

LAMPIRAN 1

LAMPIRAN 1

A. Hasil Analisa Morfologi Membran *Nanofiber* NeCS/PVA

Tabel Distribusi Diameter *Nanofiber*

Konsentrasi NeCS							
0%		5%		10%		15%	
No.	Diameter (nm)	No.	Diameter (nm)	No.	Diameter (nm)	No.	Diameter (nm)
1	65.997	1	129.630	1	68.350	1	63.888
2	89.691	2	133.539	2	83.268	2	80.579
3	113.529	3	133.539	3	84.777	3	90.351
4	117.117	4	141.033	4	89.185	4	100.000
5	141.264	5	165.635	5	90.090	5	105.062
6	154.209	6	170.732	6	90.330	6	108.108
7	155.635	7	170.732	7	99.099	7	108.108
8	162.412	8	175.682	8	102.719	8	108.797
9	173.292	9	175.682	9	102.719	9	115.372
10	180.405	10	182.386	10	103.320	10	120.869
11	181.303	11	183.324	11	103.729	11	120.869
12	182.419	12	185.185	12	107.334	12	122.890
13	192.801	13	185.185	13	108.108	13	127.407
14	202.452	14	188.853	14	108.483	14	127.407
15	203.851	15	193.339	15	108.483	15	129.930
16	207.403	16	196.855	16	112.883	16	129.930
17	207.989	17	200.308	17	113.088	17	131.708
18	210.124	18	200.308	18	114.666	18	137.221
19	210.317	19	200.308	19	115.372	19	137.221
20	210.317	20	200.308	20	117.117	20	139.130
21	210.895	21	200.308	21	117.117	21	140.698
22	216.333	22	200.308	22	119.893	22	140.725
23	216.966	23	203.704	23	120.684	23	140.725
24	216.966	24	203.704	24	121.204	24	140.725
25	217.664	25	207.043	25	121.731	25	140.725
26	220.859	26	207.043	26	122.536	26	140.725
27	221.592	27	209.513	27	122.536	27	145.266
28	223.507	28	211.144	28	125.157	28	145.266
29	225.225	29	211.144	29	126.126	29	145.266

30	225.225	30	211.144	30	126.447	30	147.080
31	225.945	31	211.144	31	127.407	31	151.859
32	225.945	32	211.144	32	127.407	32	152.888

33	226.841	33	215.961	33	127.747	33	152.888
34	226.841	34	215.961	34	128.989	34	152.888
35	229.686	35	222.222	35	130.124	35	152.888
36	230.169	36	222.222	36	131.738	36	152.888
37	230.743	37	222.992	37	131.738	37	153.862
38	230.919	38	222.992	38	133.333	38	154.997
39	231.621	39	222.992	39	133.333	39	157.593
40	232.495	40	222.992	40	133.929	40	159.719
41	234.407	41	222.992	41	135.435	41	161.158
42	234.407	42	222.992	42	135.768	42	161.158
43	235.608	43	222.992	43	136.467	43	161.158
44	235.788	44	223.760	44	136.699	44	161.158
45	236.737	45	225.288	45	136.699	45	161.158
46	238.526	46	226.047	46	137.221	46	161.158
47	239.883	47	226.047	47	137.221	47	161.624
48	242.408	48	226.047	48	139.000	48	162.162
49	242.408	49	226.047	49	140.136	49	162.882
50	243.410	50	226.047	50	140.725	50	163.160
51	245.072	51	226.047	51	141.013	51	163.160
52	245.072	52	229.061	52	141.013	52	164.953
53	245.130	53	232.036	53	142.445	53	166.118
54	246.063	54	234.243	54	142.445	54	166.118
55	247.379	55	234.243	55	142.445	55	169.982
56	247.871	56	234.243	56	145.266	56	169.982
57	252.413	57	237.153	57	145.545	57	169.982
58	252.895	58	240.741	58	145.545	58	169.982
59	253.696	59	240.741	59	145.545	59	169.982
60	253.696	60	240.741	60	146.656	60	169.982
61	256.084	61	240.741	61	146.695	61	169.982
62	258.136	62	240.741	62	147.198	62	172.615
63	259.860	63	240.741	63	148.580	63	172.615
64	260.016	64	240.741	64	149.126	64	174.379
65	261.261	65	241.452	65	149.195	65	177.457
66	262.655	66	241.452	66	149.940	66	177.457
67	262.655	67	241.452	67	152.211	67	177.457
68	264.963	68	241.452	68	152.280	68	180.180

69	267.402	69	247.068	69	153.153	69	181.079
70	267.402	70	247.068	70	153.418	70	181.079
71	268.765	71	248.452	71	153.418	71	181.827

72	269.970	72	249.141	72	153.946	72	185.507
73	270.420	73	249.141	73	154.209	73	185.507
74	270.870	74	249.141	74	156.929	74	185.507
75	273.554	75	249.141	75	157.593	75	185.507
76	277.530	76	251.879	76	159.386	76	185.714
77	280.317	77	251.879	77	160.401	77	187.899
78	282.170	78	251.879	78	160.920	78	188.114
79	284.890	79	257.267	79	162.412	79	188.114
80	284.890	80	257.933	80	162.412	80	191.534
81	284.890	81	259.259	81	164.399	81	191.534
82	288.288	82	259.920	82	166.118	82	191.534
83	288.429	83	263.198	83	167.577	83	191.663
84	288.851	84	265.145	84	167.577	84	194.060
85	295.105	85	273.423	85	168.302	85	194.060
86	297.161	86	280.236	86	170.177	86	194.060
87	312.731	87	282.066	87	172.337	87	194.895
88	312.731	88	282.673	88	173.292	88	194.895
89	357.647	89	289.269	89	174.923	89	203.851
90	383.280	90	289.269	90	176.999	90	210.124
91	397.317	91	292.803	91	193.377	91	210.124
92	459.106	92	298.602	92	194.060	92	210.895
93	465.427	93	298.602	93	194.895	93	216.966
94	510.250	94	308.210	94	195.605	94	216.966
95	542.414	95	314.270	95	210.124	95	219.938
96	544.222	96	314.270	96	222.506	96	219.938
97	586.624	97	323.942	97	243.410	97	230.743
98	597.047	98	349.407	98	247.594	98	234.234
99	664.472	99	349.407	99	256.567	99	234.926
100	501.763	100	521.486	100	271.020	100	354.914
<i>Average</i>	264,83		234,20		143,80		165,11
<i>S.Dev</i>	102,4695608		51,17029485		35,77531111		38,32225969

Tabel Hasil Analisa Diameter Membran *Nanofiber* NeCS

No	Konsentrasi NeCS	Diameter (nm)	Standar deviasi
1	0%	264,83	102,47
2	5%	234,20	51,17
3	10%	143,80	35,78
4	15%	165,11	38,32

B. Hasil Uji Viskositas

Tabel Hasil Uji Viskositas

No	Konsentrasi NeCS	Viskositas (cP)
1	0%	872,35
2	5%	602,9
3	10%	441,9
4	15%	325,9

C. Hasil Uji Daya Hantar Listrik (DHL)

Tabel Hasil Uji Daya Hantar Listrik (DHL)

No	Konsentrasi NeCS	DHL ($\mu\text{s}/\text{cm}$)
1	0%	1388
2	5%	1392,33
3	10%	1394,67
4	15%	1426,33

D. Hasil Uji Tarik

Tabel Nilai Kuat Tarik Membran *Nanofiber* NeCS/PVA

Spesimen	Nilai Kuat Tarik Membran <i>Nanofiber</i> (Mpa)			
	NeCS 0%	NeCS 5%	NeCS 10%	NeCS 15%
A	4,935	7,8244	6,8853	7,0718
B	8,003	7,8865	9,333	10,8025
C	6,018	6,3376	10,2476	9,4261
D	9,352	6,6474	8,0892	7,8668
E	7,186	6,819	6,4001	8,0348
Rata-rata	7,0988	7,10298	8,19104	8,6404
Standar Deviasi	1,7140	0,8571	2,5093	1,4763

Tabel Nilai Regangan Membran *Nanofiber* NeCS/PVA

Spesimen	Nilai Regangan Membran <i>Nanofiber</i> (%)			
	NeCS 0%	NeCS 5%	NeCS 10%	NeCS 15%
A	35,5396	50,9481	26,7762	40,174
B	58,3193	40,8174	55,0195	14,7722
C	33,402	45,1413	22,1365	58,6003
D	52,0764	39,1454	73,2112	11,8469
E	31,2067	33,7838	14,2972	57,2398
Rata-rata	42,1088	41,9672	38,3881	36,4866
Standar Deviasi	12,2470	6,4611	27,0216	22,4759

Tabel Nilai Modulus Elastisitas Membran *Nanofiber* NeCS/PVA

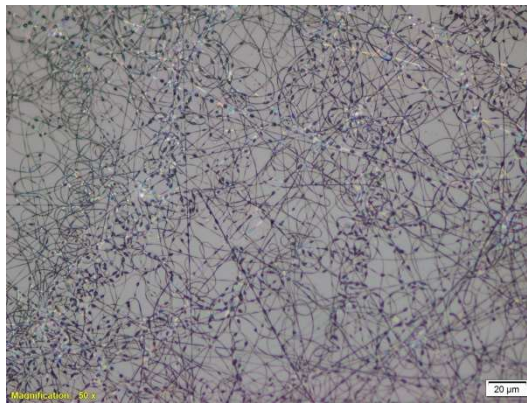
Spesimen	Nilai Modulus Elastisitas Membran <i>Nanofiber</i> (Mpa)			
	NeCS 0%	NeCS 5%	NeCS 10%	NeCS 15%
A	44,564	100,830	131,450	50,567
B	116,352	76,184	97,511	52,954
C	47,063	68,157	98,609	90,697
D	94,907	73,083	48,896	173,226
E	112,293	99,332	165,357	79,953
Rata-rata	83,036	83,517	108,365	89,479
Standar Deviasi	34,935	15,398	43,389	49,885

LAMPIRAN 2

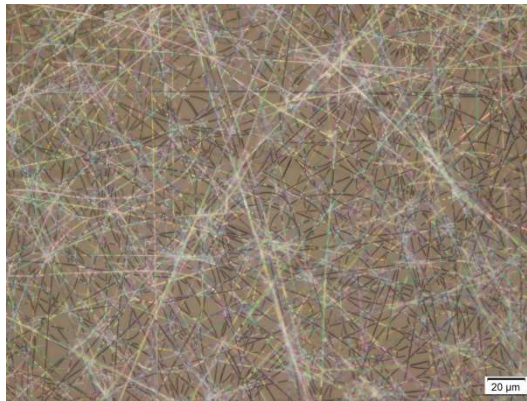
LAMPIRAN 2

Gambar Hasil Optimasi Parameter *Electrospinning*

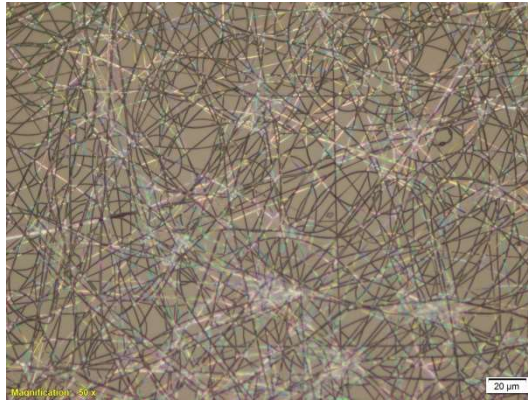
A. Optimasi pada tegangan 15kV dengan TCD 10cm



B. Optimasi pada tegangan 15kV dengan TCD 12cm



C. Optimasi pada tegangan 15kV dengan TCD 15cm

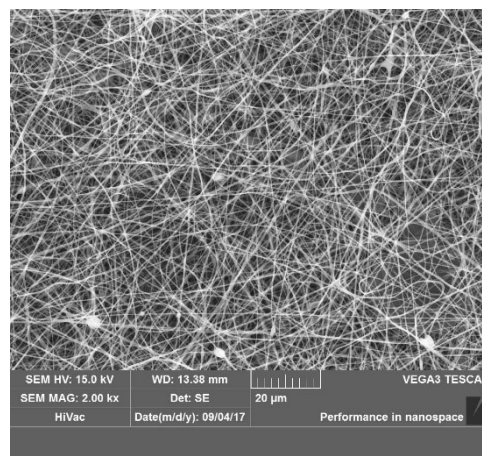
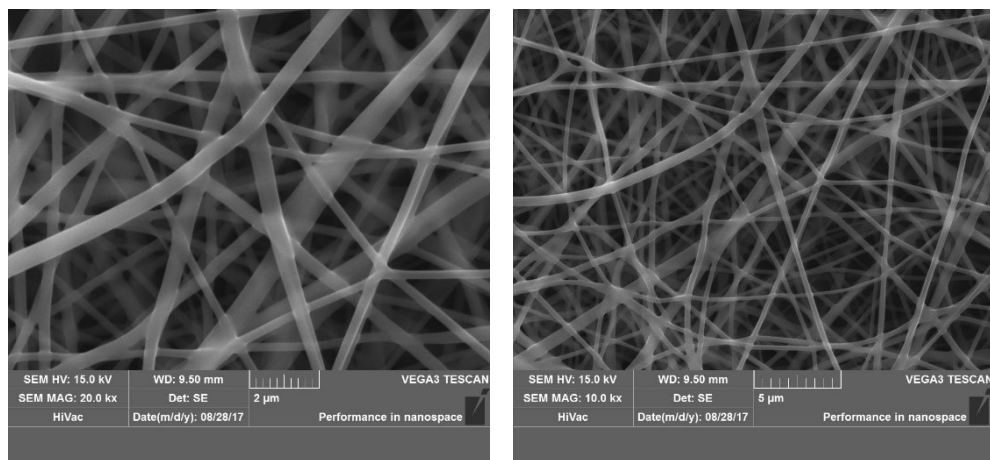


LAMPIRAN 3

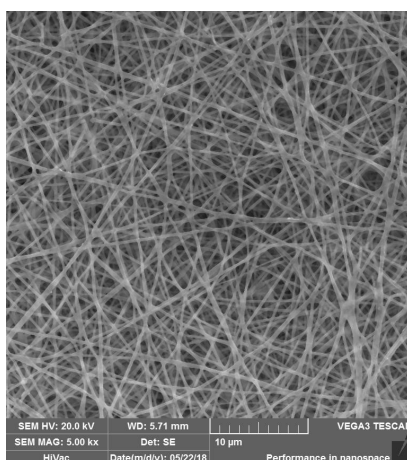
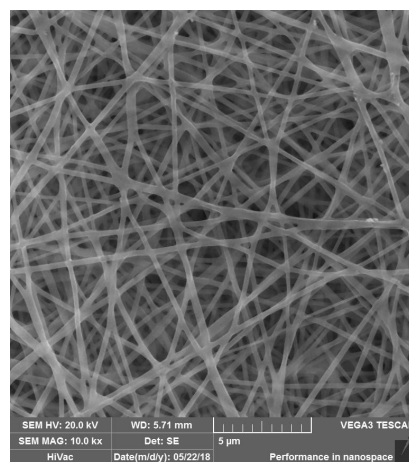
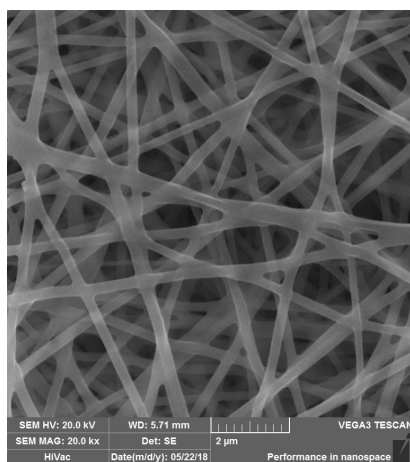
Lampiran 3

Hasil Pengamatan *Scanning Electron Microscope* (SEM)

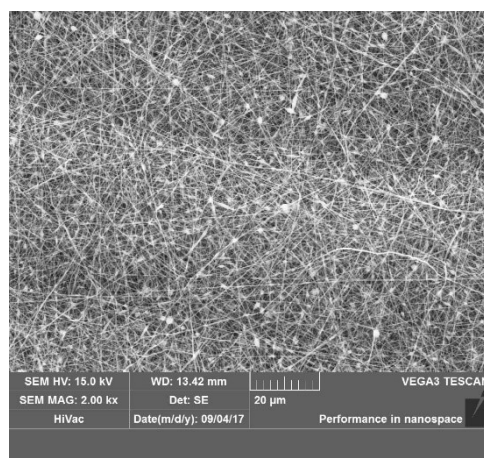
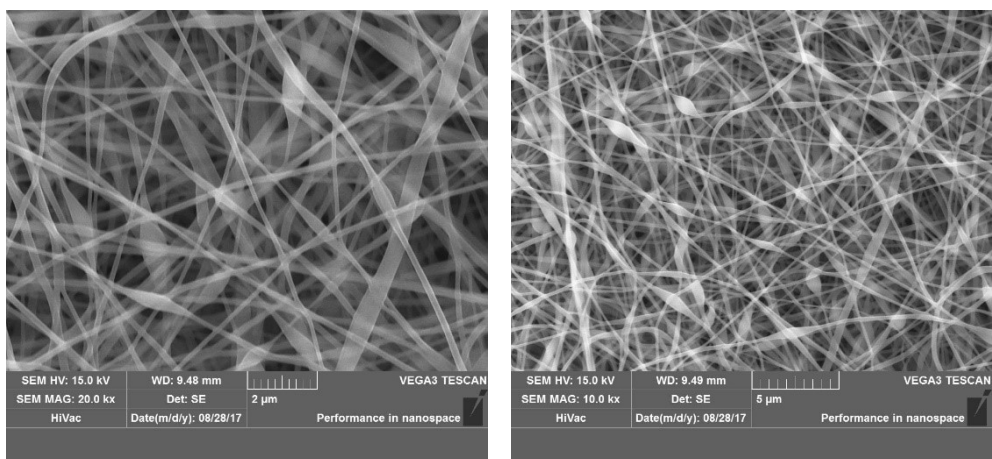
A. Mikrografi Membran *Nanofiber* NeCS 0%



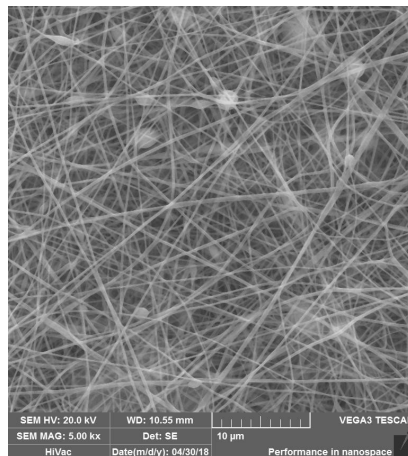
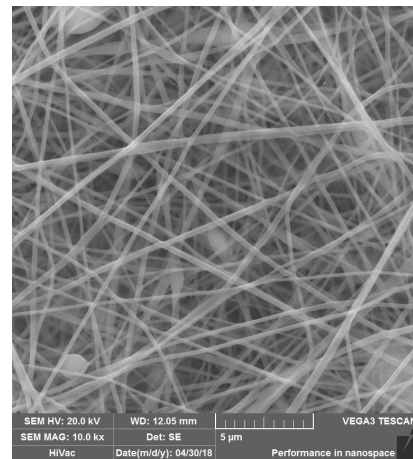
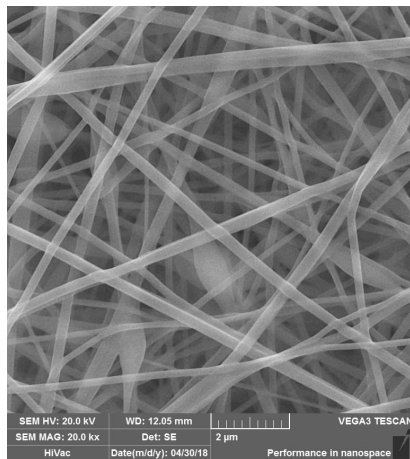
B. Mikrografi Membran *Nanofiber NeCS 5%*



C. Mikrografi Membran *Nanofiber* NeCS 10%



D. Mikrografi Membran *Nanofiber* NeCS 15%



LAMPIRAN 4

LAMPIRAN 4



Laboratorium Uji
TEKNOLOGI PANGAN DAN HASIL PERTANIAN
FAKULTAS TEKNOLOGI PERTANIAN
Universitas Gadjah Mada

Jl. Sosio Yustisia 1, Bulaksumur, Yogyakarta 55281
 Telp.0274-549650, 524517, 901311; Fax. 0274-549650

HASIL ANALISA

NO: 542 / PS / 04 / 18

Lab. Penguji : Rekayasa Proses Pengolahan
 Tanggal Pengujian : 27 April 2018
 Sampel : PVA/Kitosan
 Jenis Analisa : Viskositas
 Alat : Viskometer
 Merk : Brookfield

No	Sampel	UI 1(cP)	UI 2(cP)
1	0%	871,8	872,9
2	5%	601,9	603,9
3	10%	437,9	445,9
4	15%	323,9	327,9

Dilaporkan oleh

Penyelia



Dr.Rachma Wikandari,STP.,M.Biotech

Analisis

Rachmat Teguh S

LAMPIRAN 5



UNIVERSITAS GADJAH MADA
LABORATORIUM PENELITIAN DAN PENGUJIAN TERPADU

RDP/5.10.01/LPPT
 Rev. 1
 Halaman 1 dari 1

LAPORAN HASIL UJI

No. Sertifikat : 00817.01/V/UN1/LPPT/2018
 No. Pengujian : 18040100817

Informasi Customer

Nama : Eka Wahyu Firmansyah
 Alamat : S1 Teknik Mesin UMY
 Tanggal Penerimaan : 23 April 2018
 Tanggal Pengujian : 27 April 2018

Hasil Pengujian

1. Larutan PVA/ Kitosan (0%)

No	Parameter Uji	Hasil	Satuan	Metode
1.	DHL	1388,00	µs/cm	Konduktometri
2.	Suhu	28,23	°C	Konduktometri

2. Larutan PVA/ Kitosan (5%)

No	Parameter Uji	Hasil	Satuan	Metode
1.	DHL	1392,33	µs/cm	Konduktometri
2.	Suhu	28,53	°C	Konduktometri

3. Larutan PVA/ Kitosan (10%)

No	Parameter Uji	Hasil	Satuan	Metode
1.	DHL	1394,67	µs/cm	Konduktometri
2.	Suhu	28,77	°C	Konduktometri

4. Larutan PVA/ Kitosan (15%)

No	Parameter Uji	Hasil	Satuan	Metode
1.	DHL	1426,33	µs/cm	Konduktometri
2.	Suhu	28,67	°C	Konduktometri

Yogyakarta, 11 Mei 2018
 Manajer Teknik,


 Dr. Arief Nurrochmad, M.Si, M.Sc., Apt.
 NIP.197307161998031001

Perhatian :

1. LHU ini berlaku hanya pada sampel yang diujikan.
2. LHU ini dibuat semata-mata untuk penggunaan pelanggan yang disebutkan dalam LHU ini.
3. LPPT tidak bertanggung jawab atas setiap kerugian, kerusakan atau tanggung jawab hukum yang diderita oleh pihak ketiga sebagai akibat dari kepercayaan terhadap atau penggunaan laporan ini.
4. Tidak diperkenankan mengandakan LHU ini tanpa izin dari LPPT UGM

LAMPIRAN 6

27.04.2018

**Universitas Gadjah Mada
Fakultas Teknologi Pertanian**

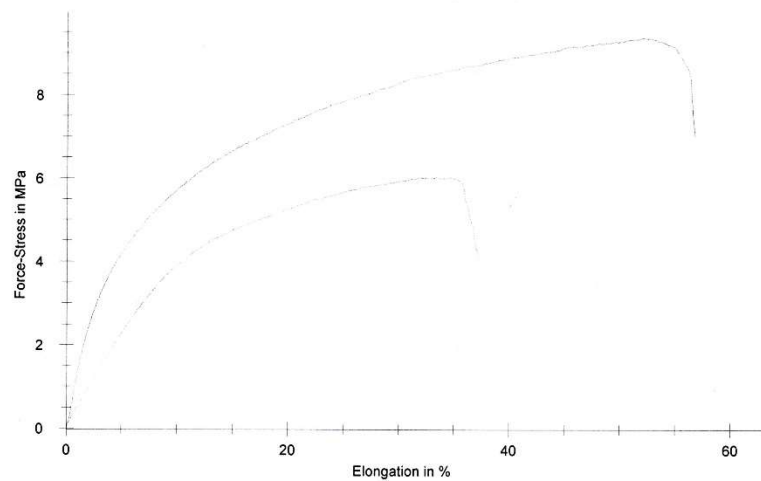
Parameter table:

Heading : Universitas Gadjah Mada Test standard: Tensile strength
 Fakultas Teknologi Pertanian Material : PVA/Chi 0%
 Customer : Ilham Dwi
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,08	10	20	7,4814	9,3518	52,0764
2	0,0922	10	20	5,5490	6,0184	33,4020

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,0861	10	20	6,5152	7,6851	42,7392
s	0,008627	0,000	0,000	1,3665	2,3571	13,2048
v	10,02	0,00	0,00	20,97	30,67	30,90



27.04.2018

**Universitas Gadjah Mada
Fakultas Teknologi Pertanian**

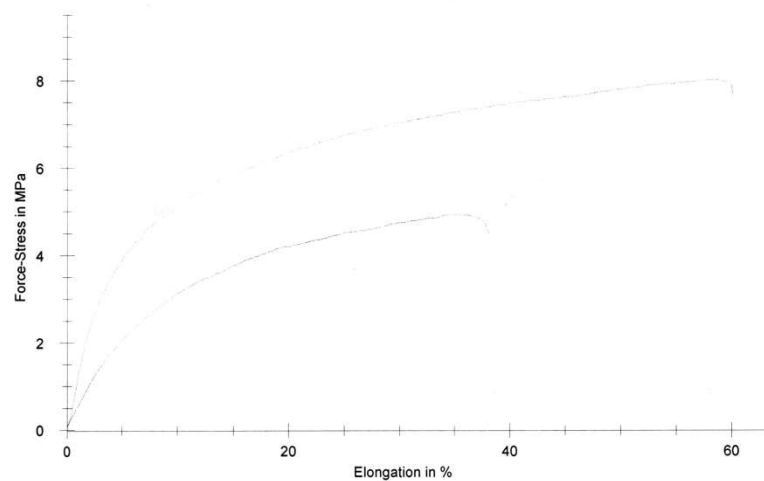
Parameter table:

Heading : Universitas Gadjah Mada Test standard: Tensile strength
 Fakultas Teknologi Pertanian Material : PVA/Chi 0%
 Customer : Ilham Dwi
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,082	10	20	4,0464	4,9346	35,5396
2	0,0898	10	20	7,1864	8,0027	58,3193

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,0859	10	20	5,6164	6,4686	46,9295
s	0,005515	0,000	0,000	2,2203	2,1695	16,1077
v	6,42	0,00	0,00	39,53	33,54	34,32

597/PS/05/18

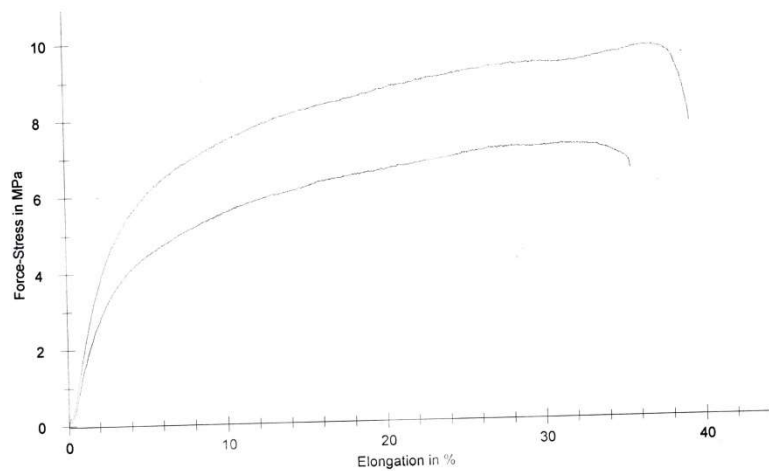
08.05.2018

Parameter table:

Heading	:	Tester	:	Rachmat		
Company name	:	597/PS/05/18	:	Test standard	:	Tensile strength
Customer	:	Ilham	:	Material	:	PVA/Chi 0%
Test speed	:	10 mm/min				

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,09963	10	20	7,1597	7,1863	31,2067
2	0,06826	10	20	6,6347	9,7198	36,3519

Series graphics:**Statistics:**

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,08394	10	20	6,8972	8,4531	33,7793
s	0,02218	0,000	0,000	0,3712	1,7914	3,6382
v	26,42	0,00	0,00	5,38	21,19	10,77

27.04.2018

**Universitas Gadjah Mada
Fakultas Teknologi Pertanian**

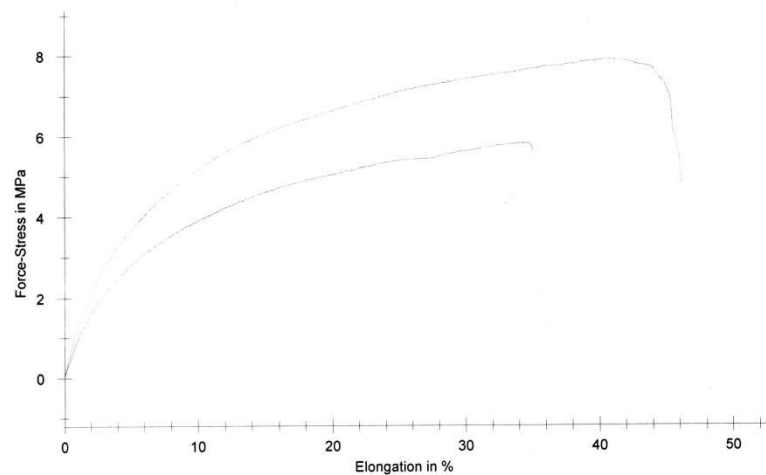
Parameter table:

Heading : Universitas Gadjah Mada Test standard: Tensile strength
Fakultas Teknologi Pertanian Material : PVA/Chi 5%
Customer : Ilham Dwi
Tester : Rachmat
Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,0959	10	20	5,5666	5,8046	34,4941
2	0,091	10	20	7,1767	7,8865	40,8174

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,09345	10	20	6,3716	6,8455	37,6557
s	0,003465	0,000	0,000	1,1385	1,4721	4,4713
v	3,71	0,00	0,00	17,87	21,50	11,87

27.04.2018

Universitas Gadjah Mada Fakultas Teknologi Pertanian

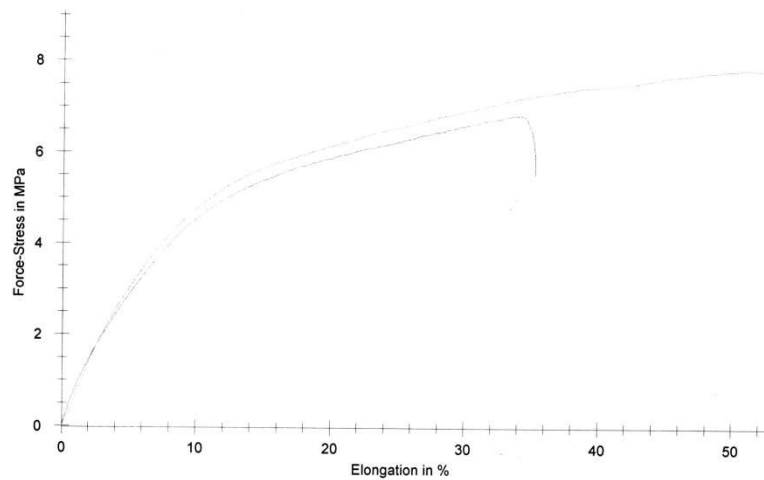
Parameter table:

Heading : Universitas Gadjah Mada Test standard: Tensile strength
 Fakultas Teknologi Pertanian Material : PVA/Chi 5%
 Customer : Ilham Dwi
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,0899	10	20	6,1303	6,8190	33,7838
2	0,0935	10	20	7,3159	7,8244	50,9481

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,0917	10	20	6,7231	7,3217	42,3660
s	0,002546	0,000	0,000	0,8383	0,7109	12,1370
v	2,78	0,00	0,00	12,47	9,71	28,65

671/PS/05/18

24.05.2018

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Universitas Gadjah Mada**

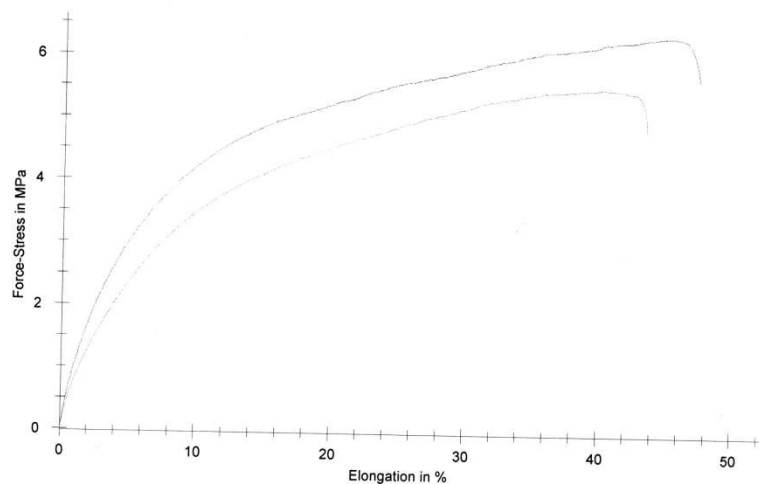
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Eka Wahyu Material : PVA/Chi 5%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
12	0,07403	10	20	4,6917	6,3376	45,1413
13	0,0752	10	20	4,1429	5,5092	40,1762

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
\bar{x}	0,07462	10	20	4,4173	5,9234	42,6588
s	0,0008273	0,000	0,000	0,3881	0,5858	3,5109
v	1,11	0,00	0,00	8,79	9,89	8,23

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24.05.2018

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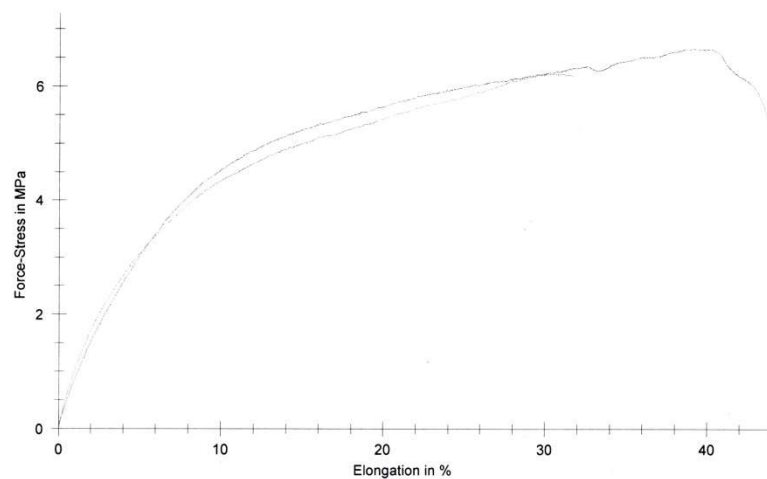
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Eka Wahyu Material : PVA/Chi 5%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
18	0,0553	10	20	3,6760	6,6474	39,1454
19	0,0523	10	20	3,2479	6,2101	31,0254

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
\bar{x}	0,0538	10	20	3,4620	6,4288	35,0854
s	0,002121	0,000	0,000	0,3027	0,3092	5,7417
v	3,94	0,00	0,00	8,74	4,81	16,36

597/PS/05/18

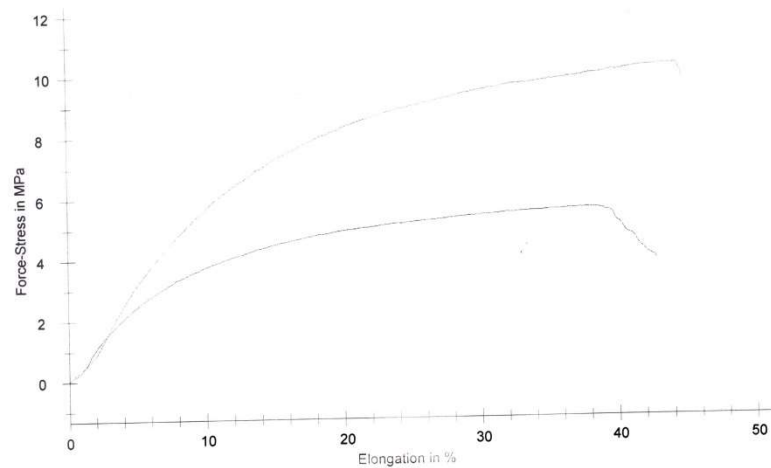
08.05.2018

Parameter table:

Heading	:	Tester	:	Rachmat
Company name:	597/PS/05/18	Test standard	:	Tensile strength
Customer	: Ilham	Material	:	PVA/Chi 10%
Test speed:	10 mm/min			

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,08241	10	20	4,5885	5,5679	38,8715
2	0,06765	10	20	6,9325	10,2476	44,1385

Series graphics:**Statistics:**

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,07503	10	20	5,7005	7,9077	20,5050
s	0,01044	0,000	0,000	1,6575	3,3090	2,3101
v	13,91	0,00	0,00	28,77	41,85	11,27

597/PS/05/18

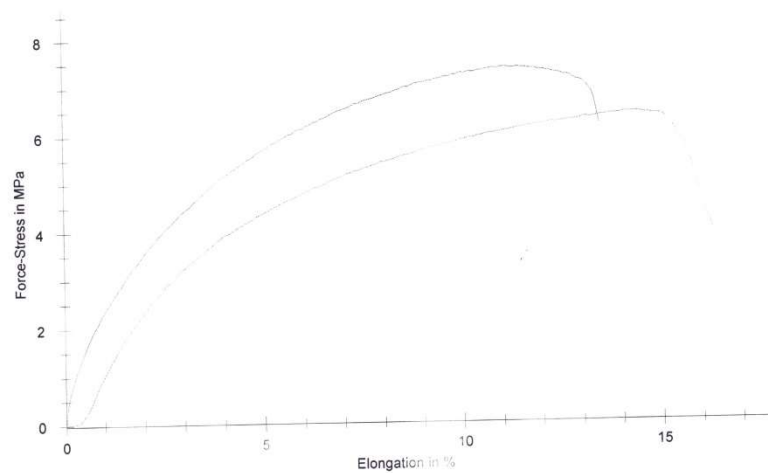
08.05.2018

Parameter table:

Heading	:	Tester	:	Rachmat
Company name:	597/PS/05/18	Test standard	:	Tensile strength
Customer	: Ilham	Material	:	PVA/Chi 10%
Test speed:	10 mm/min			

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,07216	10	20	5,3161	7,3671	11,0857
2	0,08364	10	20	5,3531	6,4001	14,2972

Series graphics:**Statistics:**

Series	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
n = 2						
x	0,0779	10	20	5,3346	6,8836	12,6914
s	0,000118	0,000	0,000	0,0262	0,6837	2,2709
v	10,42	0,00	0,00	0,49	9,93	17,89

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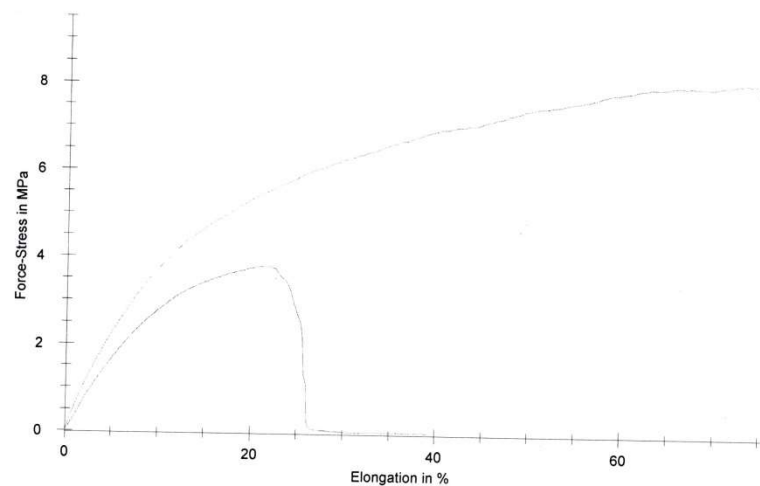
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Eka Wahyu Material : PVA/Chi 10%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
6	0,0531	10	20	2,0173	3,7990	20,9411
7	0,0514	10	20	4,1579	8,0892	73,2112

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
\bar{x}	0,05225	10	20	3,0876	5,9441	47,0762
s	0,001202	0,000	0,000	1,5136	3,0337	36,9606
v	2,30	0,00	0,00	49,02	51,04	78,51

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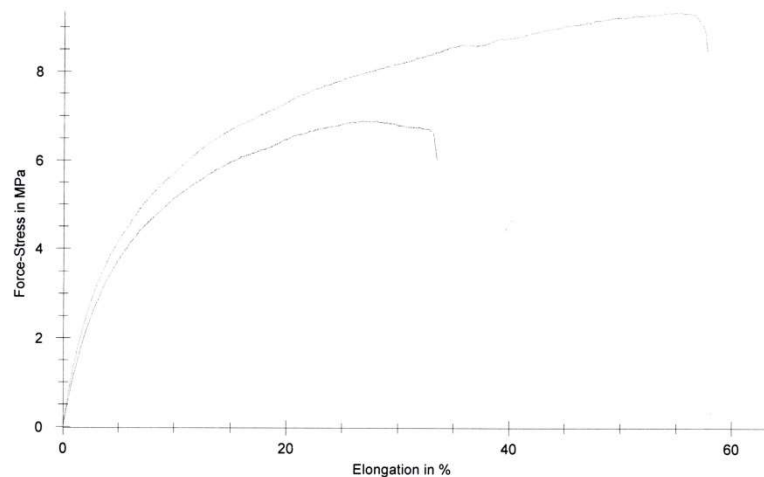
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Eka Wahyu Material : PVA/Chi 10%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
9	0,0582	10	20	4,0072	6,8853	26,7762
10	0,0612	10	20	5,7118	9,3330	55,0195

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
\bar{x}	0,0597	10	20	4,8595	8,1091	40,8978
s	0,002121	0,000	0,000	1,2053	1,7308	19,9710
v	3,55	0,00	0,00	24,80	21,34	48,83

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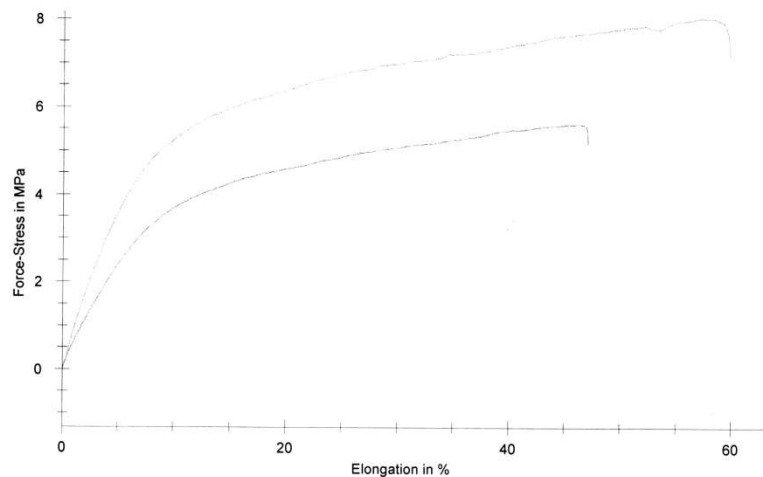
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Ilham Dwi Material : PVA/Chi 15%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
1	0,0698	10	20	3,9165	5,6110	46,2572
2	0,0413	10	20	3,3184	8,0348	57,2398

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,05555	10	20	3,6174	6,8229	51,7485
s	0,02015	0,000	0,000	0,4229	1,7139	7,7659
v	36,28	0,00	0,00	11,69	25,12	15,01

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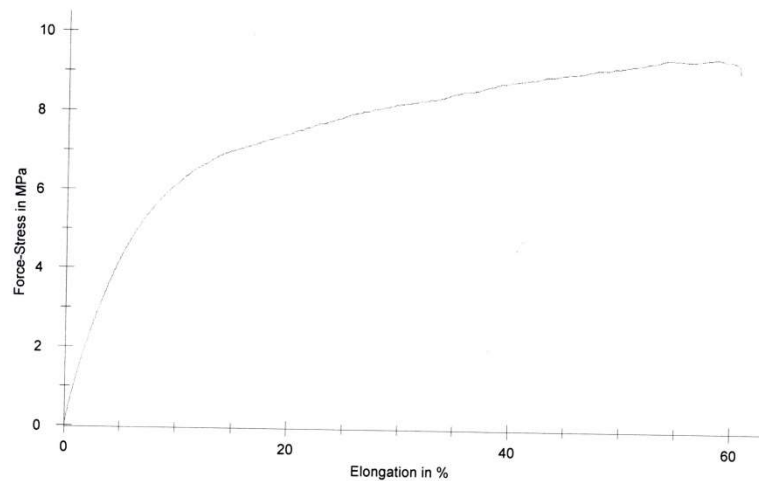
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Ilham Dwi Material : PVA/Chi 15%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
4	0,0404	10	20	3,8082	9,4261	58,6003

Series graphics:



Statistics:

Series n = 1	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,0404	10	20	3,8082	9,4261	58,6003
s	-	-	-	-	-	-
v	-	-	-	-	-	-

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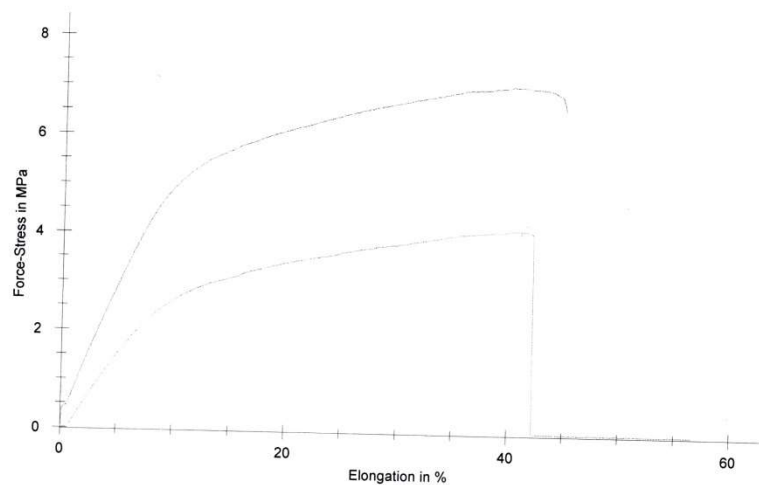
Parameter table:

Company name: 671/PS/05/18 Test standard : Tensile strength
 Customer : Ilham Dwi Material : PVA/Chi 15%
 Tester : Rachmat
 Test speed: 10 mm/min

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
12	0,06891	10	20	4,8732	7,0718	40,1740
13	0,0513	10	20	2,1256	4,1435	40,6928

Series graphics:



Statistics:

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
x	0,0601	10	20	3,4994	5,6077	40,4334
s	0,01245	0,000	0,000	1,9428	2,0706	0,3669
v	20,72	0,00	0,00	55,52	36,92	0,91

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08.05.2018

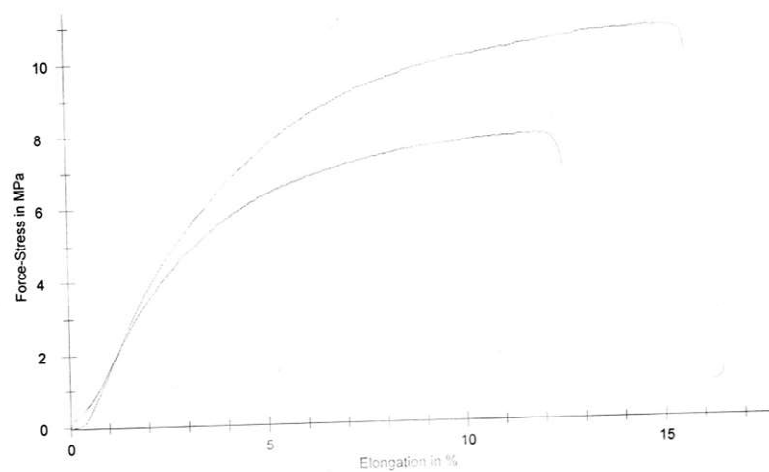
Parameter table:

Heading :
 Company name: 597/PS/05/18
 Customer : Ilham
 Test speed: 10 mm/min

Tester : Rachmat
 Test standard : Tensile strength
 Material : PVA/Chi 15%

Results:

Nr	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
7	0,0451	10	20	3,5570	7,8868	11,8469
8	0,0467	10	20	5,0448	10,8025	14,6722

Series graphics:**Statistics:**

Series n = 2	a0 mm	b0 mm	Lc mm	FMax N	Tensile Strength MPa	Strain at Fmax. %
\bar{x}	0,0459	10	20	4,3009	9,3447	13,2595
s	0,001131	0,000	0,000	1,0520	2,0617	1,9977
v	2,46	0,00	0,00	24,46	22,06	15,07

