

LAMPIRAN 1

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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%	9	0,7	10	5 menit	2	1	1	4
2	PVA	10%	9	0,7	15	5 menit	1	1	1	3
3	PVA	10%	9	0,7	20	5 menit	1	1	1	3
4	PVA	10%	9	0,7	25	5 menit	0	0	0	0
5	PVA	10%	11	0,7	10	5 menit	2	1	2	5
6	PVA	10%	11	0,7	15	5 menit	1	1	2	4
7	PVA	10%	11	0,7	20	5 menit	0	0	0	0
8	PVA	10%	11	0,7	25	5 menit	0	0	0	0
9	PVA	10%	13	0,7	10	5 menit	3	2	3	8
10	PVA	10%	13	0,7	15	5 menit	2	2	3	7
11	PVA	10%	13	0,7	20	5 menit	1	1	3	5
12	PVA	10%	13	0,7	25	5 menit	1	1	3	5
13	PVA	10%	13.5	0,7	10	5 menit	3	1	3	7
15	PVA	10%	13.5	0,7	15	5 menit	2	2	3	7
16	PVA	10%	13.5	0,7	20	5 menit	2	2	3	7
17	PVA	10%	13.5	0,7	25	5 menit	1	1	3	5
18	PVA	10%	15	0,7	10	5 menit	3	2	3	8
19	PVA	10%	15	0,7	15	5 menit	3	3	3	9
20	PVA	10%	12	0,7	10	5 menit	3	2	3	8
21	PVA	10%	12,5	0,7	10	5 menit	3	2	2	7
22	PVA	10%	11,5	0,7	10	5 menit	2	2	2	6
23	PVA	10%	11	0,7	10	5 menit	2	2	2	6
24	PVA	10%	18	0,7	20	30 menit	2	3	3	8
25	PVA	10%	17	0,7	20	30 menit	2	3	2	7
26	PVA	10%	17	0,7	15	30 menit	2	3	2	7

B. Hasil pengujian tarik

Tabel Hasil pengujian tarik membran serat nano PVA/Nanokitosan

No	Sampel	Tebal (mm)	Lebar (mm)	Fmax (N)	Tensil Strength (Mpa)	Rata-rata	Standar Deviasi
1	0%	0,07749	3,18	4,2102	17,0855886	6,647517	2,534739
2	0%	0,08241	3,18	3,7971	14,4892198		
3	0%	0,07872	3,18	1,7432	6,96361916		
4	0%	0,04674	3,18	0,954	6,41848524		
5	0%	0,04674	3,18	0,9751	6,56044545		
6	2%	0,05658	3,18	2,1315	11,8466423	7,36115	1,79846
7	2%	0,07257	3,18	1,9853	8,60284107		
8	2%	0,06273	3,18	1,057	5,29873963		
9	2%	0,06642	3,18	1,0402	4,92482563		
10	2%	0,04797	3,18	1,2481	8,18186943		
11	5%	0,04797	3,18	1,6797	11,0112059	7,949241	0,660374
12	5%	0,04305	3,18	1,1829	8,6406767		
13	5%	0,05289	3,18	0,8685	5,1637967		
14	5%	0,12915	3,18	3,2371	7,88196651		
15	5%	0,09348	3,18	2,1775	7,32507946		
16	10%	0,04797	3,18	1,7959	11,7729503	12,70577	0,808119
17	10%	0,03075	3,18	1,286	13,1513013		
18	10%	0,10947	3,18	4,5927	13,1930692		
19	10%	0,10332	3,18	2,2321	6,79363375		
20	10%	0,08241	3,18	1,464	5,5864259		
21	15%	0,04428	3,18	1,9087	13,5551067	10,63098	2,614667
22	15%	0,04059	3,18	1,2675	9,81978087		
23	15%	0,09102	3,18	2,4655	8,51806708		
24	15%	0,09102	3,18	1,1698	4,0415473		
25	15%	0,09102	3,18	1,4261	4,92703933		

C. Data kenaikan *beads***Tabel Kenaikan *beads* pada serat nano**

Sampel	Jumlah beads Konsentrasi nanokitosan				
	0%	2%	5%	10%	15%
A	2	16	18	42	51
B	0	10	23	43	59
C	1	17	26	41	54
D	0	10	24	42	75
E	0	12	22	25	72
Rata-rata	0,6	13	22,6	38,6	62,2
Standar deviasi	0,89	3,31	2,96	7,63	10,76

LAMPIRAN 2

LAMPIRAN 2

196/PS/03/17

09.03.2017

Parameter table:

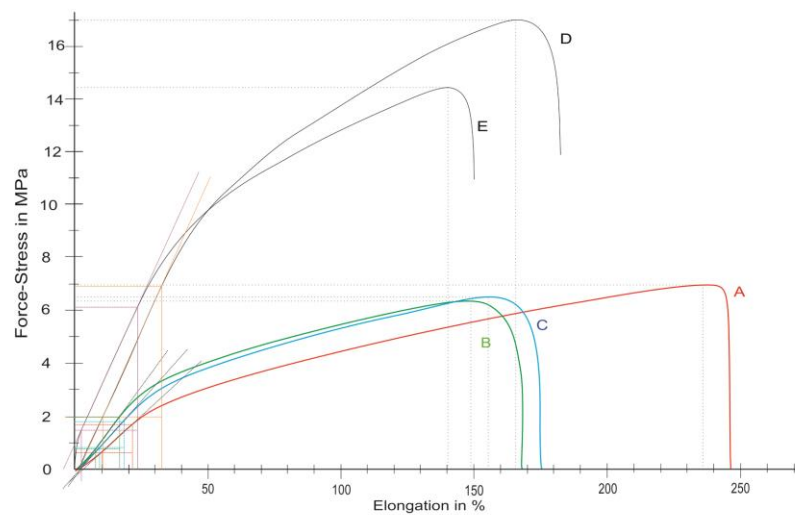
Heading :
 Company name: 196/PS/03/17
 Customer : Robaitullah
 Test speed : 10 mm/min

Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA + Nanokitosan 0%

Results :

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at FMax %
A	0,07872	3,18	9,53	1,7432	6,964	236,476
B	0,04674	3,18	9,53	0,9540	6,418	149,369
C	0,04674	3,18	9,53	0,9751	6,560	156,387
D	0,07749	3,18	9,53	4,2102	17,085	166,074
E	0,08241	3,18	9,53	3,7971	14,489	140,875

Series graphics:



196/PS/03/17

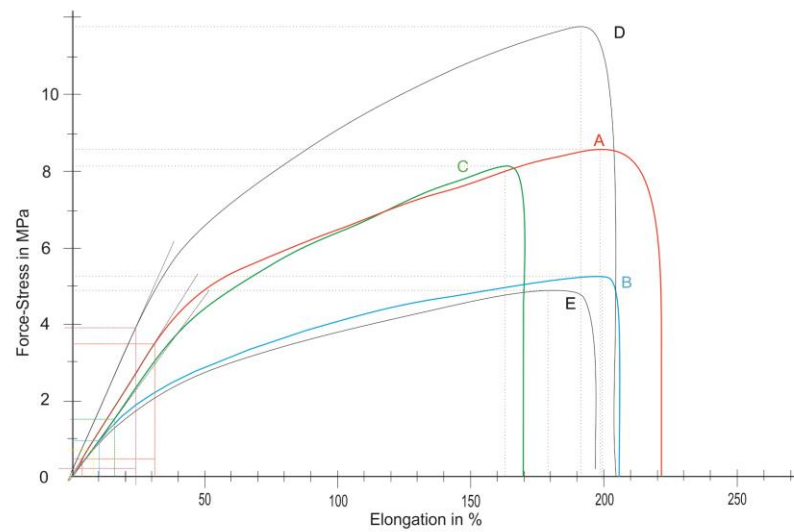
09.03.2017

Parameter table:

Heading :
 Company name: 196/PS/03/17
 Customer : Robaitullah
 Test speed : 10 mm/min
 Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA + Nanokitosan 2%

Results :

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at FMax %
A	0,07257	3,18	9,53	1,9853	8,602	197,109
B	0,06273	3,18	9,53	1,057	5,298	197,367
C	0,04797	3,18	9,53	1,2481	8,182	162,033
D	0,05658	3,18	9,53	2,1315	11,847	192,315
E	0,06642	3,18	9,53	1,0402	4,925	179,231

Series graphics:

196/PS/03/17

09.03.2017

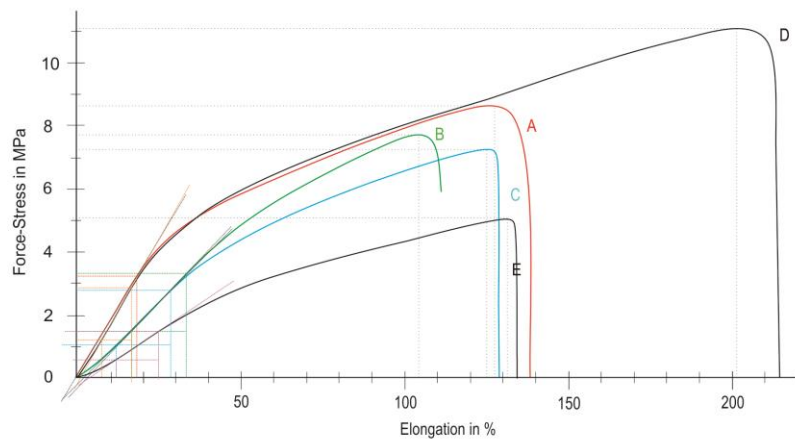
Parameter table:

Heading :
 Company name: 196/PS/03/17
 Customer : Robaitullah
 Test speed : 10 mm/min

Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA + Nanokitosan 5%

Results :

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at FMax %
A	0,04305	3,18	9,53	1,1829	8,641	128,734
B	0,12915	3,18	9,53	3,2371	7,882	104,856
C	0,09348	3,18	9,53	2,1775	7,325	125,793
D	0,04797	3,18	9,53	1,6797	11,011	207,022
E	0,05289	3,18	9,53	0,8685	5,164	131,651

Series graphics:

196/PS/03/17

09.03.2017

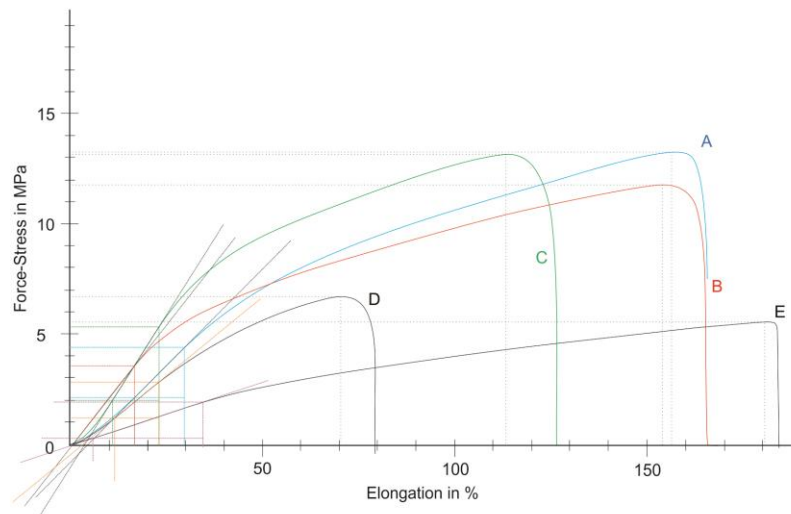
Parameter table:

Heading :
 Company name: 196/PS/03/17
 Customer : Robaitullah
 Test speed : 10 mm/min

Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA + Nanokitosan 10%

Results :

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at FMax %
A	0,10947	3,18	9,53	4,5927	13,193	156,504
B	0,04797	3,18	9,53	1,7959	11,773	154,183
C	0,03075	3,18	9,53	1,2860	13,151	112,468
D	0,10332	3,18	9,53	2,2321	6,794	70,983
E	0,08241	3,18	9,53	1,464	5,586	180,185

Series graphics:

196/PS/03/17

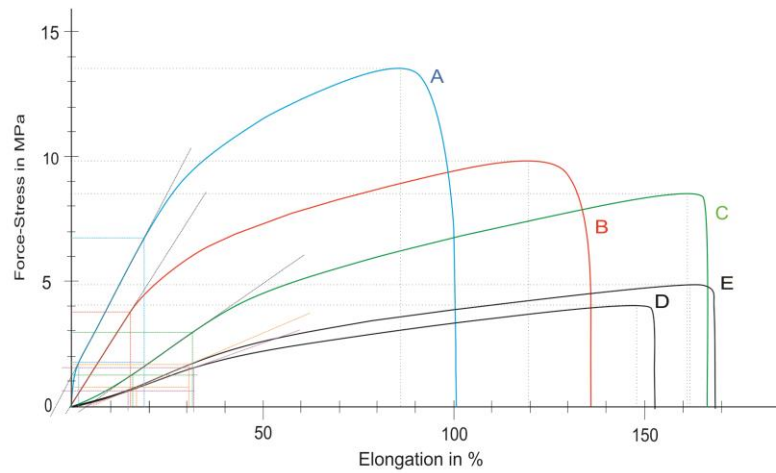
09.03.2017

Parameter table:

Heading :
 Company name: 196/PS/03/17
 Customer : Robaitullah
 Test speed : 10 mm/min
 Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA + Nanokitosan 15%

Results :

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at FMax %
A	0,04428	3,18	9,53	1,9087	13,555	86,892
B	0,04059	3,18	9,53	1,2675	9,820	119,298
C	0,09102	3,18	9,53	2,4655	8,518	161,755
D	0,09102	3,18	9,53	1,1698	4,042	147,025
E	0,09102	3,18	9,53	1,4261	4,927	161,9

Series graphics:

LAMPIRAN 3

LAMPIRAN 3

Foto penelitian



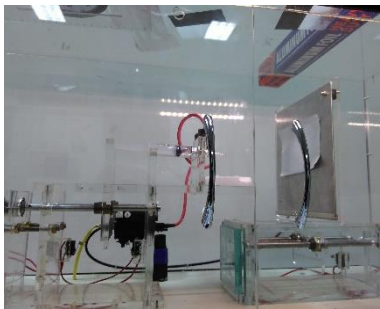
Pembuatan larutan PVA



Emusli nanokitosan



Alat *electrospinning*



Proses *electrospinning*



Pengujian tarik



Hasil optimasi PVA



Presparasi uji mekanik



Pengukuran ketebalan
spesimen menggunakan
OM

LAMPIRAN 4