

## 7. LAMPIRAN

### Lampiran 1. Uji Normalitas SPSS

Tests of Normality							
	Konsentrasi_CaCO3	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Whiteness	0%	,272	6	,188	,801	6	,060
	0,5%	,187	6	,200*	,958	6	,807
	1%	,187	6	,200*	,951	6	,751
	1,5%	,267	6	,200*	,901	6	,378
WHC	0%	,212	6	,200*	,933	6	,607
	0,5%	,212	6	,200*	,933	6	,607
	1%	,293	6	,117	,915	6	,473
	1,5%	,223	6	,200*	,908	6	,421
Kapasitas_ Emulsi	0%	,254	6	,200*	,866	6	,212
	0,5%	,340	6	,028	,860	6	,189
	1%	,195	6	,200*	,861	6	,191
Kestabilan_ Emulsi	1,5%	,191	6	,200*	,896	6	,352
	0%	,223	6	,200*	,908	6	,421
	0,5%	,195	6	,200*	,861	6	,191
	1%	,188	6	,200*	,957	6	,794
Kapasitas_ F oaming	1,5%	,175	6	,200*	,945	6	,700
	0%	,280	6	,154	,840	6	,131
	0,5%	,174	6	,200*	,947	6	,717
	1%	,198	6	,200*	,897	6	,357
Kelarutan_ P roteiin	1,5%	,202	6	,200*	,957	6	,793
	0%	,197	6	,200*	,946	6	,709
	0,5%	,230	6	,200*	,943	6	,685
	1%	,213	6	,200*	,911	6	,440
Gelasi	1,5%	,184	6	,200*	,955	6	,779
	0%	,213	6	,200*	,921	6	,509
	0,5%	,315	6	,064	,815	6	,080
	1%	,259	6	,200*	,887	6	,302
	1,5%	,226	6	,200*	,875	6	,248

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## Tests of Normality

	Konsentrasi_CaCO3	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
L	0%	,229	6	,200 <sup>*</sup>	,835	6	,118
	0,5%	,224	6	,200 <sup>*</sup>	,927	6	,556
	1%	,282	6	,147	,805	6	,066
	1,5%	,232	6	,200 <sup>*</sup>	,923	6	,525
a	0%	,214	6	,200 <sup>*</sup>	,881	6	,272
	0,5%	,204	6	,200 <sup>*</sup>	,930	6	,582
	1%	,246	6	,200 <sup>*</sup>	,905	6	,401
	1,5%	,179	6	,200 <sup>*</sup>	,893	6	,332
b	0%	,282	6	,149	,807	6	,068
	0,5%	,261	6	,200 <sup>*</sup>	,883	6	,285
	1%	,266	6	,200 <sup>*</sup>	,826	6	,100
	1,5%	,182	6	,200 <sup>*</sup>	,964	6	,853

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Lampiran 2. Uji *One Way* ANOVA

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
L	Between Groups	39,342	3	13,114	8,748	,001
	Within Groups	29,981	20	1,499		
	Total	69,323	23			
a	Between Groups	,111	3	,037	,468	,708
	Within Groups	1,576	20	,079		
	Total	1,686	23			
b	Between Groups	10,913	3	3,638	1,153	,352
	Within Groups	63,119	20	3,156		
	Total	74,032	23			

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Whiteness	Between Groups	45,975	3	15,325	25,580	,000
	Within Groups	11,982	20	,599		
	Total	57,957	23			
WHC	Between Groups	2,175	3	,725	32,824	,000
	Within Groups	,442	20	,022		
	Total	2,616	23			
Kapasitas_Emulsi	Between Groups	,044	3	,015	53,483	,000
	Within Groups	,005	20	,000		
	Total	,049	23			
Kestabilan_Emulsi	Between Groups	,083	3	,028	44,072	,000
	Within Groups	,013	20	,001		
	Total	,095	23			
Kapasitas_Foaming	Between Groups	,016	3	,005	77,758	,000
	Within Groups	,001	20	,000		
	Total	,018	23			
Kelarutan_Protein	Between Groups	8,049	3	2,683	3,381	,038
	Within Groups	15,873	20	,794		
	Total	23,922	23			
Gelasi	Between Groups	2,512	3	,837	5,171	,008
	Within Groups	3,238	20	,162		
	Total	5,750	23			
L	Between Groups	42,601	3	14,200	9,723	,000
	Within Groups	29,208	20	1,460		
	Total	71,809	23			
A	Between Groups	,108	3	,036	,455	,717
	Within Groups	1,586	20	,079		
	Total	1,695	23			
B	Between Groups	10,899	3	3,633	1,151	,353
	Within Groups	63,142	20	3,157		
	Total	74,041	23			

## Lampiran 3. Post Hoc Duncan

L

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05	
		1	2
0%	6	82,7933	
0,5%	6	83,3567	
1,5%	6		85,4933
1%	6		85,7067
Sig.		,435	,766

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

a

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05
		1
1,5%	6	,5117
1%	6	,6033
0,5%	6	,6650
0%	6	,6867
Sig.		,335

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**b**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05
		1
1,5%	6	12,5367
1%	6	13,3283
0,5%	6	13,6583
0%	6	14,4150
Sig.		,107

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Whiteness**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05		
		1	2	3
0%	6	77,2767		
0,5%	6		78,4500	
1%	6			80,1750
1,5%	6			80,7667
Sig.		1,000	1,000	,200

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Kadar\_Protein**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05	
		1	2
0%	6	37,0423	
0,5%	6	37,2333	
1%	6	37,9120	37,9120
1,5%	6		38,5057
Sig.		,124	,262

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Gelasi**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05	
		1	2
0%	6	3,5993	
0,5%	6		4,1928
1%	6		4,3025
1,5%	6		4,4517
Sig.		1,000	,305

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**WHC**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05		
		1	2	3
0%	6	1,9000		
0,5%	6		2,3000	
1%	6			2,5667
1,5%	6			2,6833
Sig.		1,000	1,000	,189

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Kapasitas\_Emulsi**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05		
		1	2	3
1,5%	6	,2900		
1%	6	,3050		
0,5%	6		,3675	
0%	6			,3933
Sig.		,132	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Kestabilan\_Emulsi**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05		
		1	2	3
1,5%	6	,2413		
1%	6		,3537	
0,5,%	6		,3767	,3767
0%	6			,3900
Sig.		1,000	,127	,367

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Kapasitas\_Foaming**

Duncan

Konsentrasi_CaCO3	N	Subset for alpha = 0.05		
		1	2	3
1,5%	6	,0705		
1%	6		,1175	
0,5%	6			,1289
0%	6			,1387
Sig.		1,000	1,000	,057

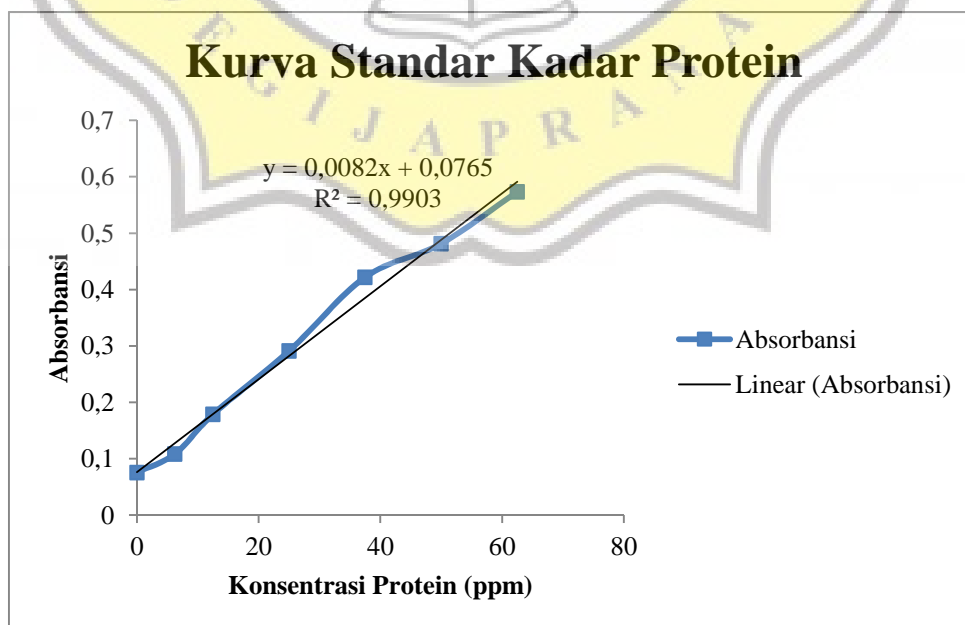
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

Lampiran 4. Gambar Hasil Uji Kurva Standar Metode Lowry



Lampiran 5. Kurva Standar Protein Surimi Bubuk Ikan Lele Dumbo





Lampiran 6. Gambar Sampel Surimi Kering Ikan Lele Dumbo Dengan Penambahan  $\text{CaCO}_3$



Sampel Surimi kering Kontrol



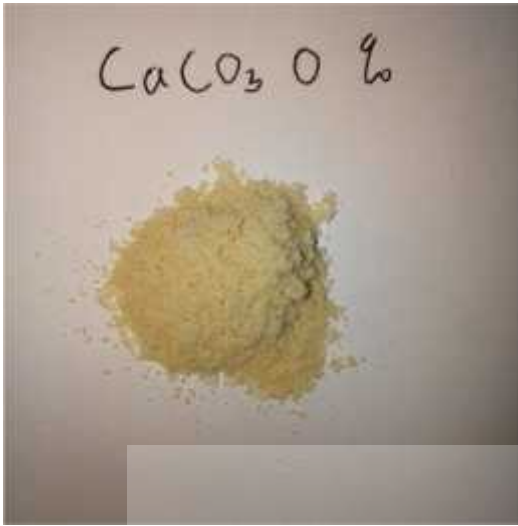
Sampel Surimi Kering dengan Penambahan  $\text{CaCO}_3$  0,5%



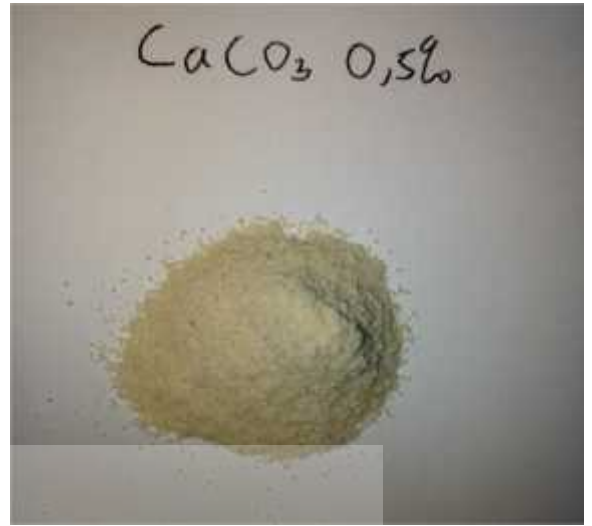
Sampel Surimi Kering dengan penambahan  $\text{CaCO}_3$  1%



Sampel Surimi Kering dengan Penambahan  $\text{CaCO}_3$  1,5%



Surimi bubuk Kontrol



Surimi bubuk dengan penambahan CaCO<sub>3</sub> 0,5%



Surimi bubuk dengan penambahan CaCO<sub>3</sub> 1%

Surimi bubuk dengan penambahan CaCO<sub>3</sub> 1,5%

## Lampiran 1. Data Mentah

Kadar protein (absorbansi)							
	0,8145		0,8282		0,8613		0,8761
	0,8511		0,8162		0,8445		0,8608
Kontrol	0,8423	0,5%	0,8168	1%	0,8312	1,5%	0,8374
	0,8267		0,8786		0,8674		0,8628
	0,8354		0,8542		0,8551		0,8618
	0,8452		0,8447		0,8627		0,8963

WHC							
	1,80		2,20		2,70		2,60
	1,60		2,00		2,60		2,80
Kontrol	2,00	0,5%	2,40	1%	2,40	1,5%	2,80
	2,10		2,30		2,60		2,70
	1,90		2,40		2,50		2,50
	2,00		2,50		2,60		2,70

Kapasitas Emulsi							
	0,38		0,36		0,32		0,27
	0,41		0,36		0,29		0,3
Kontrol	0,39	0,5%	0,38	1%	0,29	1,5%	0,3
	0,38		0,36		0,31		0,32
	0,35		0,35		0,3		0,27
	0,44		0,40		0,32		0,28

Kestabilan Emulsi						
	0,38		0,38		0,39	0,21
	0,4		0,36		0,33	0,26
Kontrol	0,42	0,5%	0,4	1%	0,37	0,22
	0,36		0,34		0,35	0,27
	0,36		0,38		0,32	0,24
	0,42		0,4		0,37	0,25

Kapasitas <i>Foaming</i>						
	0,13		0,12		0,12	0,06
	0,13		0,14		0,13	0,07
Kontrol	0,15	0,5%	0,13	1%	0,13	0,07
	0,13		0,14		0,11	0,07
	0,15		0,12		0,10	0,08
	0,15		0,13		0,12	0,07

Gelasi						
	3,11		3,91		4,90	4,17
	3,79		3,72		3,87	4,98
Kontrol	3,85	0,5%	3,74	1%	4,21	4,55
	3,98		3,98		4,25	4,27
	3,60		5,04		4,22	4,56
	3,27		4,77		4,37	4,19

<i>Whiteness (absorbansi)</i>															
	L*	a	b		L*	a	b		L*	a	b				
	82,14	1,03	15,67		82,74	0,52	13,28		86,29	0,52	15,52		87,13	0,36	12,92
	82,39	0,02	15,88		83,59	0,48	14,16		85,71	0,57	15,88		86,25	0,39	13,17
Kontrol	83,61	0,01	15,37	0,5%	83,72	0,59	14,13	1%	87,54	0,58	16,72	1,5%	87,67	0,46	14,00
	82,29	1,05	13,36		84,19	0,88	13,08		83,48	0,66	10,35		84,66	0,57	11,02
	82,74	0,99	13,23		83,02	0,77	12,86		84,71	0,64	11,35		85,84	0,65	11,53
	83,59	1,02	12,98		82,88	0,75	14,44		83,51	0,65	10,15		84,41	0,64	12,58

#### Lampiran 8. Perhitungan Rendemen

Berat ikan Lele Dumbo 10 ekor	= ± 4 kg
Berat ikan setelah difillet bersih	= ± 1236 gram
Berat ikan setelah dilumatkan	= ± 1210 gram
Berat surimi basah	= ± 1040 gram
Berat surimi bubuk	= ± 153 gram
Rendemen	= $\frac{153}{4000} \times 100\% = 3,82\%$

