

# LAMPIRAN 1

### A. Optimasi kondisi *electrospinning*

**Tabel Optimasi kondisi *electrospinning***

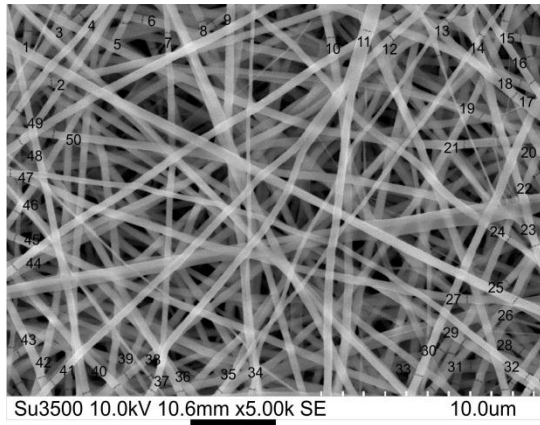
NO	Larutan	Konsentrasi/ perbandingan (w/w)	Jarak (cm)	Diameter spineret (mm)	Tegangan (kv)	Waktu	Keterangan			total
							Spot	Fiber terkumpul	sirkel	
1	PVA	10%	10	0,7	10	10 menit	3	2	1	6
2	PVA	10%	10	0,7	15	10 menit	3	2	0	5
3	PVA	10%	10	0,7	20	10 menit	3	1	0	4
4	PVA	10%	10	0,7	25	10 menit	2	2	1	5
5	PVA	10%	12	0,7	10	10 menit	3	2	2	7
6	PVA	10%	12	0,7	15	10 menit	2	2	2	6
7	PVA	10%	12	0,7	20	10 menit	3	2	1	6
8	PVA	10%	12	0,7	25	10 menit	3	3	3	9
9	PVA	10%	15	0,7	10	10 menit	2	3	2	7
10	PVA	10%	15	0,7	15	10 menit	2	3	2	7
11	PVA	10%	15	0,7	20	10 menit	2	2	1	5
12	PVA	10%	15	0,7	25	10 menit	3	1	1	5
13	PVA	10%	16,5	0,7	10	10 menit	3	1	3	7
14	PVA	10%	16,5	0,7	15	10 menit	2	2	2	6
15	PVA	10%	16,5	0,7	20	10 menit	2	2	1	5
16	PVA	10%	16,5	0,7	25	10 menit	3	2	1	6

## B. Hasil pengujian tarik

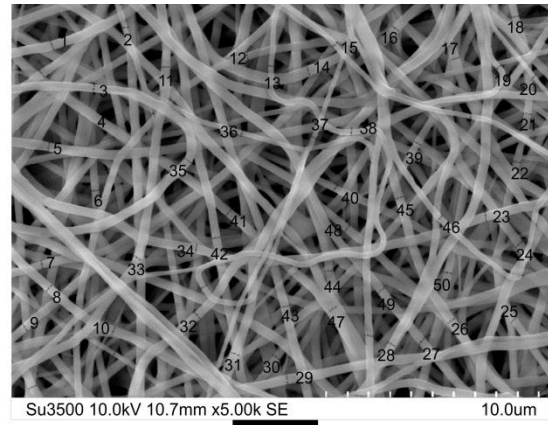
**Tabel Hasil pengujian tarik membran serat nano PVA**

No	Sampel	a0 (mm)	b0 (mm)	Fmax (N)	Tensile strength (Mpa)	Rata-Rata	Standard deviasi
1	6%	0,066	10	2.9101	4.4093	3.8710	0.4931
2	6%	0,073	10	2.512	3.4411		
3	6%	0,056	10	2.107	3.7625		
4	8%	0,055	10	2.8892	5.2531	4.1561	0.9945
5	8%	0,068	10	2.6532	3.9017		
6	8%	0,073	10	2.4188	3.3135		
7	10%	0,054	10	4.4222	4.4222	3.2719	1.0712
8	10%	0,052	10	3.5505	3.5505		
9	10%	0,065	10	1.843	1.843		
10	BM 10%	0,057	10	7.8546	13.7801	15.4298	2.8951
11	BM 10%	0,051	10	9.5741	18.7727		
12	BM 10%	0,056	10	7.6926	13.7367		

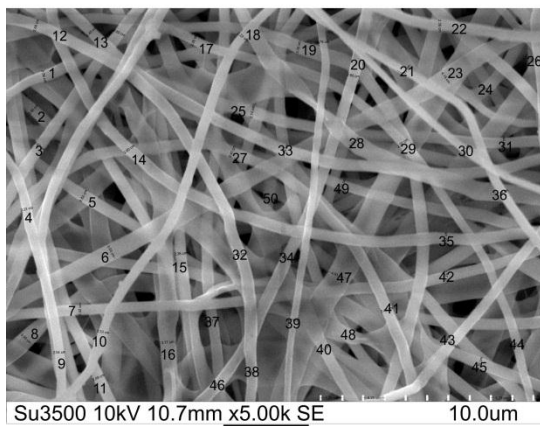
### C. Perhitungan diameter nanofiber



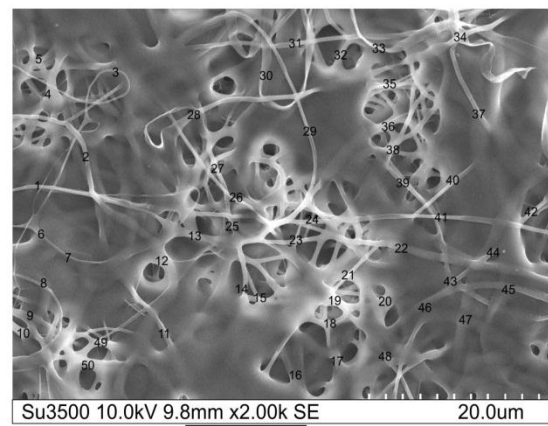
**6%**



**8%**



**10%**



**BM 10%**

### D. Tabel perhitungan diameter nanofiber (nm)

Konsentrasi PVA Gohsenol dan PVA (BM 85.000-124.000)													
6%			8%			10%			BM 10%				
No	Diameter	Rata-Rata	No	Diameter	Rata-Rata	No	Diameter	Rata-Rata	No	Diameter	Rata-Rata		
1	366.06	356.56	1	411.68	367.21	1	734.12	484	1	479.81	551.76		
2	406.62		2	417.38		2	460.00		2	618.74			
3	356.99		3	415.95		3	492.94		3	405.49			
4	295.09		4	148.15		4	457.65		4	457.65		4	841.68
5	340.98		5	339.03		5	490.59		5	490.59		5	510.50
6	335.65		6	433.05		6	385.88		6	385.88		6	449.11
7	372.47		7	458.69		7	416.47		7	416.47		7	444.26
8	329.24		8	477.21		8	610.59		8	610.59		8	613.89
9	351.65		9	427.35		9	508.24		9	508.24		9	512.12
10	466.92		10	445.87		10	474.12		10	474.12		10	487.88
11	404.48		11	356.13		11	467.06		11	467.06		11	513.73
12	400.21		12	470.09		12	501.18		12	501.18		12	410.34
13	375.13		13	423.08		13	488.24		13	488.24		13	497.58
14	354.86		14	403.13		14	516.47		14	516.47		14	693.05
15	256.14		15	417.38		15	420.00		15	420.00		15	709.21
16	403.95		16	396.01		16	523.53		16	523.53		16	562.20
17	374.07		17	216.52		17	730.59		17	730.59		17	466.88
18	388.47		18	485.75		18	449.41		18	449.41		18	625.20
19	456.24		19	565.53		19	495.29		19	495.29		19	628.43
20	364.46		20	330.48		20	507.06		20	507.06		20	536.35
21	377.80		21	384.62		21	448.24		21	448.24		21	415.19
22	371.93		22	435.90		22	440.00		22	440.00		22	584.81
23	387.94		23	378.92		23	712.94		23	712.94		23	399.03
24	582.18		24	431.62		24	467.06		24	467.06		24	516.96
25	377.80		25	394.59		25	323.53		25	323.53		25	499.19
26	295.09		26	390.31		26	385.88		26	385.88		26	610.66
27	406.62		27	272.08		27	507.06		27	507.06		27	794.83
28	382.60		28	411.68		28	472.94		28	472.94		28	646.20
29	390.07		29	418.80		29	461.18		29	461.18		29	852.99
30	368.20		30	373.22		30	452.94		30	452.94		30	588.05
31	397.55		31	415.95		31	428.24		31	428.24		31	428.11
32	308.43		32	296.30		32	540.00		32	540.00		32	466.88

33	427.43	33	216.52	33	389.41	33	492.73
34	460.51	34	225.07	34	456.47	34	460.42
35	366.06	35	269.23	35	475.29	35	649.43
36	264.67	36	343.30	36	448.24	36	426.49
37	335.11	37	260.68	37	428.24	37	736.67
38	386.87	38	487.18	38	411.76	38	402.26
39	316.97	39	217.95	39	722.35	39	491.11
40	393.81	40	413.11	40	443.53	40	555.74
41	208.64	41	344.73	41	384.71	41	602.58
42	320.17	42	474.36	42	435.29	42	536.35
43	369.26	43	257.83	43	491.76	43	657.51
44	352.72	44	225.07	44	774.12	44	576.74
45	135.54	45	309.12	45	545.88	45	539.58
46	331.38	46	220.80	46	437.65	46	563.81
47	408.22	47	383.19	47	472.94	47	712.44
48	170.76	48	344.73	48	336.47	48	471.73
49	190.50	49	307.69	49	448.24	49	444.26
50	343.65	50	417.38	50	328.24	50	458.80

# LAMPIRAN 2

## A. Hasil uji tarik

910/PS/09/17

28.09.2017

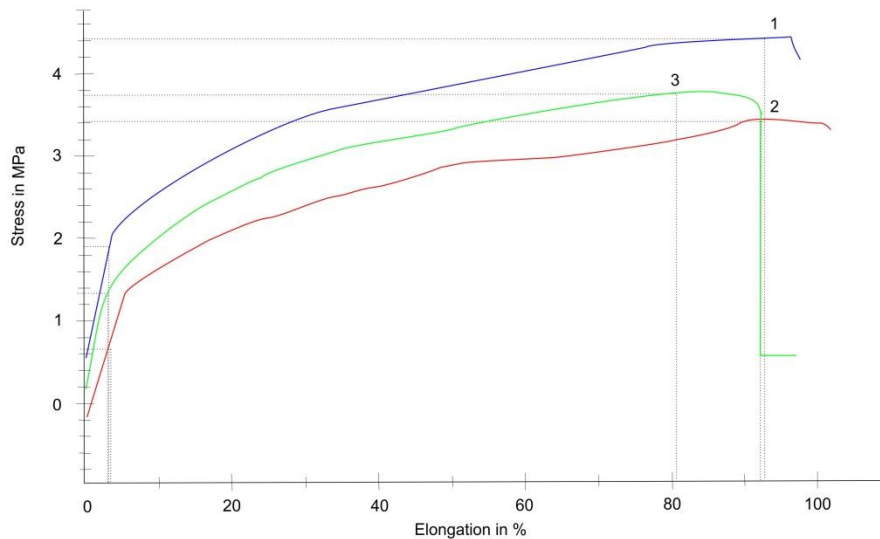
### Parameter table:

Heading :	Tester :	Rachmat
Company name : 910/PS/09/17	Test standard :	Tensile strength
Customer : Diyan	Material :	PVA Gohsenol 6%
Test speed : 10mm/min		

### Results:

Nr	a0 mm	b0 mm	Lc mm	Fmax N	Tensile Strength Mpa	Strain at FMax %
1	0,066	10	20	2,9101	4,4093	94,0917
2	0,073	10	20	2,5120	3,4411	94,0803
3	0,056	10	20	2,1070	3,7625	81,6887

### Series graphics:





910/PS/09/17

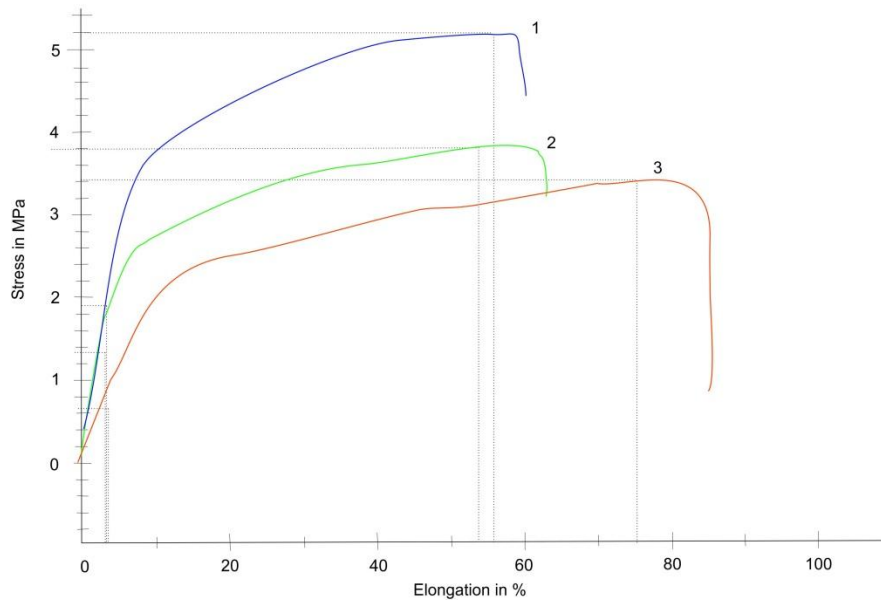
28.09.2017

**Parameter table:**

Heading	:	Tester	:	Rachmat		
Company name	:	910/PS/09/17	:	Test standard	:	Tensile strength
Customer	:	Diyari	:	Material	:	PVA Gohsenol 8%
Test speed	:	10mm/min				

**Results:**

Nr	a0 mm	b0 mm	Lc mm	Fmax N	Tensile Strength Mpa	Strain at FMax %
1	0,055	10	20	2,8892	5,2531	53,4029
2	0,068	10	20	2,6523	3,9017	55,4089
3	0,073	10	20	2,4188	3,3135	72,2334

**Series graphics:**

910/PS/09/17

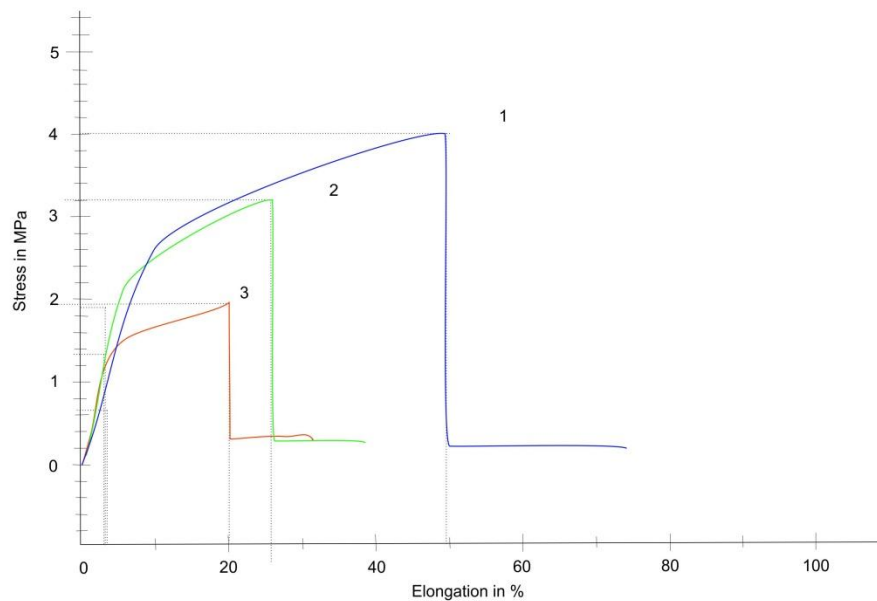
28.09.2017

**Parameter table:**

Heading	:	Tester	: Rachmat
Company name	: 910/PS/09/17	Test standard	: Tensile strength
Customer	: Diyan	Material	: PVA Gohsenol 10%
Test speed	: 10mm/min		

**Results:**

Nr	a0 mm	b0 mm	Lc mm	Fmax N	Tensile Strength Mpa	Strain at FMax %
1	0,054	10	20	2,3830	4,4222	36,1149
2	0,052	10	20	1,8463	3,5505	20,2021
3	0,065	10	20	1,1980	1,8430	12,7205

**Series graphics:**

910/PS/09/17

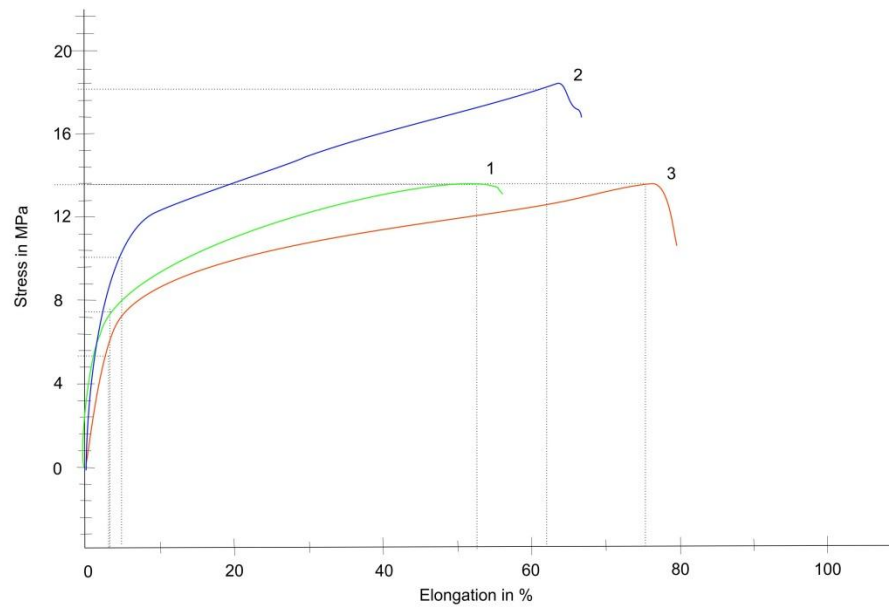
28.09.2017

**Parameter table:**

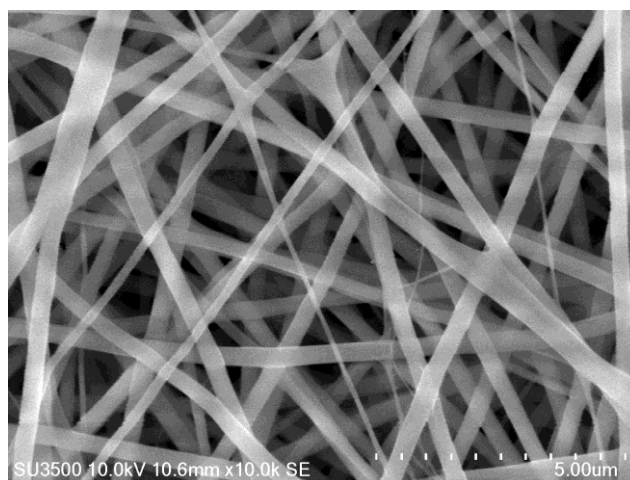
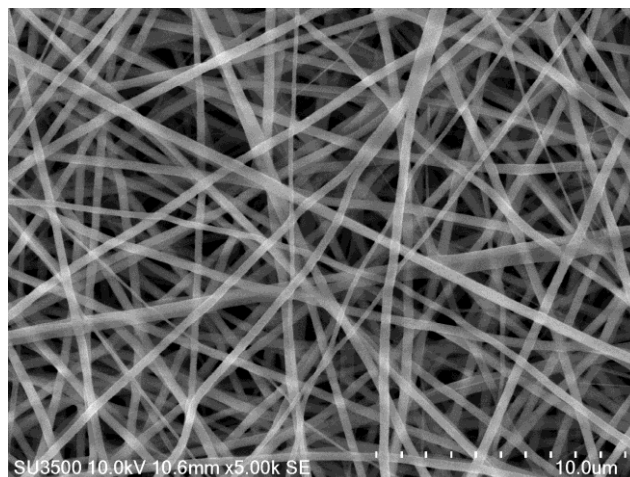
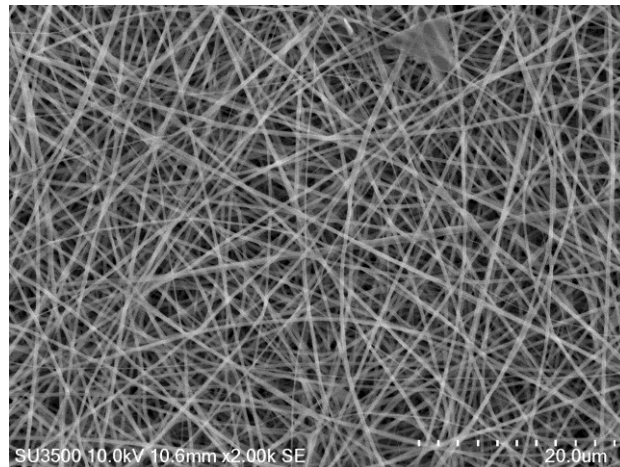
Heading	:	Tester	:	Rachmat	
Company name	:	910/PS/09/17	Test standard	:	Tensile strength
Customer	:	Diyar	Material	:	PVA (BM 85.000-124.000) 10%
Test speed	:	10mm/min			

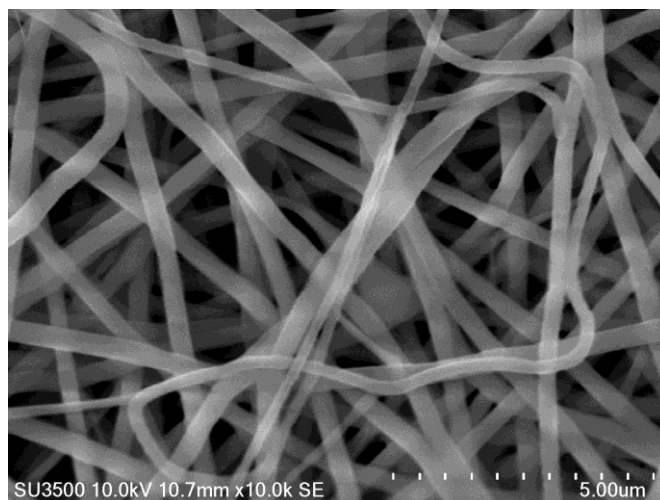
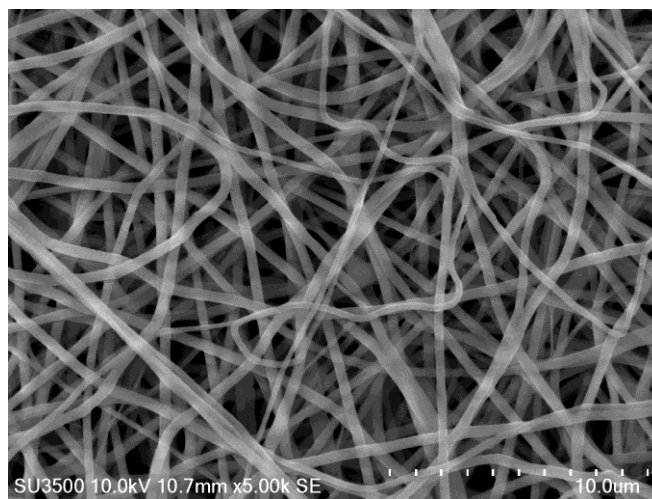
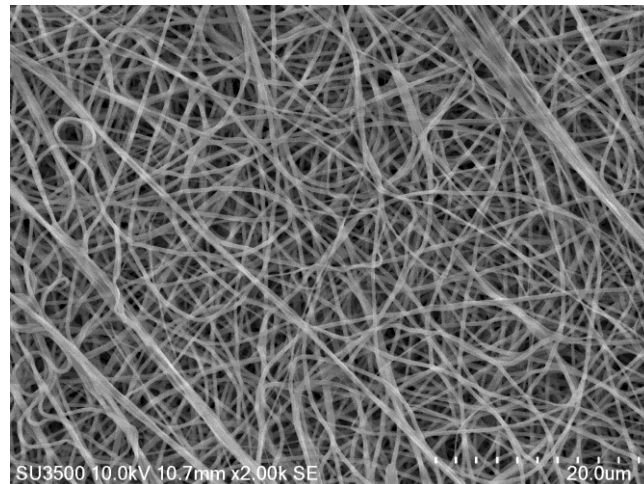
**Results:**

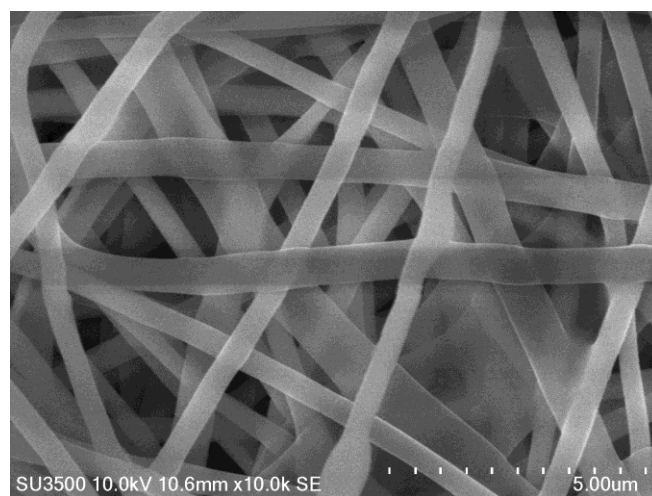
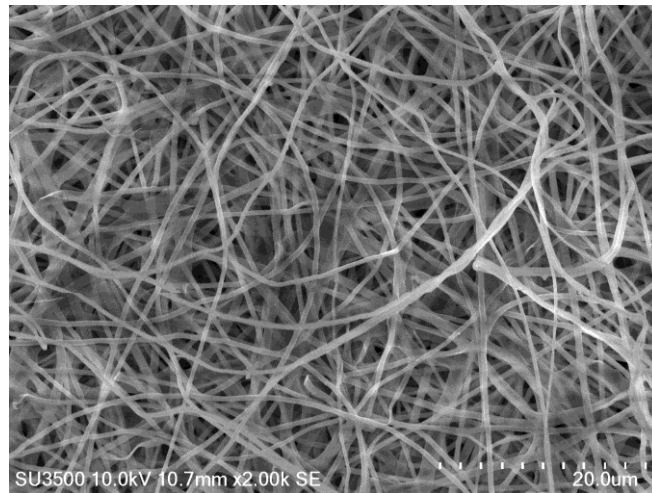
Nr	a0 mm	b0 mm	Lc mm	Fmax N	Tensile Strength Mpa	Strain at FMax %
1	0,057	10	20	7,8548	13,7801	53,6454
2	0,051	10	20	9,5741	18,7727	61,4522
3	0,056	10	20	7,6926	13,7367	74,4089

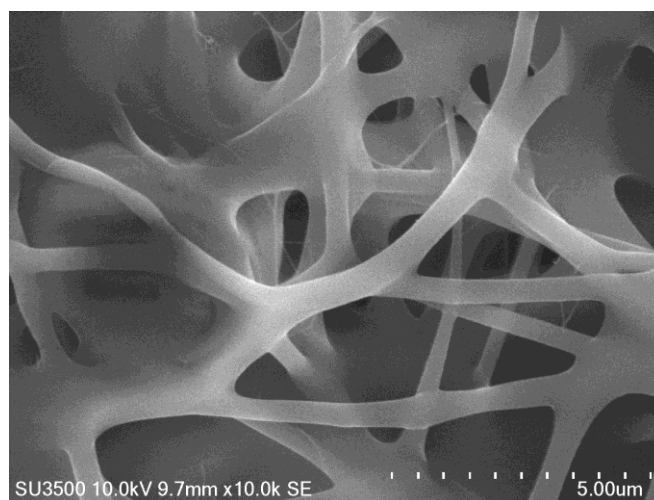
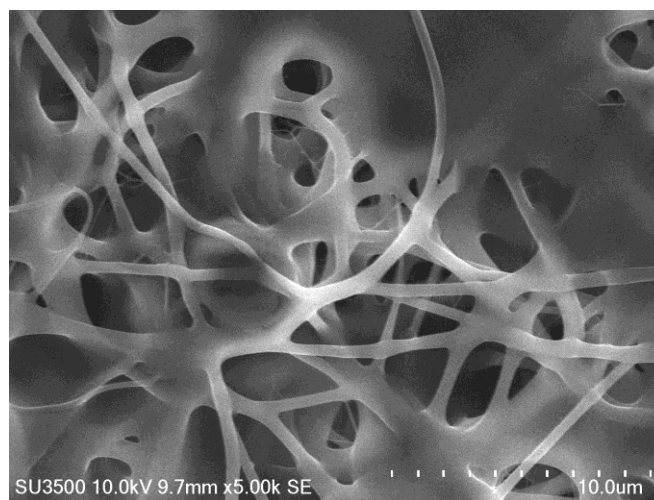
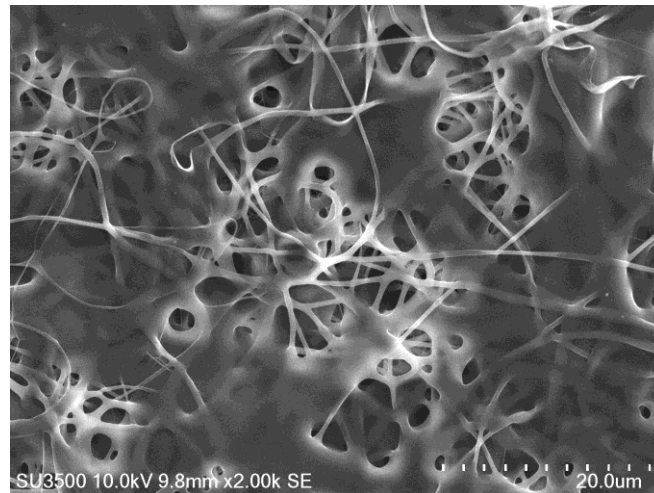
**Series graphics:**

# LAMPIRAN 3

**A. Foto hasil SEM****Foto SEM PVA Gohsenol 6%**

**Foto SEM PVA Gohsenol 8%**

**Foto SEM PVA Gohsenol 10%**

**Foto SEM PVA (BM 85.000-124.000) 10%**



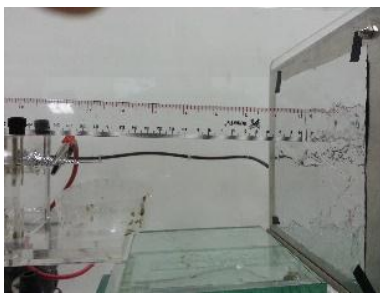
## B. Foto Penelitian



Penimbangan bahan larutan PVA



Pembuatan larutan PVA



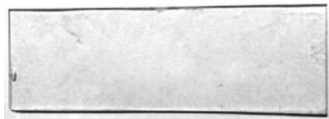
Pengukuran jarak TCD



Pengaturan tegangan



Optimasi kondisi



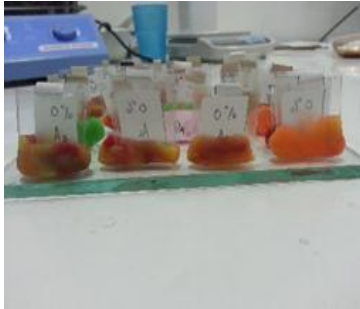
Sampel OM



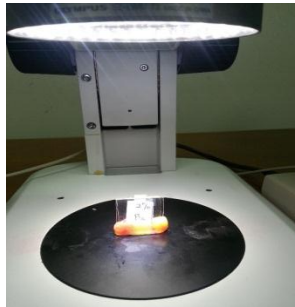
Sampel nanofiber



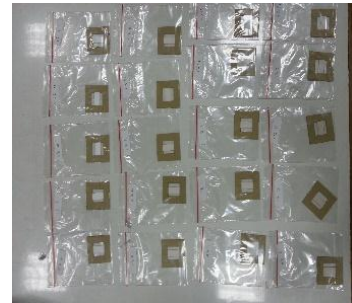
Sampel uji tarik ASTM D 882



Sampel uji ketebalan



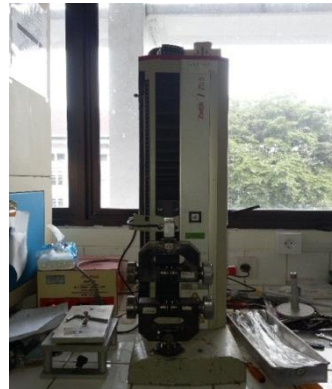
Pengukuran ketebalan



Sampel uji Tarik



Pengujian tarik



Mesin uji tarik Zwick 0.5



Sampel SEM