Perpustakaan Unika

LAMPIRAN 1. Anova Persen Perpanjangan *Edible Film*

Oneway

ANOVA

ELONGATI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8878,242	7	1268,320	7,613	,000
Within Groups	2665,446	16	166,590		
Total	11543,687	23			

Post Hoc Tests

Homogeneous Subsets

ELONGATI

Duncan[a]

kode	N	Subset for alpha = .05			
		1	2	3	4
F	3	33,8000			
H	3	40,3367	40,3367		
A	3	57,1750	57,1750	57,1750	
B	3		58,1033	58,1033	
G	3		63,0267	63,0267	
D	3			65,8600	
E	3			75,8667	
C	3				100,0600
Sig.		,050	,064	,128	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Perpustakaan Unika

LAMPIRAN 2. Anova Kekuatan Renggangan Putus *Edible Film*

Oneway

ANOVA

TEN1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,379	7	5,412E-02	9,394	,000
Within Groups	9,219E-02	16	5,762E-03		
Total	,471	23			

Post Hoc Tests

Homogeneous Subsets

TEN1

Duncan[a]

kode	N	Subset for alpha = .05			
		1	2	3	4
A	3	,9946			
C	3	1,0162			
B	3	1,1228	1,1228		
E	3		1,1666	1,1666	
G	3		1,2343	1,2343	
H	3		1,2632	1,2632	1,2632
D	3			1,2784	1,2784
F	3				1,3853
Sig.		,066	,052	,115	,079

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Perpustakaan Unika

LAMPIRAN 3. Anova Ketebalan *Edible Film*

Oneway

ANOVA

KETEBALA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4,707E-02	7	6,724E-03	73,351	,000
Within Groups	1,467E-03	16	9,167E-05		
Total	4,853E-02	23			

Post Hoc Tests

Homogeneous Subsets

KETEBALA

Duncan[a]

kode	N	Subset for alpha = .05				
		1	2	3	4	5
E	3	,2133				
G	3		,2300			
H	3		,2333			
C	3			,2767		
D	3			,2833	,2833	
A	3			,2900	,2900	
F	3				,3000	
B	3					,3600
Sig.		1,000	,675	,125	,059	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Perpustakaan Unika

LAMPIRAN 4. Anova Permeabilitas Uap Air *Edible Film*

Oneway

ANOVA

PERM1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,514	7	7,348E-02	11,866	,000
Within Groups	9,907E-02	16	6,192E-03		
Total	,613	23			

Post Hoc Tests

Homogeneous Subsets

PERM1

Duncan[a]

kode	N	Subset for alpha = .05		
		1	2	3
H	3	-,9996		
D	3		-,8258	
E	3		-,8199	
F	3		-,8154	
G	3		-,7508	
B	3		-,7311	
A	3			-,5807
C	3			-,4945
Sig.		1,000	,201	,199

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Perpustakaan Unika

LAMPIRAN 5. Anova Kadar Air *Edible Film*

Oneway

ANOVA

KADARAIR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	154,798	7	22,114	29,910	,000
Within Groups	11,830	16	,739		
Total	166,627	23			

Post Hoc Tests

Homogeneous Subsets

KADARAIR

Duncan[a]

kode	N	Subset for alpha = .05				
		1	2	3	4	5
G	3	17,9889				
H	3	19,2863	19,2863			
D	3		20,0554			
F	3		20,1096			
E	3		20,2013			
B	3			21,9356		
A	3				24,4088	
C	3					26,0284
Sig.		,083	,248	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Perpustakaan Unika

LAMPIRAN 6. Korelasi Antara Parameter Fisik dan Kimia *Edible Film*

Correlations

		ELONGATI	KETEBALA	KADARAIR	TEN1	PERM1
ELONGATI	Pearson Correlation	1,000	-,106	,414*	-,388	,570**
	Sig. (2-tailed)	,	,624	,044	,061	,004
	N	24	24	24	24	24
KETEBALA	Pearson Correlation	-,106	1,000	,379	-,145	,309
	Sig. (2-tailed)	,624	,	,068	,500	,141
	N	24	24	24	24	24
KADARAIR	Pearson Correlation	,414*	,379	1,000	-,759**	,736**
	Sig. (2-tailed)	,044	,068	,	,000	,000
	N	24	24	24	24	24
TEN1	Pearson Correlation	-,388	-,145	-,759**	1,000	-,616**
	Sig. (2-tailed)	,061	,500	,000	,	,001
	N	24	24	24	24	24
PERM1	Pearson Correlation	,570**	,309	,736**	-,616**	1,000
	Sig. (2-tailed)	,004	,141	,000	,001	,
	N	24	24	24	24	24

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Perpustakaan Unika

LAMPIRAN 7. Hasil Uji T *Edible Film* dengan Perlakuan Penambahan Isolat Protein

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
ELONGATI	Equal variances assumed	1,978	22	,061	17,0421
	Equal variances not assumed	1,978	21,464	,061	17,0421
KETEBALA	Equal variances assumed	3,997	22	,001	5,833E-02
	Equal variances not assumed	3,997	22,000	,001	5,833E-02
KADARAIR	Equal variances assumed	4,651	22	,000	3,7105
	Equal variances not assumed	4,651	16,226	,000	3,7105
TENS1	Equal variances assumed	-3,110	22	,005	-,2089
	Equal variances not assumed	-3,110	21,849	,005	-,2089
PERM1	Equal variances assumed	3,419	22	,002	,1884
	Equal variances not assumed	3,419	21,723	,002	,1884

Perpustakaan Unika

LAMPIRAN 8. Hasil Uji T *Edible Film* dengan Perlakuan Penambahan *Casein*

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
ELONGATI	Equal variances assumed	3,160	22	,005	24,5071
	Equal variances not assumed	3,160	19,310	,005	24,5071
KETEBALA	Equal variances assumed	-2,452	22	,023	-4,1667E-02
	Equal variances not assumed	-2,452	19,750	,024	-4,1667E-02
KADARAIR	Equal variances assumed	1,715	22	,100	1,8101
	Equal variances not assumed	1,715	13,554	,109	1,8101
TENS1	Equal variances assumed	-3,186	22	,004	-,2124
	Equal variances not assumed	-3,186	21,381	,004	-,2124
PERM1	Equal variances assumed	3,234	22	,004	,1815
	Equal variances not assumed	3,234	21,667	,004	,1815

Perpustakaan Unika

LAMPIRAN 9. Hasil Uji T *Edible Film* dengan Perlakuan Penambahan *Skim*

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
ELONGATI	Equal variances assumed	-3,160	22	,005	-24,5071
	Equal variances not assumed	-3,160	19,310	,005	-24,5071
KETEBALA	Equal variances assumed	2,452	22	,023	4,167E-02
	Equal variances not assumed	2,452	19,750	,024	4,167E-02
KADARAIR	Equal variances assumed	-1,715	22	,100	-1,8101
	Equal variances not assumed	-1,715	13,554	,109	-1,8101
TENS1	Equal variances assumed	3,186	22	,004	,2124
	Equal variances not assumed	3,186	21,381	,004	,2124
PERM1	Equal variances assumed	-3,234	22	,004	-,1815
	Equal variances not assumed	-3,234	21,667	,004	-,1815

Perpustakaan Unika

LAMPIRAN 10. Hasil Uji T *Edible Film* dengan Perlakuan Penambahan *Antifoam*

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
ELONGATI	Equal variances assumed	1,225	22	,234	11,0846
	Equal variances not assumed	1,225	21,384	,234	11,0846
KETEBALA	Equal variances assumed	-1,982	22	,060	-3,5000E-02
	Equal variances not assumed	-1,982	15,938	,065	-3,5000E-02
KADARAIR	Equal variances assumed	-,743	22	,466	-,8240
	Equal variances not assumed	-,743	18,006	,467	-,8240
TEN1	Equal variances assumed	,270	22	,789	2,175E-02
	Equal variances not assumed	,270	19,867	,790	2,175E-02
PERM1	Equal variances assumed	-,456	22	,653	-3,0932E-02
	Equal variances not assumed	-,456	16,744	,654	-3,0932E-02

Perpustakaan Unika

LAMPIRAN 11. Kekuatan Renggangan Putus dan Persen Perpanjangan *Film* dari Berbagai Jenis *Film*

Jenis *Film*	**Kekuatan Renggangan Putus (MPa)**	**Persen Perpanjangan Film (%)**
Wheat Gluten:Lactic Acid (1:1)	0.01	75
Wheat Gliadin:Lactic Acid (1:1)	0.01	72
Wheat Glutenin:Lactic Acid (1:1)	0.02	63
Wheat Gluten:Glycerin (2:5:1)	2.6	276
Wheat Gluten:Soy Protein:Glycerin (1.75:0.75:1)	4.4	233
Wheat Gluten:Glycerin (2:9:1)	3.9	-
Corn Zein:Glycerin (2:4:1)	13.2	-
Corn Zein:Glycerin (3:9:1)	0.4	-
Soy Protein:Glycerin (1:7:1) pH = 8	4.3	78
Collagen:Glycerin (3.4:1)	8.1	25
Collagen:Sorbitol:Glycerin (8.8:0.8:1)	9.1	38
LDPE	8.6-17.3	500
HDPE	17.3-34.6	300
PVDC	48.4-138	20-40
EVA	13.8	650-800
PET	175	70-100
OPS	62.2-82.7	20

Perpustakaan Unika

LAMPIRAN 12. Ketebalan dan Permeabilitas Uap Air dari Berbagai Jenis *Film*

Jenis *Film*	**Ketebalan (mm)**	**Permeabilitas Uap Air (g.mm / m^2. hari. mmHg)**
Zein:Glycerin (4:9:1)	0.12-0.33	7.69-11.49
Gluten:Glycerin (3:1:1)	0.38-0.42	52.1-54.4
Gluten:Glycerin (2:5:1)	0.140	108.4
Sodium Caseinate (SC)	0.083	36.7
Buffer Treated (pH 4.6) SC	0.072	22.3
SC:Acetylated Monoglyceride (2:8)	0.040	15.8
Whey Protein:Glycerin (1:6:1)	0.106	6.64
Whey Protein:Sorbitol (1:6:1)	0.129	62.0
WP:Beeswax:Sorbitol (3:5:1:8:1)	0.162	20.4
Hydroxypropylmethylcellulose	0.019	9.12
HPMC:Stearic Acid (0.8:1)	0.019	0.026
HPMC:PEG (9:1)	0.036	6.48
SA:PA:HPMC:PEG	0.041	0.336
SA:PA:MC:HPMC:PEG	0.056	0.058
M.BW:MC:PEG (11:3:4)	0.05	1.48
SA:HPMC (1:1:1)	0.019	0.106
Acetylated Monoglyceride		2.00-5.36
Paraffin Wax		0.019
Chocolate		1.06
Shellac		0.40-0.571
Beeswax	0.04-0.05	0.0502
Microcrystaline	0.09-0.011	0.0292
Carnauba Wax	0.09-0.011	0.0285
Candelilla Wax	0.09-0.011	0.0152
LDPE		0.079
HDPE		0.02
Saran		0.0086-0.034
EVOH (68% VOH)		0.252
Cellophane		7.27