

## DAFTAR LAMPIRAN

1. Lampiran kekuatan tarik dan mulur kanji *regular* 8%

### PT. ISTEM

30/1 P.100 / NE1 30 (Sample 1)

Shape: Yarn

Units	Linear Density Tex	Gauge Length Mm
1 - 1	1,0000	500,0000
1 - 2	1,0000	500,0000
1 - 3	1,0000	500,0000
1 - 4	1,0000	500,0000
1 - 5	1,0000	500,0000
1 - 6	1,0000	500,0000
1 - 7	1,0000	500,0000
1 - 8	1,0000	500,0000
1 - 9	1,0000	500,0000
1 - 10	1,0000	500,0000

Name Units	Max_Force cN	Break_Disp Mm	Elongation %
1 - 1	706,33	54,27	10,40
1 - 2	744,50	56,28	10,50
1 - 3	713,63	55,77	11,10
1 - 4	686,00	48,77	10,60
1 - 5	747,00	46,27	10,70
1 - 6	677,50	62,53	10,60
1 - 7	743,45	52,77	11,00
1 - 8	736,32	59,28	10,80
1 - 9	630,63	49,27	10,60
1 - 10	672,75	52,52	10,60
Mean	705,81	53,77	10,69
Maximum	747,00	62,53	11,10
Minimum	630,63	46,27	10,40

2. Lampiran kekuatan tarik dan mulur kanji *regular* 7%

**PT. ISTEM**

30/1 P.100 / NE1 30 (Sample 2)

Shape: Yarn

	Linear Density	Gauge Length
Units	Tex	Mm
1 - 1	1,0000	500,0000
1 - 2	1,0000	500,0000
1 - 3	1,0000	500,0000
1 - 4	1,0000	500,0000
1 - 5	1,0000	500,0000
1 - 6	1,0000	500,0000
1 - 7	1,0000	500,0000
1 - 8	1,0000	500,0000
1 - 9	1,0000	500,0000
1 - 10	1,0000	500,0000

Name	Max_Force	Break_Displacement	Elongation
Units	cN	Mm	%
1 - 1	685,50	54,27	11,03
1 - 2	643,28	51,76	11,05
1 - 3	643,40	58,52	11,01
1 - 4	723,50	53,76	10,90
1 - 5	739,10	46,01	10,40
1 - 6	713,43	51,26	11,50
1 - 7	716,52	51,56	10,90
1 - 8	663,58	57,51	11,70
1 - 9	641,98	47,01	11,30
1 - 10	669,47	55,26	10,80
Mean	683,98	55,66	11,70
Maximum	739,10	58,52	11,10
Minimum	641,98	46,01	10,40

3. Lampiran kekuatan tarik dan mulur kanji *recovery* 8%

**PT. ISTEM**

30/1 P.100 / NE1 30 (Sample 3)

Shape: Yarn

	Linear Density	Gauge Length
Units	Tex	Mm
1 - 1	1,0000	500,0000
1 - 2	1,0000	500,0000
1 - 3	1,0000	500,0000
1 - 4	1,0000	500,0000
1 - 5	1,0000	500,0000
1 - 6	1,0000	500,0000
1 - 7	1,0000	500,0000
1 - 8	1,0000	500,0000
1 - 9	1,0000	500,0000
1 - 10	1,0000	500,0000

Name	Max_Force	Break_Displacement	Elongation
Units	cN	Mm	%
1 - 1	708,25	54,27	11,20
1 - 2	698,40	51,76	10,60
1 - 3	724,25	58,52	10,50
1 - 4	702,10	53,76	10,40
1 - 5	720,50	46,01	11,20
1 - 6	668,90	51,26	10,60
1 - 7	631,78	51,56	11,30
1 - 8	711,65	57,51	10,60
1 - 9	680,25	47,01	10,80
1 - 10	676,35	55,26	10,70
Mean	692,24	55,66	11,79
Maximum	724,25	58,52	11,30
Minimum	631,78	46,01	10,40

4. Lampiran kekuatan tarik dan mulur kanji *recovery* 7%

**PT. ISTEM**

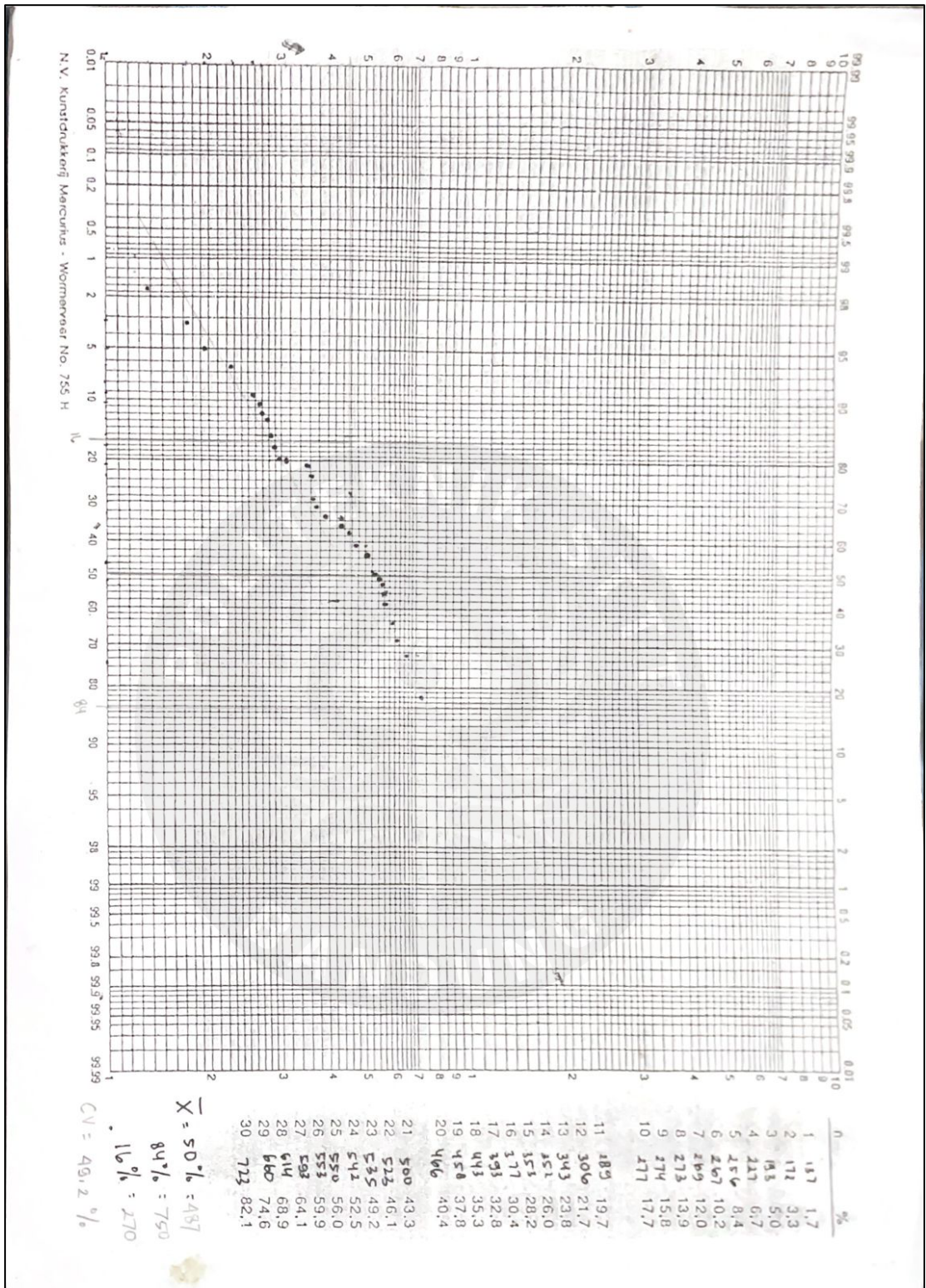
30/1 P.100 / NE1 30 (Sample 4)

Shape: Yarn

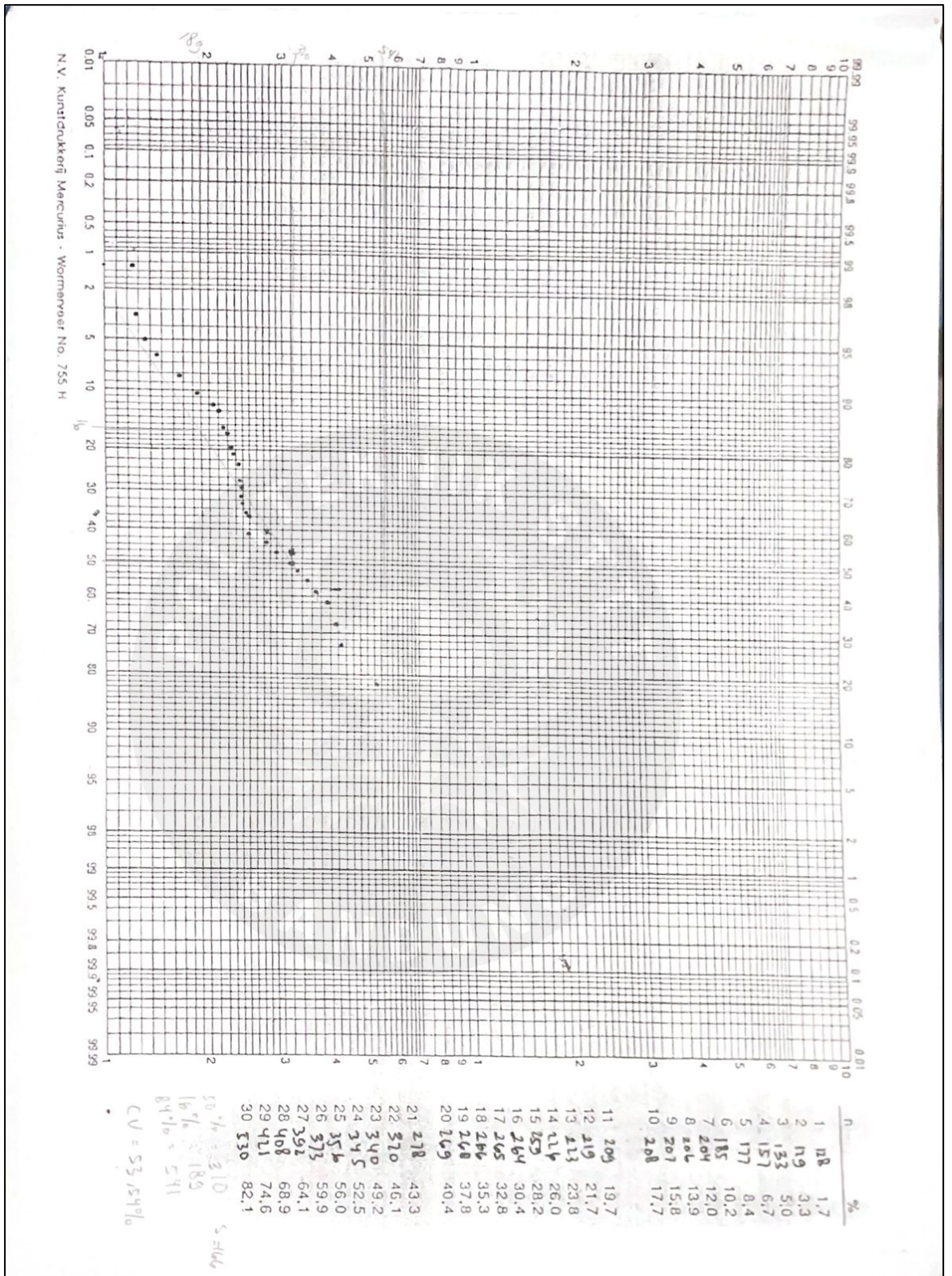
	Linear Density	Gauge Length
Units	Tex	Mm
1 - 1	1,0000	500,0000
1 - 2	1,0000	500,0000
1 - 3	1,0000	500,0000
1 - 4	1,0000	500,0000
1 - 5	1,0000	500,0000
1 - 6	1,0000	500,0000
1 - 7	1,0000	500,0000
1 - 8	1,0000	500,0000
1 - 9	1,0000	500,0000
1 - 10	1,0000	500,0000

Name	Max_Force	Break_Disp	Elongation
Units	cN	Mm	%
1 - 1	638,40	50,02	11,03
1 - 2	723,30	57,27	11,05
1 - 3	688,95	56,27	11,01
1 - 4	624,78	53,27	10,90
1 - 5	667,25	46,27	10,40
1 - 6	712,53	55,77	11,50
1 - 7	681,80	56,02	10,90
1 - 8	739,00	61,52	11,70
1 - 9	617,97	58,27	11,30
1 - 10	662,83	55,02	10,80
Mean	675,68	54,97	11,06
Maximum	723,30	61,52	11,70
Minimum	617,97	46,27	10,40

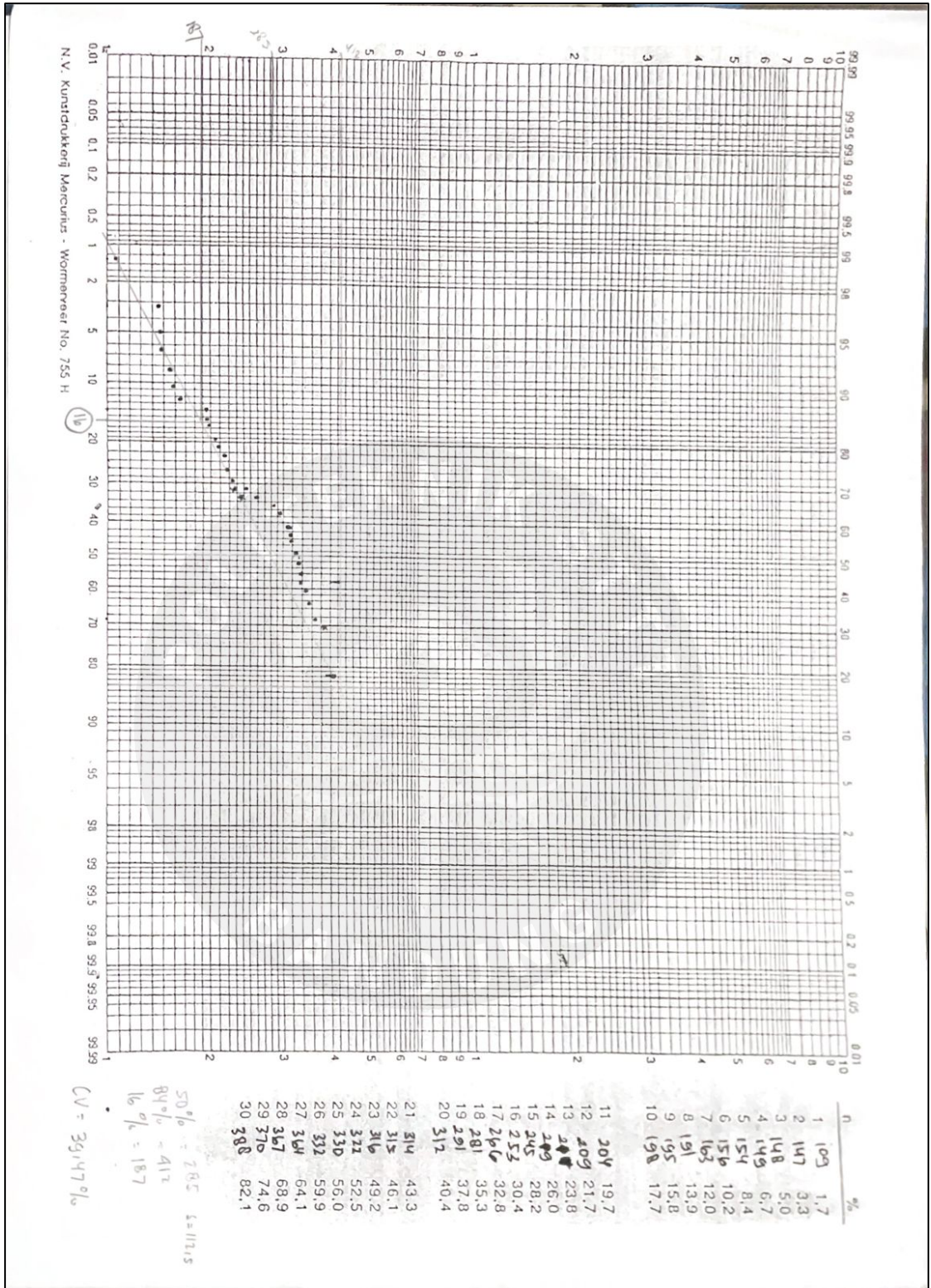
5. Lampiran grafik tahan gosok kanji regular 8%



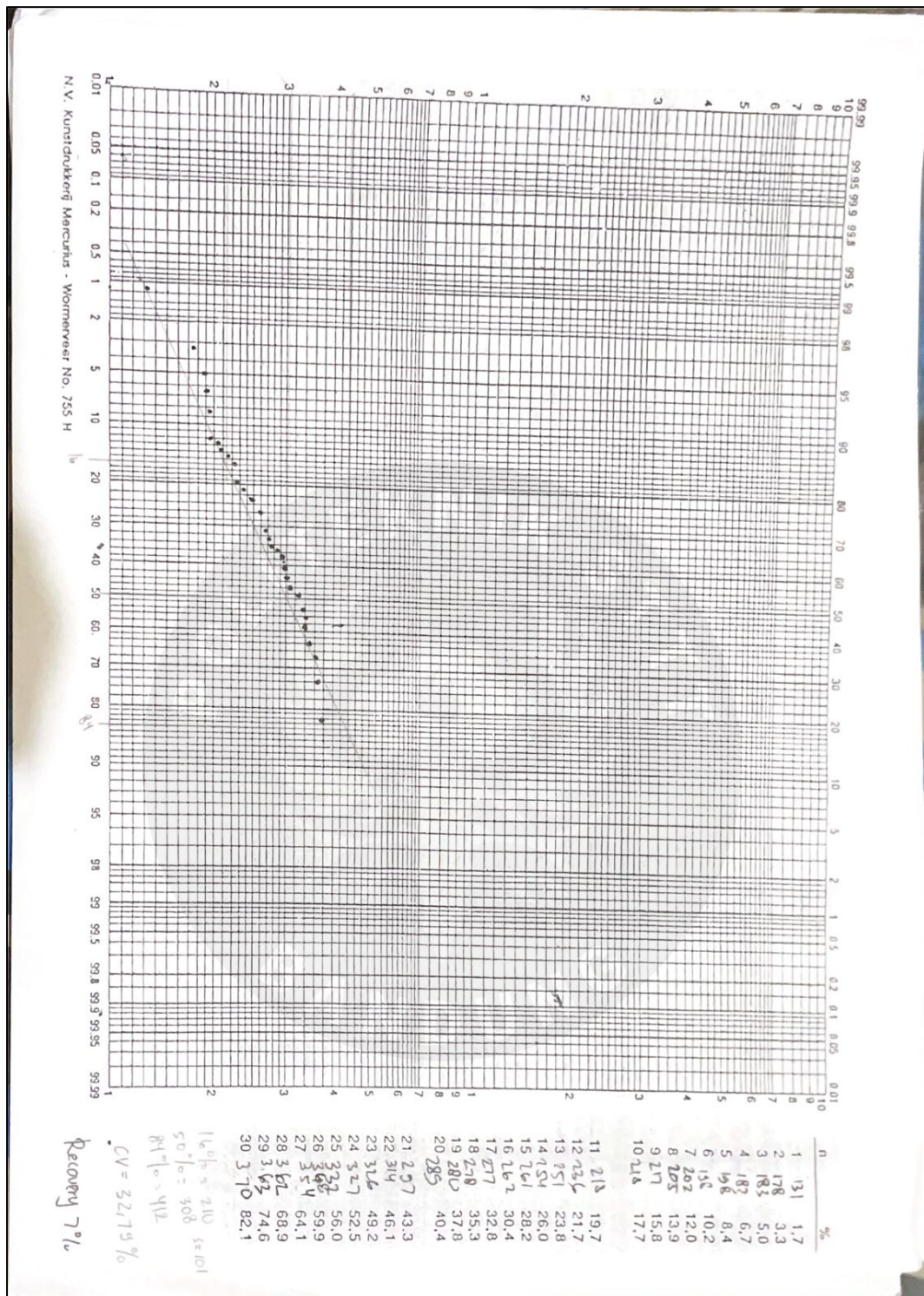
6. Lampiran grafik tahan gosok kanji *regular* 7%



7. Lampiran grafik tahan gosok kanji recovery 7%



8. Lampiran grafik tahan gosok kanji recovery 7%





9. Lampiran perhitungan kalkulasi biaya penganjian

Diketahui biaya persatuan bahan baku dan utilitas untuk pemasakan kanji

- 1 kubik air = 1000L =Rp 17.048 =Rp 17,048/L
- 100 kg kanji = Rp 6.330.000 =Rp 63.300/kg
- 2000L kanji *rec* = Rp 1.800.000 =Rp 900/L
- 1 kWh =Rp 1.467,28
- Daya listrik = 8189 watt =8,189 kilowatt

• Biaya pemasakan kanji *regular*

Pemasakan kanji *regular* 8% membutuhkan beberapa bahan berikut:

- 560 air = Rp 9.546,88
- Kanji *regular* 100kg = Rp 6.330.000
- Biaya listrik = Rp 12.015,55/jam
- **Total keseluruhan = Rp 6.351.562,43/870L**  
**= Rp 7.300,64/L = Rp 3.650.320/500L**

• Biaya pemasakan kanji *regular*

Pemasakan kanji *regular* 7% membutuhkan beberapa bahan berikut:

- 600L air = Rp 10.228,8
- Kanji *regular* 100kg = Rp 6.330.000
- Biaya listrik = Rp 12.015,55/jam
- **Total keseluruhan = Rp 6.352.224,35/900L**  
**= Rp 7.058,04/L = Rp 3.529.020/500L**

• Biaya pemasakan kanji *recovery*

Pemasakan kanji *recovery* 8% membutuhkan beberapa bahan berikut:

- Kanji *recovery* 420L =Rp 378.000
- 80L air = Rp 1.363,84
- Biaya listrik = Rp 12.015,55/jam
- **Total keseluruhan = Rp 391.379,39/500L**

• Biaya pemasakan kanji *recovery*

Pemasakan kanji *recovery* 8% membutuhkan beberapa bahan berikut:

- Kanji *recovery* 420L =Rp 378.000
- 100L air = Rp 1.704,80
- Biaya listrik = Rp 12.015,55/jam
- **Total keseluruhan = Rp 391.720,35/520L =Rp 376.654,18L**

10. Lampiran perhitungan SPU% (*size pick up*) dan refrakto larutan

Dilakukan pengujian SPU % sesuai dengan standar SNI 08-0265-1989:

$$\text{SPU \%} = \frac{\text{Berat kering (B)} - \text{berat setelah pencucian (C)}}{\text{berat setelah pencucian (C)}} \times 100\%$$

No.	Sampel	A (Berat Basah)	B (Berat Kering)			C (Berat Setelah Cuci)			SPU %		
			L	C	R	L	C	R	L	C	R
1	Regular 8%	9,14	9,05	9,03	9,06	8,27	8,26	8,28	9,48%	9,33%	9,40%
2	Regular 7%	9,07	8,98	8,97	8,99	8,35	8,40	8,34	7,9%	6,7%	7,7%
1	Recovery 8%	9,06	8,94	8,96	8,93	8,20	8,23	8,08	9,00%	8,8%	8,5%
2	Recovery 7%	9,04	8,92	8,88	8,90	8,24	8,32	8,31	8,21%	6,7%	7,7%

11. Lampiran perhitungan refrakto secara teori (pindahkan di bab 3)

$$\text{Komponen padat kanji (kg)} = \frac{\text{Total larutan kanji (L)} \times \text{konsentrasi (\%)}}{100 \text{ kg}}$$

$$\text{Refrakto (\%)} = \frac{\text{Komponen padat kanji (kg)}}{\text{volume akhir (L)}} \times 100\%$$

- Perhitungan untuk kanji *regular* 8% =  $\frac{500L \times 8\%}{100 \text{ kg}}$   
= 40 kg padatan kanji

$$\text{Refrakto (\%)} = \frac{40 \text{ kg}}{500L} \times 100\% = 8 \%$$

- Perhitungan untuk kanji *regular* 7% =  $\frac{500L \times 7\%}{100 \text{ kg}}$   
= 35 kg padatan kanji

$$\text{Refrakto (\%)} = \frac{35 \text{ kg}}{500L} \times 100\% = 7 \%$$

- Perhitungan untuk kanji *rec* 8% =  $\frac{500L \times 8\%}{100 \text{ kg}}$   
= 40 kg padatan kanji

$$\text{Refrakto (\%)} = \frac{40 \text{ kg}}{500L} \times 100\% = 8 \%$$

- Perhitungan untuk kanji *rec* 7% =  $\frac{500L \times 7\%}{100 \text{ kg}}$   
= 35 kg padatan kanji

$$\text{Refrakto (\%)} = \frac{35 \text{ kg}}{500L} \times 100\% = 7 \%$$