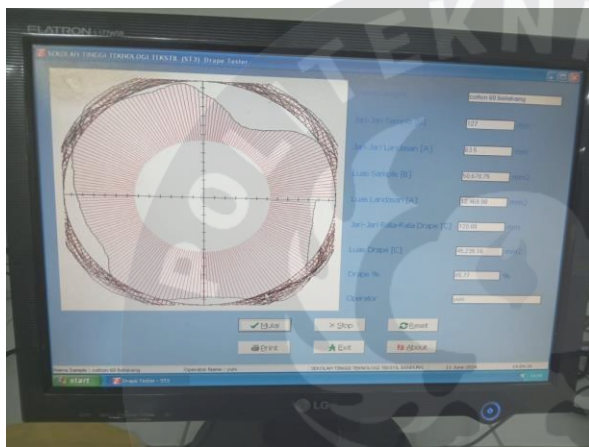
$$\begin{aligned}
 \% \text{ drape depan} &= \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\% \\
 &= \frac{41,964.08 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 77,2 \%
 \end{aligned}$$

$$\begin{aligned}
 \% \text{ drape belakang} &= \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\% \\
 &= \frac{68,304.48 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 88.5 \%
 \end{aligned}$$

Data hasil pengujian kelangsiaan kain variasi 60 g/l :



Tampak depan



Tampak belakang

No.	Nama	Depan	Belakang
1	Jari-jari sampel	127 mm	127 mm
2	Jari-jari landasan (A)	63,5 mm	63,5 mm
3	Luas sampel (B)	50,670.75 mm ₂	50,670.75 mm ₂
4	Luas landasan (A)	12,468.98 mm ₂	12,468.98 mm ₂
5	Jari-jari rata-rata drape (C)	113.92 mm	120.00 mm
6	Luas drape	40,770.86 mm ₂	45,235.16 mm ₂
7	Drape (%)	74.09 %	85.77 %

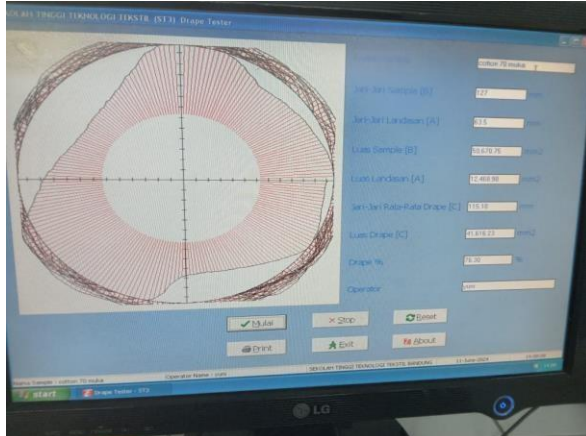
$$\% \text{ drape depan} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{40,770.86 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 74.0 \%$$

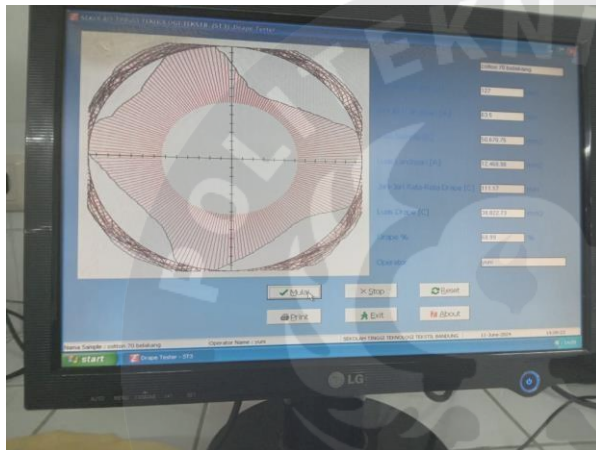
$$\% \text{ drape belakang} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{45,235.16 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 85.7 \%$$

Data hasil pengujian kelangsiaan kain variasi 70 g/l :



Tampak depan



Tampak belakang

No.	Nama	Depan	Belakang
1	Jari-jari sampel	127 mm	127 mm
2	Jari-jari landasan (A)	63,5 mm	63,5 mm
3	Luas sampel (B)	50,670.75 mm ₂	50,670.75 mm ₂
4	Luas landasan (A)	12,468.98 mm ₂	12,468.98 mm ₂
5	Jari-jari rata-rata drape (C)	115.10 mm	111.17 mm
6	Luas drape	41,616.23 mm ₂	38,822.73 mm ₂
7	Drape (%)	76.30 %	68.99 %

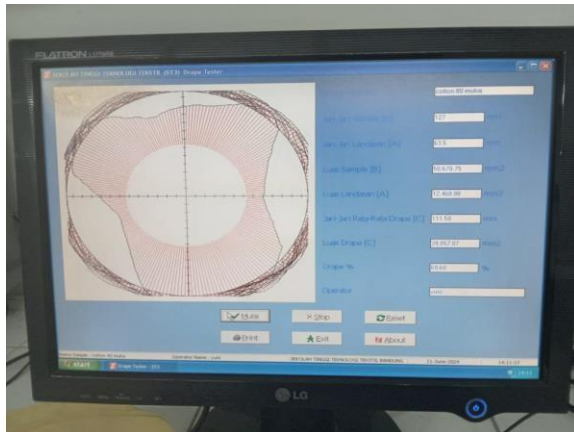
$$\% \text{ drape depan} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{41,616.23 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 76.3 \%$$

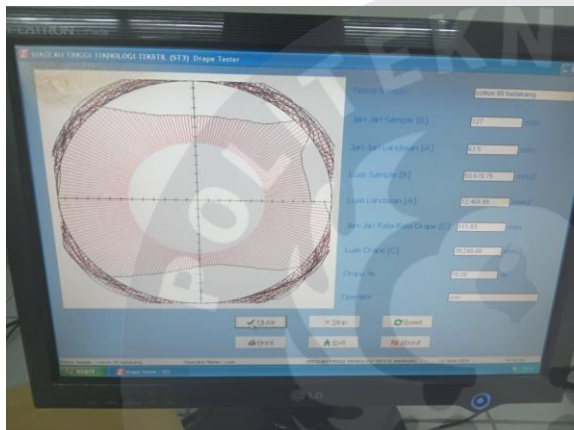
$$\% \text{ drape belakang} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{38,822.73 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 68,9 \%$$

Data hasil pengujian kelangsaan kain variasi 80 g/l :



Tampak depan



Tampak belakang

No.	Nama	Depan	Belakang
1	Jari-jari sampel	127 mm	127 mm
2	Jari-jari landasan (A)	63,5 mm	63,5 mm
3	Luas sampel (B)	50,670.75 mm ₂	50,670.75 mm ₂
4	Luas landasan (A)	12,468.98 mm ₂	12,468.98 mm ₂
5	Jari-jari rata-rata drape (C)	111.50 mm	111.83 mm
6	Luas drape	39,057.07 mm ₂	39,285.08 mm ₂
7	Drape (%)	69.60 %	70.20 %

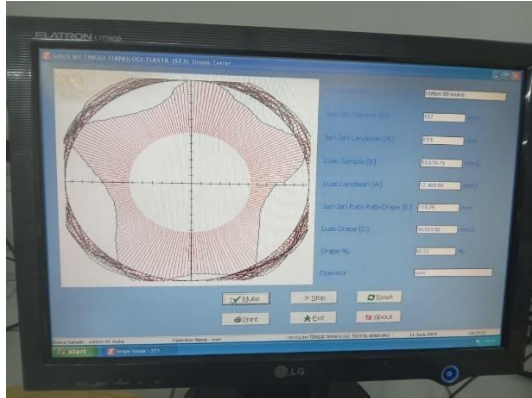
$$\% \text{ drape depan} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{39,057.07 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 69.6 \%$$

$$\% \text{ drape belakang} = \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\%$$

$$= \frac{39,285.08 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 70.2 \%$$

Data hasil pengujian kelangsaan kain variasi 90 g/l :



Tampak depan



Tampak belakang

No.	Nama	Depan	Belakang
1	Jari-jari sampel	127 mm	127 mm
2	Jari-jari landasan (A)	63,5 mm	63,5 mm
3	Luas sampel (B)	50,670.75 mm ₂	50,670.75 mm ₂
4	Luas landasan (A)	12,468.98 mm ₂	12,468.98 mm ₂
5	Jari-jari rata-rata drape (C)	110.75 mm	115.18 mm
6	Luas drape	38,529.92 mm ₂	41,674.11 mm ₂
7	Drape (%)	68.22 %	76.45 %

$$\begin{aligned}
 \% \text{ drape depan} &= \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\% \\
 &= \frac{38,529.92 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 68,2 \%
 \end{aligned}$$

$$\begin{aligned}
 \% \text{ drape belakang} &= \frac{\text{Luas Drape} - \text{Luas Landasan}}{\text{Luas Sampel} - \text{Luas Landasan}} \times 100\% \\
 &= \frac{41,674.11 - 12,468.98}{50,670.75 - 12,468.98} \times 100\% = 76,4 \%
 \end{aligned}$$

Data hasil pengujian kekakuan kain :

Konsentrasi pelemas	Arah lusi			$\bar{x}_L$	Arah pakan			$\bar{x}_P$
	CU 1	CU 2	CU 3		CU 1	CU 2	CU 3	
(50 g/L)	5	5.2	5.5	5,23	4.8	4.3	4.5	4.53
(60 g/L)	5	4.8	5.4	5,06	4.4	4.5	4.5	4.46
(70 g/L)	4.7	4.8	5.2	4.9	4.3	4.5	4.5	4.43
(80 g/L)	4.7	4.7	4.8	4.73	4.3	4.5	4.5	4.43
(90 g/L)	4.7	5	4.8	4.83	4.4	4.3	4.4	4.36

Konsentrasi pelemas	Panjang lengkung rata-rata	
	Arah lusi	Arah pakan
(50 g/L)	$CL = \bar{x}_L \times 0,5$ $= 5,23 \times 0,5$ $= 2,61$	$CP = \bar{x}_P \times 0,5$ $= 4.53 \times 0,5$ $= 2.26$
(60 g/L)	$CL = \bar{x}_L \times 0,5$ $= 5,06 \times 0,5$ $= 2,53$	$CP = \bar{x}_P \times 0,5$ $= 4.46 \times 0,5$ $= 2,23$
(70 g/L)	$CL = \bar{x}_L \times 0,5$ $= 4.9 \times 0,5$ $= 2,45$	$CP = \bar{x}_P \times 0,5$ $= 4.43 \times 0,5$ $= 2,21$
(80 g/L)	$CL = \bar{x}_L \times 0,5$ $= 4.73 \times 0,5$ $= 2,36$	$CP = \bar{x}_P \times 0,5$ $= 4.43 \times 0,5$ $= 2,21$
(90 g/L)	$CL = \bar{x}_L \times 0,5$ $= 4.83 \times 0,5$ $= 2,41$	$CP = \bar{x}_P \times 0,5$ $= 4.36 \times 0,5$ $= 2,18$

Konsentrasi pelemas	Kekakuan lentur	
	Arah lusi (mg.cm)	Arah pakan (mg.cm)
(50 g/L)	$GL = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.61)^3$ $= 0,10 \times 106.27 \times 17.78$ $= 188.94$	$GP = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.26)^3$ $= 0,10 \times 106.27 \times 11.54$ $= 122.63$
(60 g/L)	$GL = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.53)^3$ $= 0,10 \times 106.27 \times 16.19$ $= 172.05$	$GP = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.23)^3$ $= 0,10 \times 106.27 \times 11.09$ $= 117.85$
(70 g/L)	$GL = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.45)^3$ $= 0,10 \times 106.27 \times 14.7$ $= 156.21$	$GP = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.23)^3$ $= 0,10 \times 106.27 \times 11.09$ $= 117.85$
(80 g/L)	$GL = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.36)^3$ $= 0,10 \times 106.27 \times 13.14$ $= 139.63$	$GP = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.18)^3$ $= 0,10 \times 106.27 \times 10.37$ $= 110.2$
(90 g/L)	$GL = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.41)^3$ $= 0,10 \times 106.27 \times 13.99$	$GP = 0,10 \text{ WC}^3$ $= 0,10 \times 106.27 \times (2.36)^3$ $= 0,10 \times 106.27 \times 13.14$

	= 148.68	= 139.63
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Konsentrasi pelemas	<i>Bending modulus lusi</i>	<i>Bending modulus pakan</i>
(50 g/L)	$Q = \frac{12 \times GL \times 10^{-6}}{g^3}$ $= \frac{12 \times 188,94 \times 10^{-6}}{0,025^3}$ $= 145,1$	$Q = \frac{12 \times GP \times 10^{-6}}{g^3}$ $= \frac{12 \times 122,63 \times 10^{-6}}{0,025^3}$ $= 94,17$
(60 g/L)	$Q = \frac{12 \times GL \times 10^{-6}}{g^3}$ $= \frac{12 \times 72,05 \times 10^{-6}}{0,025^3}$ $= 132,13$	$Q = \frac{12 \times GP \times 10^{-6}}{g^3}$ $= \frac{12 \times 117,85 \times 10^{-6}}{0,025^3}$ $= 90,50$
(70 g/L)	$Q = \frac{12 \times GT \times 10^{-6}}{g^3}$ $= \frac{12 \times 156,21 \times 10^{-6}}{0,025^3}$ $= 119,96$	$Q = \frac{12 \times GP \times 10^{-6}}{g^3}$ $= \frac{12 \times 117,85 \times 10^{-6}}{0,025^3}$ $= 90,50$
(80 g/L)	$Q = \frac{12 \times GT \times 10^{-6}}{g^3}$ $= \frac{12 \times 139,63 \times 10^{-6}}{0,025^3}$ $= 107,23$	$Q = \frac{12 \times GP \times 10^{-6}}{g^3}$ $= \frac{12 \times 110,2 \times 10^{-6}}{0,025^3}$ $= 84,63$
(90 g/L)	$Q = \frac{12 \times GT \times 10^{-6}}{g^3}$ $= \frac{12 \times 148,68 \times 10^{-6}}{0,025^3}$ $= 114,18$	$Q = \frac{12 \times GP \times 10^{-6}}{g^3}$ $= \frac{12 \times 139,63 \times 10^{-6}}{0,025^3}$ $= 107,23$