BAB V

KESIMPULAN DAN SARAN

A. Kesimpulan

Peningkatan masa inkubasi meningkatkan ketebalan dan kadar selulosa film yang dihasilkan. Ketebalan film tertinggi terdapat pada *nata* yang dihasilkan pada masa inkubasi 18 hari yaitu sebesar 0.467 mm dan kadar selulosanya sebesar 31.15%. Kerapatan serat selulosa akan mengurangi laju transmisi uap air (WVTR), dengan kecepatan hilangnya uap air terendah terdapat pada film yang dihasilkan pada masa inkubasi 18 hari yaitu sebesar 2.809 gr/m^{2}hari. Persen susut berat buah lengkeng yang terendah terdapat pada buah yang ditutup dengan film masa inkubasi 18 hari yaitu sebesar 1,91%. Ketebalan film selulosa mempengaruhi kekuatan tarik film, semakin tebal film yang dihasilkan maka kekuatan tarik film akan semakin besar. Kekuatan tarik *film* (*tensile strengh*) terbesar terdapat pada film masa inkubasi 18 hari yaitu sebesar 24,93 MPa. *Elongasi* tertinggi terdapat pada film yang dihasilkan pada masa inkubasi 17 hari, yaitu sebesar 49,475%.

B. Saran

Aplikasi *film* pada buah sebaiknya tidak hanya dilakukan pada suhu ruangan saja, tetapi lebih baik dilakukan juga pada suhu rendah (kulkas).

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LAMPIRAN

LAMPIRAN 1

Tabel 3. Tebal rata-rata *nata de coco* pada hari pengunduhan yang berbeda

Ulangan	Tebal Rata-rata Pada Hari Pengunduhan (mm)			
	H15	H16	H 17	H18
A	5,72	6,02	6,63	7,06
B	5,42	6,23	6,53	7,04
Rata-rata	5,57	6,13	6,58	7,05

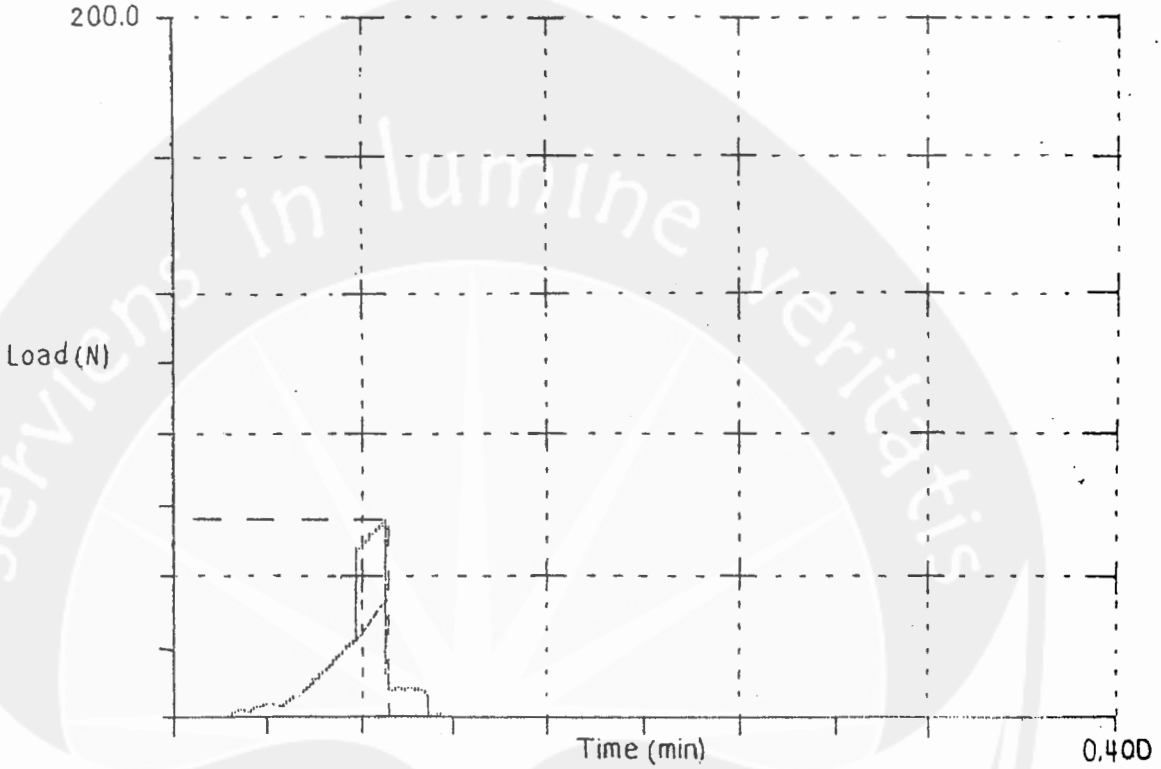
Tabel 4. Tebal Rata-rata *Film* Selulosa

Ulangan	Tebal Rata-rata *Film* selulosa Pada Masa inkubasi yang berbeda (mm)			
	H15	H16	H 17	H18
A	0,375	0,405	0,453	0,473
B	0,343	0,395	0,440	0,462
Rata-rata	$0,359^{c}$	$0,400^{b}$	$0,446^{a}$	$0,467^{a}$

Keterangan : angka yang diakhiri huruf yang sama dan pada kolom yang sama menandakan tidak beda nyata.

LAMPIRAN 2

Contoh PerhitunganPengujian *Tensile Strengh* dan % *Elongasi*



Gambar 13. Pengujian *Tensile Strengh*,% *Elongasi* Ulangan A Masa Inkubasi 16 Hari (H16A)

F_{max} (N)	t_{max} (min)
55.81	0.0909

Wed 20 sep 2000
Auto Return ..... ON
Auto Zero ..... ON
Cycle ..... OF
Mode ..... Tension
Extensometer ..... Internal
Test Speed ..... 10.00 mm/min
Inch Speed ..... 10.00 mm/min
Width ..... 15.00 mm
Depth ..... 0.500 mm
Gauge Length ..... 40.00 mm
Data saved as files B :\ H16A.CDA

Luas Area (A) = p x l
p = 1 cm = 0,01 m
l = tebal fim = 0,405 mm
$= 0{,}405.10^{-4}$
Luas Area (A) = 0,01 m x $0{,}405.10^{-4}$ m
$= 4{,}05.10^{-6}\ m^2$

$$\textit{Tensile Strengh} = \frac{F}{A} = 13780246{,}91\ N/m^2$$

$1\ N/m^2 = 1$ Pascal $= 1.10^{-6}$ Mpa
Tensile Strengh = 13780246,91 x 1.10^{-6}
= 13,18 MPa

$$\%\ \textit{Elongasi} = \frac{\text{Test Speed} \times \Delta t\ max}{\text{panjang awal}} \times 100\%$$

$$= \frac{10 \times 0{,}0909}{7} \times 100\%$$

= 12,99%

LAMPIRAN 3

Tabel 5. Hasil Pengujian *Tensile Strengh film* selulosa

Ulangan	*Tensile Strengh* Pada Hari Perlakuan (MPa)			
	H15	H16	H 17	H18
A	19,18	13.78	16.05	25.67
B	6.53	16.42	16.43	24.19
Rata-rata	12.86^{a}	15.10^{b}	16.24^{b}	24.93^{c}

Keterangan : angka yang diakhiri huruf yang sama dan pada kolom yang sama menandakan tidak beda nyata

Tabel 6. Hasil Pengujian *elongasi* dari hari 15 sampai hari 18

Ulangan	*Elongasi* Pada Hari Perlakuan (%)			
	II15	H16	H 17	H18
A	12.99	67.21	30.25	61.26
B	7.23	10.89	68.7	35.41
Rata-rata	10.11^{a}	39.05^{b}	49.475^{c}	48.335^{c}

Keterangan : angka yang diakhiri huruf yang sama dan pada kolom yang sama menandakan tidak beda nyata

LAMPIRAN 4

Tabel 7. Pertambahan berat dalam pengukuran *Water Vapour Transmition Rate* (WVTR)

Perlakuan	Berat *Film*	Berat cawan	Pertambahan berat cawan pada hari ke-														
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
H15A	0.893	89.540	117.278	118.514	119. 407	120.260	121.020	121.652	122.251	122.849	123.418	123.796	124.155	124.519	124.878	125.236	125.575
H16A	0.883	88.564	117.532	118.497	119.432	120355	121254	121.808	122.324	122.860	123.394	123.771	124.136	124.506	124.870	125.233	125.563
H17A	0.999	88.645	116.002	116.312	116.575	117.227	117.912	118.595	119.216	119.814	120.394	120.773	121.123	121.482	121.836	122.189	122.525
H18A	1.020	88.743	116.978	117.610	118.460	119.020	119.382	119.914	120.477	121.096	121.636	122.017	122.363	122.708	123.057	123.398	123.736
Perlakuan	Berat *Film*	Berat Cawan	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
H15B	0.985	94.765	121.892	122.948	123.916	124.869	125.654	126.252	126.775	127.231	127.667	128.052	128.413	128.771	129.128	129484	129.830
H16B	0.893	88.484	116.348	117.404	118.360	119.256	120.012	120.697	121.263	121.776	122.188	122.563	122.930	123.293	123.658	124.024	124.379
H17B	1.005	90.560	117.612	118.634	119.500	120.393	121.188	121.951	122.452	122.950	123.439	123.807	124.164	124.510	124.862	125.213	125.561
H18B	1.034	88.643	116.079	116.978	117.874	118.659	119.195	119.827	120.372	120.934	121.592	121.970	122.315	122.658	123.004	123.353	123.693

LAMPIRAN 5

Tabel 8. Selisih pengukuran berat uap air pada 2 ulangan

Perlakuan	Berat uap air yang terukur pada hari ke-													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
H15A	1.236	0.893	0.853	0.760	0.632	0.599	0.598	0.569	0.378	0.359	0.364	0.359	0.358	0.339
H16A	0.965	0.935	0.923	0.890	0.563	0.516	0.536	0.534	0.377	0.365	0.370	0.364	0.363	0.330
H17A	0.310	0.263	0.652	0.685	0.683	0.621	0.598	0.580	0.379	0.350	0.359	0.354	0.353	0.336
H18A	0.632	0.850	0.560	0.362	0.532	0.563	0.619	0.540	0.381	0.346	0.345	0.349	0.341	0.338
Perlakuan	1	2	3	4	5	6	7	8	9	10	11	12	13	14
H15B	1.056	0.968	0.953	0.785	0.598	0.523	0.456	0.436	0.385	0.361	0.358	0.375	0.356	0.346
H16B	1.056	0.956	0.896	0.756	0.685	0.566	0.513	0.412	0.375	0.367	0.363	0.365	0.366	0.355
H17B	1.022	0.866	0.893	0.795	0.763	0.501	0.498	0.489	0.368	0.357	0.346	0.352	0.351	0.348
H18B	0.899	0.896	0.785	0.536	0.632	0.545	0.562	0.658	0.378	0.345	0.343	0.346	0.349	0.340

LAMPIRAN 6

Tabel 9. Contoh perhitungan slope dan WVTR pada film H17A :

X	Y	x.y	x^2
1	0.31	0.31	1
2	0.263	0.526	4
3	0.262	0.786	9
4	0.685	2.740	16
5	0.683	3.415	25
6	0.621	3.726	36
7	0.598	4.186	49
28	3.422	15.689	140

Keterangan : x = 7 hari perlakuan (lihat tabel 8)
y = berat uap air yang terukur selama 7 hari

Slope dihitung berdasarkan garis regresi y = a + bx, dimana b = slope (gr/hari)

$$b = \frac{n(\Sigma xy) - (\Sigma x)(\Sigma y)}{n(\Sigma x^2) - (\Sigma x)^2}$$

Σx pada film masa inkubasi 17 hari (H17A) = 28
Σy pada film masa inkubasi 17 hari (H17A) = 3.422
$\Sigma x.y$ pada film masa inkubasi 17 hari (H17A) = 15.689
Σx^2 pada film masa inkubasi 17 hari (H17A) = 140
n = jumlah hari perlakuan (hari ke-1 sampai hari ke-7) = 7

$$b = \frac{7(15.689) - (28)(3.422)}{7(140) - (28)^2} = 0.023 \text{ gr/ hari}$$

WVTR = gr/luas area.hari

Luas = 0.005024

WVTR = 0.023/0.005024 m^2.hari

= 4,578 gr/m^2.hari

LAMPIRAN 7

Tabel 10. Hasil Perhitungan WVTR film selulosa masa inkubasi 15 sampai 18 hari

Perlakuan	Σx	Σy	$\Sigma x.y$	Σx^2	Slope	WVTR
H15A	28	5.571	19.564	140	0.031	6.170
H16A	28	5.328	18.827	140	0.028	5.573
H17A	28	3.422	15.689	140	0.023	4.578
H18A	28	4.118	15.831	140	7.22×10^{-3}	1.437
H15B	28	5.339	18.311	140	0.034	6.768
H16B	28	5.428	19.092	140	0.030	5.976
H17B	28	5.338	18.920	140	0.027	5.374
H18B	28	4.855	17.554	140	0.021	4.180

Tabel 11. Hasil rata-rata perhitungan slope dan WVTR film selulosa masa inkubasi 15 sampai 18 hari

Perlakuan	Slope (gr/hari)	WVTR(gr/m^2.hari)
H15	0.033	6.469^a
H16	0.029	5.771^b
H17	0.025	4.976^c
H18	0.014	2.809^d

Keterangan : angka yang diakhiri huruf yang sama pada kolom yang sama menandakan tidak beda nyata

LAMPIRAN 8

Tabel 12 . Hasil Pengukuran Kadar Selulosa

Perlakuan	a	b	Bb	I	II	III	IV	BKT	KA(%)	KS (%)
H15A	30.869	28.869	2	30.575	30.496	30.498	30.504	1.635	22.32	19.06
H16A	32.872	30.872	2	32.398	32.408	32.412	32.414	1.542	29.70	23.67
H17A	31.303	29.303	2	30.696	30.699	30.730	30.733	1.430	39.86	29.21
H18A	32.617	30.617	2	31.992	31.994	31.996	31.997	1.380	44.93	31.69
H15B	320217	30.217	2	31.937	31.938	31.939	31.940	1.723	16.08	14.71
H16B	32.161	30.161	2	31.770	31.773	31.775	31.776	1.615	23.84	20.06
H17B	32.010	30.010	2	31.420	31.422	31.423	31.425	1.415	41.34	29.96
H18B	34.696	32.696	2	34.093	34.095	34.097	34.098	1.402	42.65	30.60

Keterangan :
a = berat cawan saring dan sampel tepung selulosa
b = berat cawan saring
I – III = berat penimbangan sampel tepung selulosa
IV = berat konstan
Bb = berat serbuk semula kering angin (a-b)
BKT = berat serbuk kering tanur (c-b)

$$\text{Kadar Air (KA)} = \frac{Bb - BKT}{BKT} \times 100\%$$

$$\text{Kadar Selulosa (KS)} = \frac{BKT\ (1 + KA)}{Bb} \times 100\%$$

LAMPIRAN 9

Tabel 13. Hasil Pengukuran Kadar Selulosa *film* pada masa inkubasi 15 sampai 18 hari

Ulangan	Kadar Selulosa Pada Hari Perlakuan (%)			
	H15	H16	H 17	H18
A	19.06	23.67	29.21	31.69
B	14.71	20.06	29.96	30.60
Rata-rata	16.89^{a}	21.87^{b}	29.59^{c}	31.15^{d}

Keterangan : angka yang diakhiri huruf yang sama dan pada kolom yang sama menunjukkan tidak beda nyata

LAMPIRAN 10

Tabel 14. Pengurangan berat buah Lengkeng pada pengujian susut berat

Perlakuan	Pengurangan Berat Buah pada hari ke- (Ulangan A)								Pengurangan Berat Buah pada hari ke- (Ulangan B)							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
H15	180.634	180.035	179.402	178.757	178.193	177.647	177.043	176.490	186.144	185.557	184.893	184.231	183.699	183.138	182.574	182.042
H16	184.556	184.185	183.732	183.232	182.789	182.169	181.599	180.635	184.375	183.746	183.075	182.420	181.857	181.296	180.660	180.152
H17	198.247	197.747	197.116	196.479	196.027	195.452	194.899	194.351	189.793	189.278	188.787	188.331	188.030	187.402	186.803	186.192
H18	190.197	189.901	189.322	188.598	188.154	187.575	187.084	186.592	196.734	196.277	196.732	195.135	194.707	194.128	193.590	192.962
KONTROL	195.006	193.828	192.725	191.623	190.853	190.128	189.311	188.530	186.173	185.085	184.232	183.257	182.631	182.066	181.425	180.882

Contoh perhitungan % susut berat pada perlakuan H15 ulangan A

Berat awal buah lengkeng (W1) = 180.634

Berat akhir buah lengkeng (W2) = 176.490

$$\% \text{ susut berat} = \frac{W1 - W2}{W1} \times 100\%$$

$$\% \text{ susut berat} = \frac{180.634 - 176.490}{180.634} \times 100$$

% susut berat = 2,28%

LAMPIRAN 11

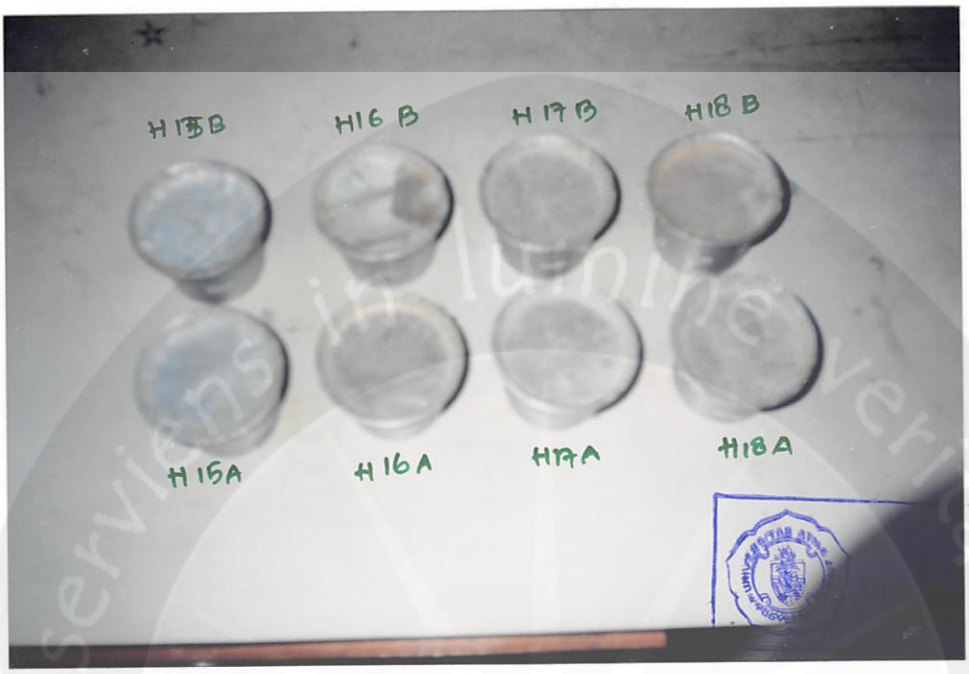
Tabel 15 . Persen susut berat buah Lengkeng pada hari perlakuan pada 2 ulangan

Perlakuan	Persen Susut Berat Buah pada hari ke- (Ulangan A)								Persen Susut Berat Buah pada hari ke- (Ulangan B)							
	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
H15	0	0.33	0.35	0.36	0.32	0.31	0.34	0.31	0	0.32	0.36	0.36	0.29	0.31	0.31	0.29
H16	0	0.20	0.25	0.27	0.24	0.34	0.33	0.53	0	0.34	0.37	0.36	0.31	0.31	0.35	0.28
H17	0	0.25	0.32	0.32	0.23	0.29	0.28	0.28	0	0.27	0.25	0.24	0.16	0.33	0.32	0.33
H18	0		0.30	0.39	0.24	0.30	0.26	0.26	0	0.23	0.23	0.31	0.22	0.30	0.28	0.32
KONTROL	0	0.60	0.57	0.57	0.40	0.38	0.43	0.41	0	0.58	0.46	0.53	0.34	0.31	0.35	0.30

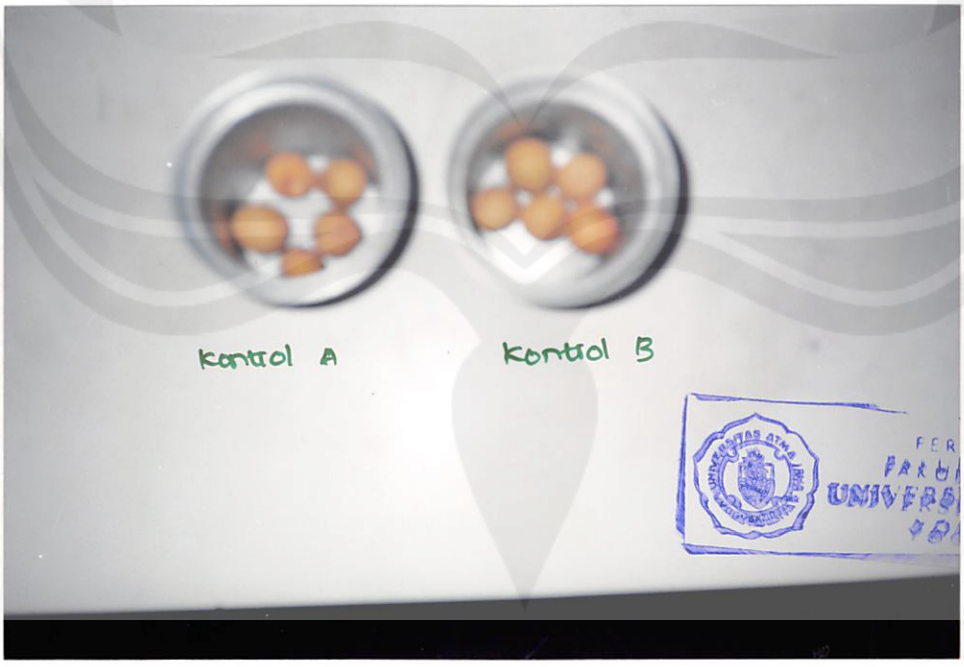
Tabel 16 . Rata-rata persen susut berat buah Lengkeng

Perlakuan	% susut berat buah Lengkeng pada hari ke-							
	0	1	2	3	4	5	6	7
H15	0	0.325	0.355	0.36	0.305	0.31	0.325	0.30
H16	0	0.27	0.31	0.315	0.275	0.325	0.34	0.405
H17	0	0.26	0.285	0.28	0.195	0.31	0.30	0.305
H18	0	0.19	0.265	0.35	0.23	0.30	0.27	0.29
Kontrol	0	0.59	0.515	0.55	0.37	0.345	0.39	0.355

LAMPIRAN 12



Gambar 14. Buah lengkeng yang ditutup dengan film selulosa masa inkubasi 15 sampai 18 hari.



Gambar 15. Buah lengkeng yang tidak ditutup dengan film selulosa

LAMPIRAN 13

Gambar 16. Gambar alat Soxhlet dalam pengukuran kadar selulosa

HASIL PERHITUNGAN STATISTIKA

LAMBDA-KAPPA 15:50 Wednesday, Dec 06, 2000

DATA: TEBAL FILM

	HARI			
ULANGAN	15	16	17	18
A	0.375	0.405	0.453	0.473
B	0.343	0.395	0.440	0.462
RERATA	0.359	0.400	0.446	0.467

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	4	15 16 17 18
ULANGAN	2	A B

Number of observations in data set = 8
Analysis of Variance Procedure

Dependent Variable: TBL_FILM

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	3	0.01411536	0.00470512	26.66	0.0042
Error	4	0.00070583	0.00017646		
Corrected Total	7	0.01482119			

R-Square	C.V.	Root MSE	TBL_FILM Mean
0.952377	3.174971	0.013284	0.41838750

Duncan's Multiple Range Test for variable: TBL_FILM
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 4 MSE= 0.000176

Number of Means	2	3	4
Critical Range	.0369	.0377	.0379

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
C	0.467	2	18
C			
C	0.446	2	17
B	0.400	2	16
A	0.359	2	15

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DATA: TENSILE STRENGTH

ULANGAN	HARI			
	15	16	17	18
A	19.18	13.78	16.05	25.67
B	6.53	16.42	16.43	24.19
RERATA	12.86	15.10	16.24	24.93

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	4	15 16 17 18
ULANGAN	2	A B

Number of observations in data set = 8
Analysis of Variance Procedure

Dependent Variable: TENSL_ST

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	3	167.8742375	55.9580792	2.64	0.1855
Error	4	84.6634500	21.1658625		
Corrected Total	7	252.5376875			

R-Square	C.V.	Root MSE	TENSL_ST Mean
0.664749	26.62213	4.600637	17.2812500

Duncan's Multiple Range Test for variable: TENSL_ST
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 4 MSE= 21.16586

Number of Means	2	3	4
Critical Range	12.80	13.07	13.12

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
C	24.930	2	18
B	16.240	2	17
B	15.100	2	16
A	12.855	2	15

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DATA: ELONGASI

ULANGAN	HARI			
	15	16	17	18
A	12.99	67.21	30.25	61.26
B	7.23	10.89	68.70	35.41
RERATA	10.11	39.05	49.48	48.33

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	4	15 16 17 18
ULANGAN	2	A B

Number of observations in data set = 8
Analysis of Variance Procedure

Dependent Variable: ELONGASI

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	3	2022.234450	674.078150	1.01	0.4763
Error	4	2675.872500	668.968125		
Corrected Total	7	4698.106950			

R-Square	C.V.	Root MSE	ELONGASI Mean
0.430436	70.39374	25.86442	36.7425000

Duncan's Multiple Range Test for variable: ELONGASI
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 4 MSE= 668.9681

Number of Means	2	3	4
Critical Range	71.94	73.46	73.74

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
C	49.48	2	17
C	48.33	2	18
B	39.05	2	16
A	10.11	2	15

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DATA: WATER VAPOUR TRANSMITION RATE

	HARI			
ULANGAN	15	16	17	18
A	6.170	5.573	4.578	4.578
B	6.768	5.976	5.374	4.180
RERATA	6.469	5.771	4.976	2.809

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	4	15 16 17 18
ULANGAN	2	A B

Number of observations in data set = 8
Analysis of Variance Procedure

Dependent Variable: WVTR

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	3	18.35640000	6.11880000	87.41	0.0004
Error	4	0.28000000	0.07000000		
Corrected Total	7	18.63640000			

R-Square	C.V.	Root MSE	WVTR Mean
0.984976	0.373905	0.264575	70.7600000

Duncan's Multiple Range Test for variable: WVTR
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 4 MSE= 0.07

Number of Means	2	3	4
Critical Range	0.736	0.751	0.754

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
A	6.469	2	15
B	5.771	2	16
C	4.976	2	17
D	2.809	2	18

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DATA: KADAR SELULOSA

ULANGAN	HARI			
	15	16	17	18
A	19.06	23.67	29.21	31.69
B	14.71	20.06	29.96	30.60
RERATA	16.88	21.87	29.58	31.15

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	4	15 16 17 18
ULANGAN	2	A B

Number of observations in data set = 8
Analysis of Variance Procedure

Dependent Variable: SELULOSA

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	3	268.7942000	89.5980667	21.27	0.0064
Error	4	16.8526000	4.2131500		
Corrected Total	7	285.6468000			

R-Square	C.V.	Root MSE	SELULOSA Mean
0.941002	8.253301	2.052596	24.8700000

Duncan's Multiple Range Test for variable: SELULOSA
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 4 MSE= 4.21315

Number of Means	2	3	4
Critical Range	5.709	5.830	5.852

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
D	31.145	2	18
C	29.585	2	17
B	21.865	2	16
A	16.885	2	15

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HARI	TBL_FILM	TENSL_ST	ELONGASI	WVTR	SELULOSA
15	0.359	12.855	10.110	6.469	16.885
16	0.400	15.100	39.050	5.771	21.865
17	0.446	16.240	49.475	4.976	29.585
18	0.467	24.930	48.335	3.809	31.145

Dependent Variable: TBL_FILM

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Regression	1	0.00691	0.00691	93.517	0.0105
Error	2	0.00015	0.00007		
C Total	3	0.00706			

Root MSE	0.00860	R-square	0.9791
Dep Mean	0.41839	Adj R-sq	0.9686
C.V.	2.05453		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-0.195000	0.06357475	-3.067	0.0919
HARI	1	0.037175	0.00384420	9.670	0.0105

Dependent Variable: TENSL_ST

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Regression	1	69.80716	69.80716	9.881	0.0443
Error	2	14.12996	7.06498		
C Total	3	83.93712			

Root MSE	2.65800	R-square	0.8317
Dep Mean	17.28125	Adj R-sq	0.7475
C.V.	15.38085		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-44.371000	19.65844189	-2.257	0.1526
HARI	1	3.736500	1.18869498	3.143	0.0880

Dependent Variable: ELONGASI

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Regression	1	782.50050	782.50050	6.846	0.1203
Error	2	228.61672	114.30836		
C Total	3	1011.11723			

Root MSE	10.69151	R-square	0.7739
Dep Mean	36.74250	Adj R-sq	0.6608
C.V.	29.09848		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-169.672500	79.07381001	-2.146	0.1650
HARI	1	12.510000	4.78138814	2.616	0.1203

Dependent Variable: WVTR

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Regression	1	9.16658	9.16658	1577.725	0.0006
Error	2	0.01162	0.00581		
C Total	3	9.17820			

Root MSE	0.07622	R-square	0.9987
Dep Mean	70.76000	Adj R-sq	0.9981
C.V.	0.10772		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	93.101000	0.56374374	165.148	0.0001
HARI	1	-1.354000	0.03408812	-39.721	0.0006

Dependent Variable: SELULOSA

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Prob>F
Regression	1	127.51250	127.51250	37.043	0.0259
Error	2	6.88460	3.44230		
C Total	3	134.39710			

Root MSE	1.85534	R-square	0.9488
Dep Mean	24.87000	Adj R-sq	0.9232
C.V.	7.46017		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	T for H0: Parameter=0	Prob > |T|
INTERCEP	1	-58.455000	13.72201917	-4.260	0.0509
HARI	1	5.050000	0.82973490	6.086	0.0259

DATA: % SUSUT BERAT

ULANGAN	HARI				
	Kontrol	15	16	17	18
A	3.320	2.240	2.130	1.990	1.895
B	2.840	2.200	2.110	1.897	1.920
RERATA	3.080	2.240	2.120	1.943	1.907

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
HARI	5	15 hr 16 hr 17 hr 18 hr Kontrol
ULANGAN	2	A B

Number of observations in data set = 10
Analysis of Variance Procedure

Dependent Variable: SUSUTBRT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
HARI	4	1.83362460	0.45840615	18.60	0.0033
Error	5	0.12323700	0.02464740		
Corrected Total	9	1.95686160			

R-Square	C.V.	Root MSE	SUSUTBRT Mean
0.937023	6.952214	0.156995	2.25820000

Duncan's Multiple Range Test for variable: SUSUTBRT
NOTE: This test controls the type I comparisonwise error rate, not the experimentwise error rate

Alpha= 0.05 df= 5 MSE= 0.024647

Number of Means	2	3	4	5
Critical Range	0.404	0.416	0.421	0.423

Means with the same letter are not significantly different.

Duncan Grouping	Mean	N	HARI
A	3.080	2	Kontrol
A			
B	2.240	2	15 hr
B			
B	2.120	2	16 hr
B			
C	1.943	2	17 hr
C			
C	1.907	2	18 hr