

## LAMPIRAN

Lampiran 1 Data hasil pengujian kehalusan serat

No.	Berat (mg)	Kehalusan (tex)	$(x - \bar{x})^2$ (tex)
1	29,78	6,61	0,0361
2	31,56	7,01	0,04
3	30,74	6,82	0,0001
$\Sigma$	92,08	20,43	0,0762
$\bar{x}$	30,69	6,81	0,0254

$$\begin{aligned}
 S &= \sqrt{\frac{\sum(X_i - \bar{X})^2}{n-1}} = \sqrt{\frac{0,0762}{2}} \\
 &= \sqrt{0,0381} = 0,195 \\
 \text{SD} &= 0,195 \\
 \text{CV} &= \frac{\text{SD}}{\bar{X}} \times 100 \% \\
 &= \frac{0,195}{6,81} \times 100 \% = 2,86 \%
 \end{aligned}$$

Lampiran 2 Data pengujian panjang serat

No	Panjang serat terukur (cm)	Panjang berkas serat (cm) x 80%	$(x - \bar{x})^2$
1	54,6	43,68	13,69
2	56,3	45,04	25,52
3	46,4	37,12	8,17
4	48,7	38,96	1,04
5	54,7	43,76	14,28
6	43,4	34,72	27,66
7	45,8	36,64	11,15
$\Sigma$	349,9	279,92	101,51
$\bar{x}$	49,985	39,988	14,50

Panjang berkas serat = panjang serat terukur x 80%

$$\begin{aligned}
 S &= \sqrt{\frac{\sum(X_i - \bar{X})^2}{n-1}} = \sqrt{\frac{101,51}{6}} \\
 &= \sqrt{16,91} = 4,11
 \end{aligned}$$

$$CV = \frac{SD}{\bar{X}} \times 100 \%$$

$$= \frac{4,11}{39,98} \times 100 \% = 10,2 \%$$

Lampiran 3 Data pengujian Moisture Content dan Moisture Regain

berat botol (g)	berat serat (g)	berat basah (g)	berat kering 1 (g)	berat kering 2 (g)	selisih 1&2 (%)
120,431	3,009	123,44	123,273	123,243	0,0370721 89
			2,842	2,812	

$$MR = \frac{\text{BeratBasah} - \text{BeratKering}}{\text{BeratKering}} \times 100 \%$$

$$= \frac{3,009 - 2,812}{2,812} \times 100 \% = 7,005\%$$

$$MC = \frac{\text{BeratBasah} - \text{BeratKering}}{\text{BeratBasah}} \times 100 \%$$

$$= \frac{3,009 - 2,812}{3,009} \times 100 \% = 6,54\%$$

Lampiran 4 Data pengujian kekuatan tarik serat

No.	Kekuatan (kg)	Berat (mg)	Tenacity g/tex	Tenacity g/denier	$(x - \bar{x})^2$
1	29,453	18,97	77,63	8,62	0,0361
2	34,969	21,71	80,53	8,94	0,2601
3	37,578	20,60	91,20	10,13	2,89
4	16,547	16,47	50,23	5,58	8,1225
5	26,594	16,62	80,006	8,88	0,2025
$\Sigma$	145,141	94,37	379,61	42,17	11,5112
$\bar{x}$	29,0282	18,874	75,92	8,43	5,0132

$$S = \sqrt{\frac{\Sigma(X_i - \bar{X})^2}{n-1}} = \sqrt{\frac{11,5112}{4}}$$

$$= \sqrt{2,8778} = 1,6964$$

$$CV = \frac{SD}{\bar{X}} \times 100 \%$$

$$= \frac{1,6964}{8,43} \times 100 \% = 20,123 \%$$

Lampiran 5 Data pengujian mulur serat

No.	Mulur(%)	$(x - \bar{x})^2$
1	9,6	0,9216
2	7,2	2,0736
3	7,8	0,7056
4	11,4	7,6176
5	7,2	2,0736
$\Sigma$	43,2	13,392
$\bar{x}$	8,64	2,6784

- Standar Deviasi kekuatan (S)

$$\begin{aligned}
 S &= \sqrt{\frac{\Sigma(X_i - \bar{x})^2}{n-1}} = \sqrt{\frac{13,392}{4}} \\
 &= \sqrt{3,348} = 1,82975408 \\
 CV &= \frac{SD}{\bar{x}} \times 100 \% \\
 &= \frac{1,82975408}{8,64} \times 100 \% = 21,1777093 \%
 \end{aligned}$$