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LAMPIRAN

1. Ukuran Partikel Ikan Gabus dengan Berbagai Perlakuan Suhu Ultrasonikasi dengan Menggunakan Ultrasonik Bath

Perlakuan	Ukuran Partikel (nm)			Rata-Rata
	T1	T2	T3	
Ultrasonikasi 30^{O}C	4252.10	2602.50	3037.60	3297.40
Ultrasonikasi 45^{O}C	2864.80	2159.10	2399.20	2474.37
Ultrasonikasi 60^{O}C	3859.90	3034.60	3000.90	3298.47

2. Ukuran Partikel Ikan Gabus dengan Berbagai Perlakuan Amplitudo dan Durasi Ultrasonikasi dengan Menggunakan Ultrasonik Probe

Perlakuan		Ukuran Partikel (nm)			Rata-rata
Amplitudo	Durasi	Ulangan 1	Ulangan 2	Ulangan 3	
20%	20	556.8	459.7	483.0	499.8
	40	513.4	542.5	454.1	503.3
	60	440.6	463.9	424.6	443.0
40%	20	645.1	1535.1	553.2	911.1
	40	451.5	1247.5	870.70	856.6
	60	533.7	923.9	488.7	648.8
60%	20	1268.0	1542.0	720.8	1176.9
	40	559.6	626.6	533.1	573.1
	60	653.0	672.8	750.2	692.0
80%	20	638.6	739.7	1146.0	841.4
	40	776.2	949.8	964.5	896.8
	60	841.4	1115.8	991.0	982.7

3. Analisa Sidik Ragam Hubungan Amplitudo dan Lama Ultrasonikasi dan Ukuran Partikel

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1833862.971[a]	11	166714.816	2.256	.046
Intercept	21728028.445	1	21728028.445	294.006	.000
Duration	136960.290	2	68480.145	.927	.410
Amplitudo	1108732.211	3	369577.404	5.001	.008
Duration * do	588170.470	6	98028.412	1.326	.284
	1773678.985	24	73903.291		
	25335570.401	36			
ed	3607541.957	35			

4. Uji lanjut Duncan Amplitudo

Amplitudo		N	Subset	
			1	2
Duncan[a,b]	20 %	9	482.0648	
	40 %	9		805.5000
	80 %	9		906.9981
	60 %	9		912.9926
	Sig.		1.000	.437

5. Ukuran Partikel Dispersi Ikan Gabus Sebelum dan Setelah Ultrasonikasi

Perlakuan	Ukuran Partikel (nm)			Rata-rata	SD
	U1	U2	U3		
Sebelum ultrasonikasi	1390.33	1300.80	1373.70	1354.94	47.62
Setelah ultrasonikasi	503.61	488.68	453.91	482.07	25.50

6. Hasil Analisa Uji t-test Ukuran Partikel Dispersi Ikan Gabus Sebelum dan Setelah Ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
PS	Equal variances assumed	27.99	4.00	0.00	872.88	31.19	786.28	959.47
	Equal variances not assumed	27.99	3.06	0.00	872.88	31.19	774.71	971.04

7. Polidispersitas dispersi ikan Gabus sebelum dan setelah ultrasonikasi

ıan	Polidispersitas			Rata-rata	SD
	U1	U2	U3		
ın ultrasonikasi	0.86	0.9	0.88	0.88	0.02
ultrasonikasi	0.36	0.34	0.32	0.34	0.02

8. Hasil Analisa Uji t-Test Polidispersitas Dispersi Ikan Gabus Sebelum dan Setelah Ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
PD	Equal variances assumed	33.07	4.00	0.00	0.54	0.02	0.49	0.59
	Equal variances not assumed	33.07	4.00	0.00	0.54	0.02	0.49	0.59

9. Total Padatan Terlarut Dispersi ikan Gabus Sebelum dan Setelah Ultrasonikasi

Perlakuan	Total Padatan Terlarut (%brix)			Rata-rata	Standar devisiasi
	U1	U2	U3		
Sebelum ultrasonikasi	23.4	24.17	21.37	22.98	1.45
Setelah ultrasonikasi	26.2	25.3	25	25.50	0.62

10. Hasil Analisa Uji t-Test Total Padatan Terlarut Dispersi Ikan Gabus Sebelum dan Setelah Ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
tss	Equal variances assumed	-2.77	4.00	0.05	-2.52	0.91	-5.05	0.01
	Equal variances not assumed	-2.77	2.72	0.08	-2.52	0.91	-5.59	0.55

11. Rasio Pemisahan Fase

Perlakuan	Rasio Pemisahan Fase (cm)			Rata-rata	Standar devisiasi
	1	2	3		
Sebelum ultrasonikasi	0.14	0.15	0.15	0.15	0.01
Setelah ultrasonikasi	0.17	0.17	0.15	0.16	0.01

12. Hasil Analisa Uji t-Test Rasio Pemisahan Fase Dispersi Ikan Gabus sebelum dan setelah ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
RPF	Equal variances assumed	-2.236	4	.089	-.01667	.00745	-.03736	.00403
	Equal variances not assumed	-2.236	2.941	.113	-.01667	.00745	-.04066	.00732

13. Viskositas dispersi Ikan Gabus sebelum dan setelah ultrasonikasi dengan Berbagai Variasi Kecepatan Viskometer

Kecepatan (rpm)	2.5	5	10	20	50	100
Viskositas dispersi ikan Gabus sebelum ultrasonikasi (mPas)	1893.05	514.80	388.89	228.96	174.53	176.36
Viskositas dispersi ikan Gabus setelah ultrasonikasi (mPas)	688.69	209.96	108.31	57.96	33.17	29.67

14. Viskositas dispersi ikan Gabus sebelum dan setelah ultrasonikasi

Perlakuan	Viskositas (mPas)			Rata-rata	Standar devisiasi
	U1	U2	U3		
Sebelum ultrasonikasi	155.36	204.7	116.14	158.73	36.23
Setelah ultrasonikasi	63.29	59.84	58.43	60.52	2.04

15. Hasil Analisa Uji t-Test Viskositas Dispersi Ikan Gabus sebelum dan setelah ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Viscos	Equal variances assumed	3.83	4.00	0.02	98.21	25.66	26.97	169.45
	Equal variances not assumed	3.83	2.01	0.06	98.21	25.66	-11.53	207.95

16. Stabilitas Ukuran Partikel Dispersi Ikan Gabus sebelum dan setelah ultrasonikasi

Produk	Ulangan	Ukuran Partikel (nm)				
		Hari 0	Hari ke-1	Hari ke-3	Hari ke- 5	Hari ke-7
Dispersi ikan Gabus sebelum ultrasonikasi	Ulangan 1	1390.3	1530.0	3126.8	2401.7	2118.6
	Ulangan 2	1300.8	1440.5	2520.3	1728.5	2036.0
	Ulangan 3	1373.7	1475.4	1620.2	1792.5	2468.6
	Rata-rata	1355.0±47.6	1482.0±45.1	2422.4±758.1	1974.2±371.6	2207.7±229.7
Dispersi Ikan Gabus setelah ultrasonikasi	Ulangan 1	503.6	587.0	637.3	708.8	957.6
	Ulangan 2	488.7	559.5	712.8	740.6	1000.3
	Ulangan 3	453.9	468.4	602.5	784.9	984.7
	Rata-rata	482.1±25.5	538.3±62.0	650.9±56.4	744.8±38.2	980.9±21.6

17. Stabilitas Polidispersitas Dispersi Ikan Gabus sebelum dan setelah ultrasonikasi

Produk	Ulangan	Polidipsersitas				
		Hari 0	Hari ke-1	Hari ke-3	Hari ke-5	Hari ke-7
Dispersi ikan Gabus sebelum ultrasonikasi	Ulangan 1	0.86	0.79	1.21	1.02	1.13
	Ulangan 2	0.90	0.64	0.90	1.11	1.10
	Ulangan 3	0.88	0.80	1.09	0.99	1.04
	Rata-rata	0.88±0.02	0.74±0.09	1.07±0.16	1.04±0.06	1.09±0.04
Dispersi ...ous ...kasi	Ulangan 1	0.36	0.43	0.43	0.48	0.62
	Ulangan 2	0.34	0.38	0.50	0.52	0.65
	Ulangan 3	0.32	0.34	0.43	0.54	0.67
	Rata-rata	0.34±0.02	0.39±0.05	0.46±0.04	0.51±0.03	0.65±0.03

18. Total Peptida Dispersi Ikan Gabus Sebelum danSsetelah Ultrasonikasi

Perlakuan	Total Kelarutan Peptida (mg/L)		Rata-rata	Standar devisiasi
	U1	U2		
Sebelum ultrasonikasi	7.10	8.09	7.60	0.70
Setelah ultrasonikasi	8.27	8.38	8.33	0.08

19. Hasil Analisa Uji t-Test Total Peptida Dispersi Ikan Gabus sebelum dan setelah ultrasonikasi

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
total_ peptida	Equal variances assumed	-1.47	2.00	0.28	-0.73	0.50	-2.87	1.41
	Equal variances not assumed	-1.47	1.02	0.38	-0.73	0.50	-6.71	5.25

20. Dokumentasi Penelitian

Pembersihan ikan

Pengukusan ikan

Pemisahan Daging Ikan dengan Tulangnya

Pengeringan Ikan

Pengahalusan daging Ikan Kering

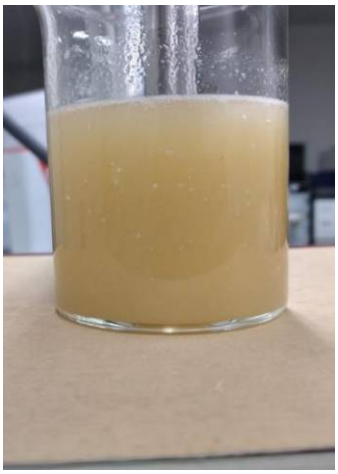
Pengayakan Bubuk Ikan

ısi Botol

Pembuatan Dispersi Ikan Gabus

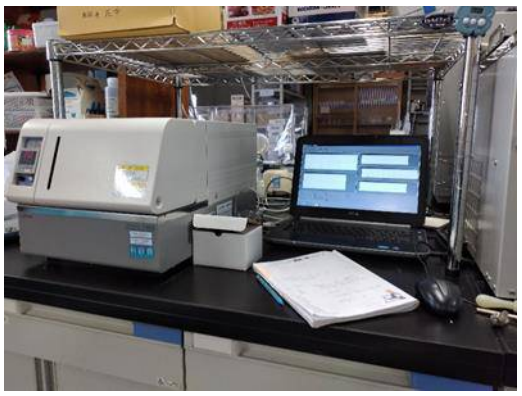
Ultrasonik Bath

Ultrasonik Homogenizer/probe



Gelembung yang dihasilkan
Saat ultrasonikasi

Homogenisasi



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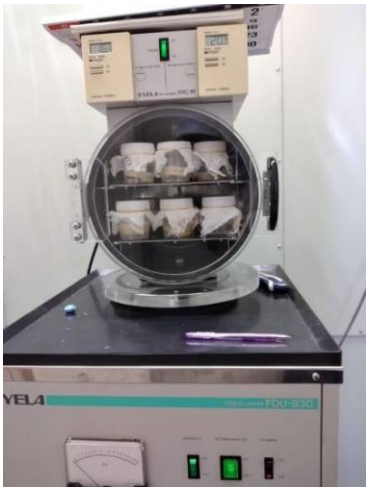
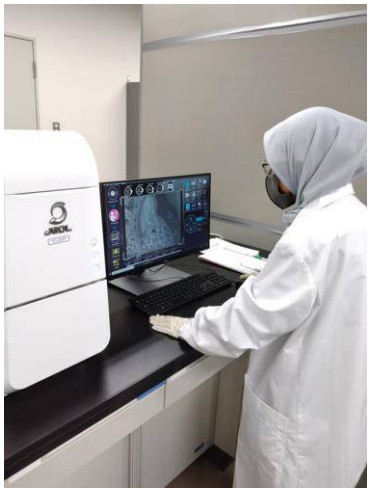
a Ukuran partikel
olidispersitas



Freeze drying



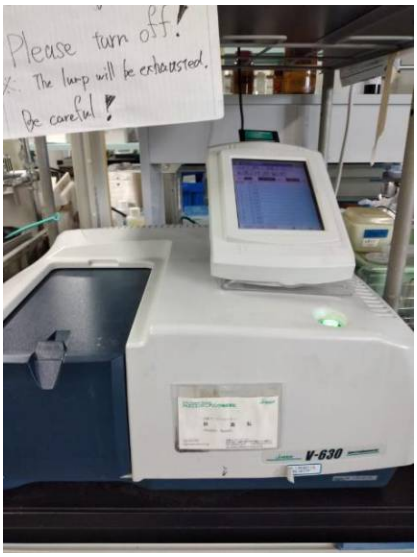
Analisa Morfologi Partikel

Analisa viskositas dan laju alir

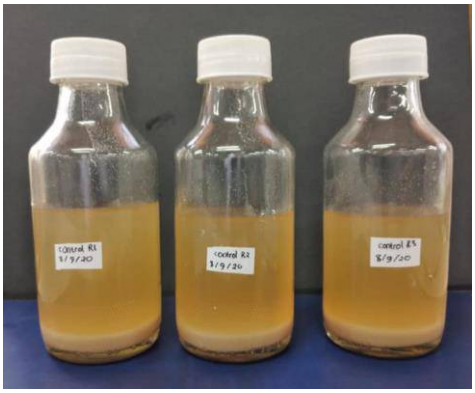
Analisa total padatan terlarut

untuk penyimpanan

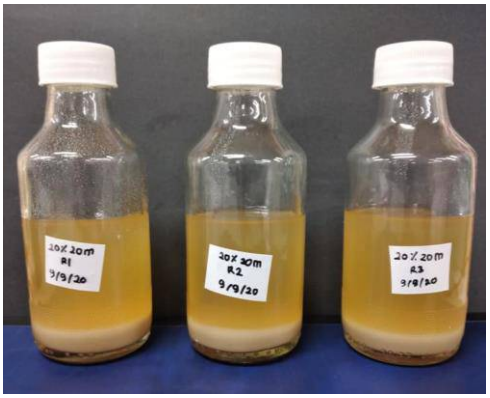
Kondisi dispersi
setelah penyimpanan



Analisa Kelarutan Peptida



Dispersi Ikan Gabus
sebelum ultrasonikasi
setelah penyimpanan 1 hari



Dispersi Ikan Gabus
setelah ultrasonikasi
setelah penyimpanan 1 hari