

## DAFTAR PUSTAKA

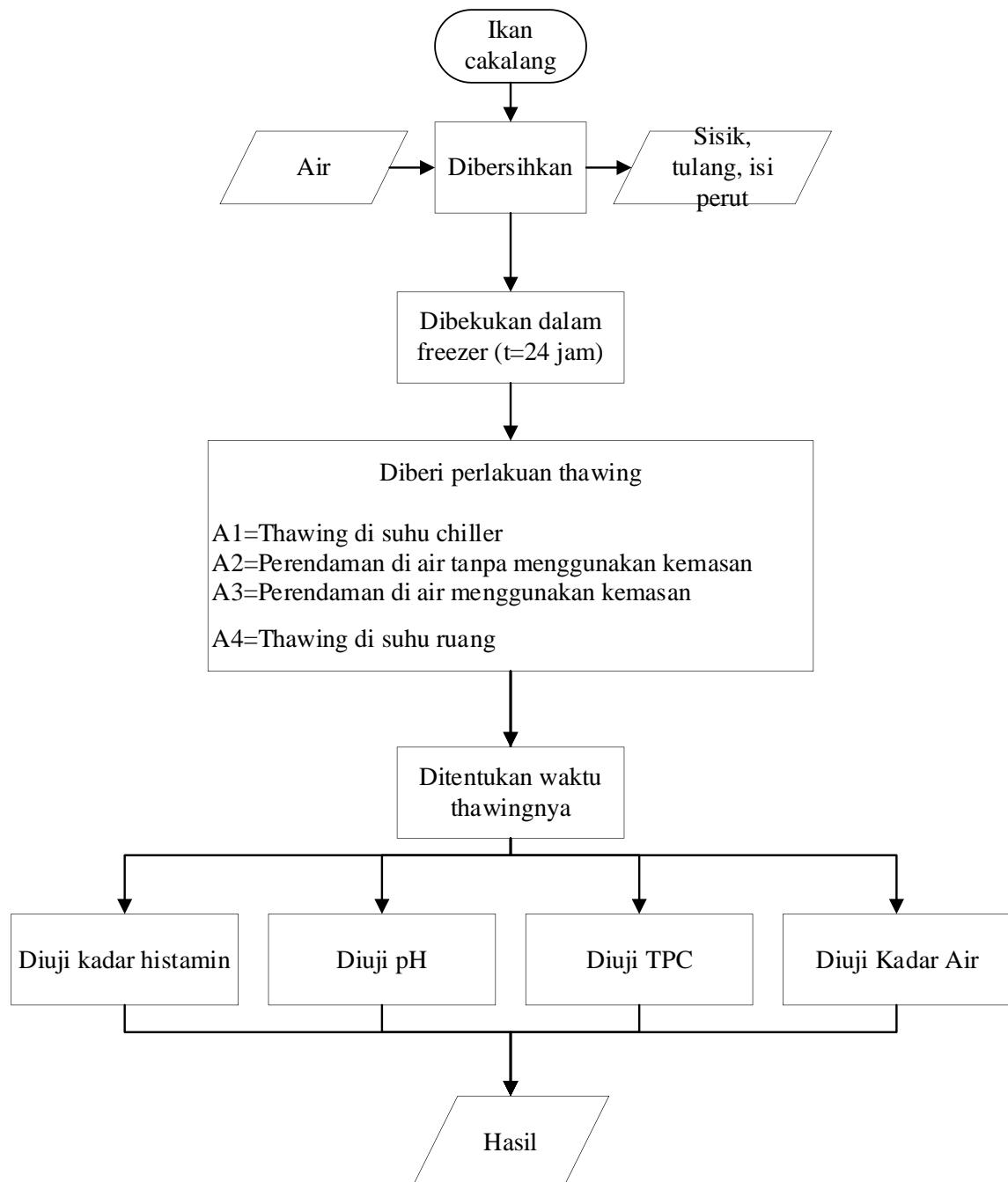
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## LAMPIRAN

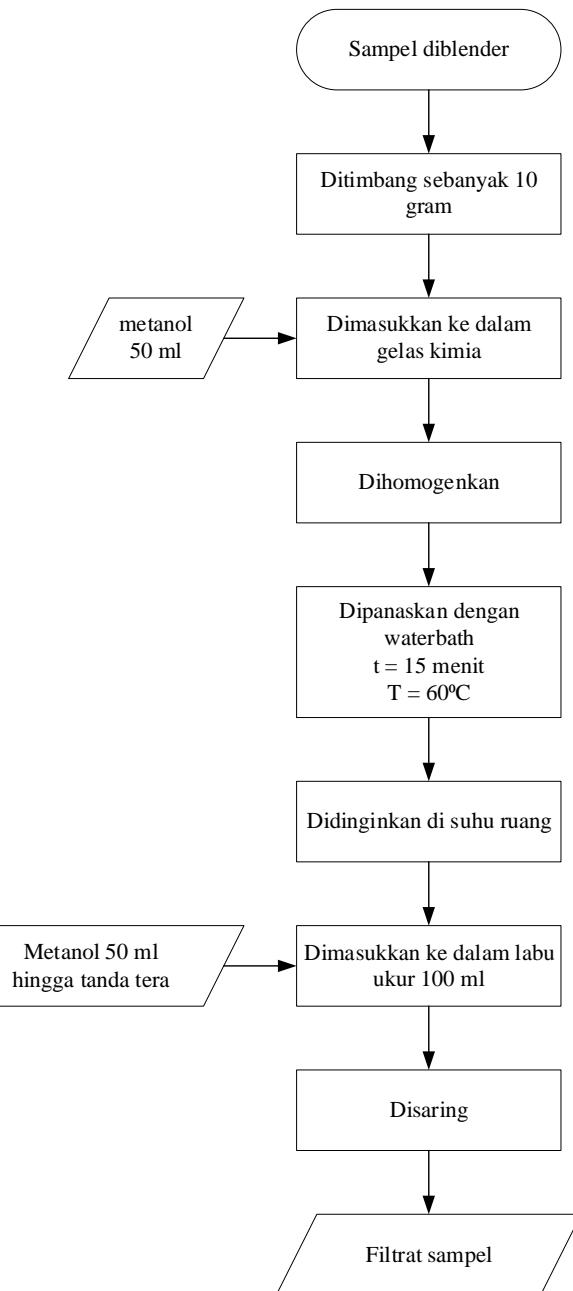
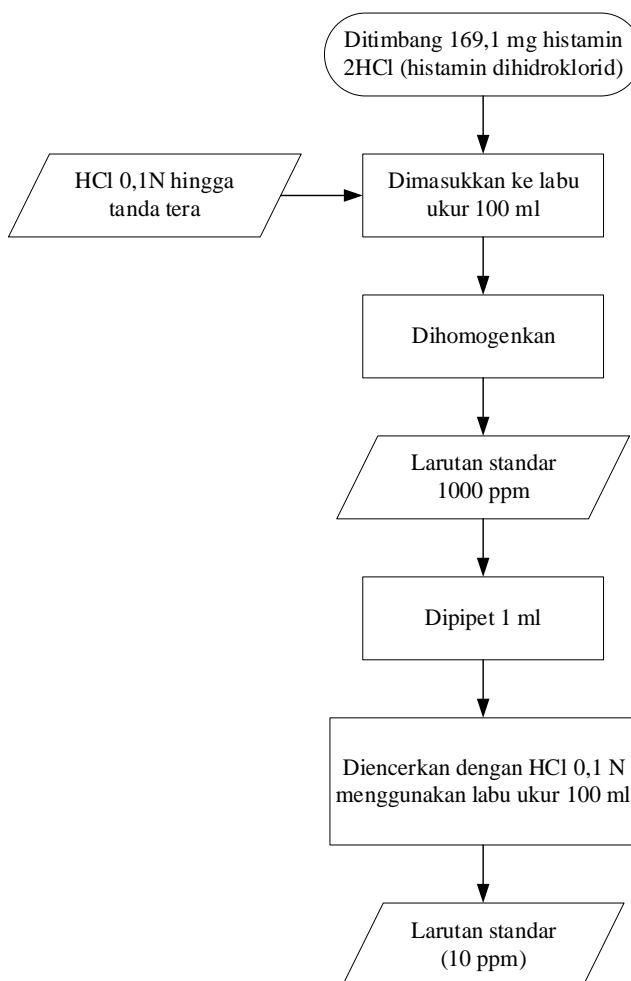
Lampiran 1. Diagram Alir Prosedur Penelitian



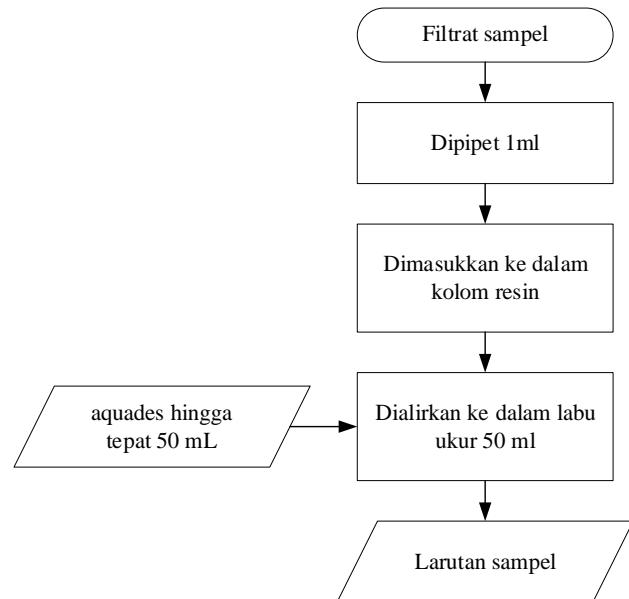
Lampiran 2. Diagram Alir Pengujian Kadar Histamin Ikan Cakalang

b. Pengujian Histamin

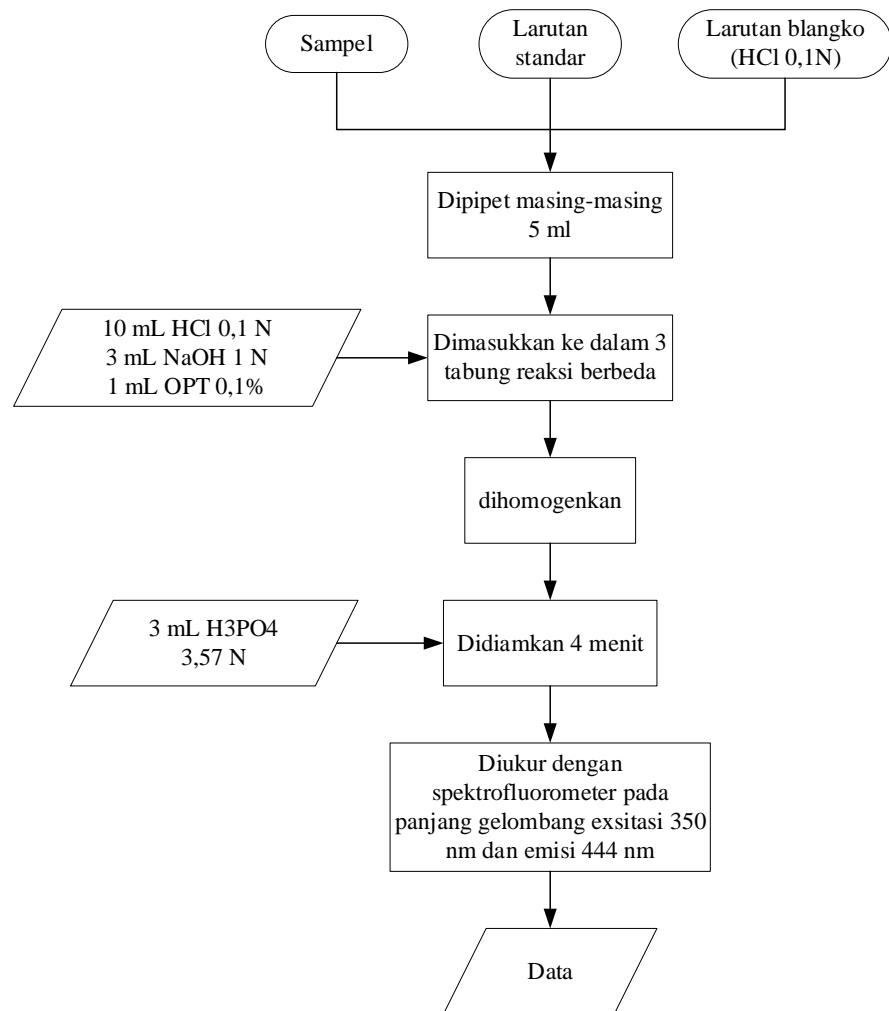
a. Pembuatan Larutan Standar



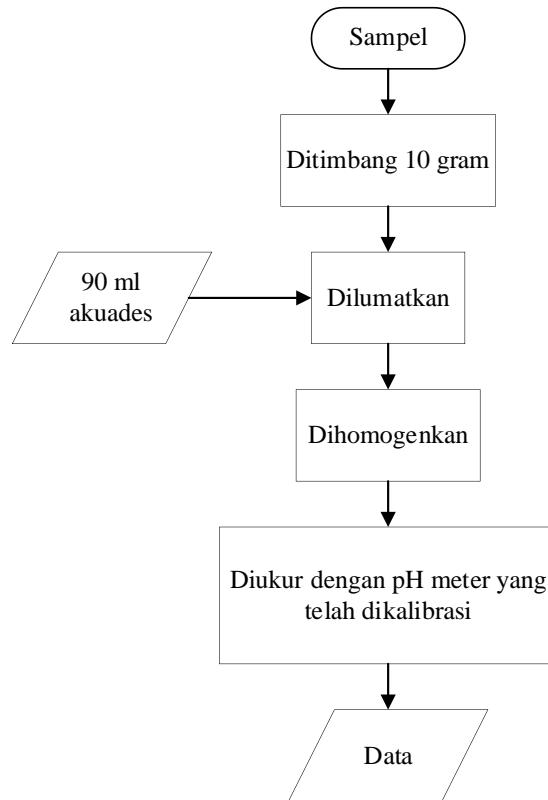
### c. Pemurnian Sampel



### d. Derivatisasi

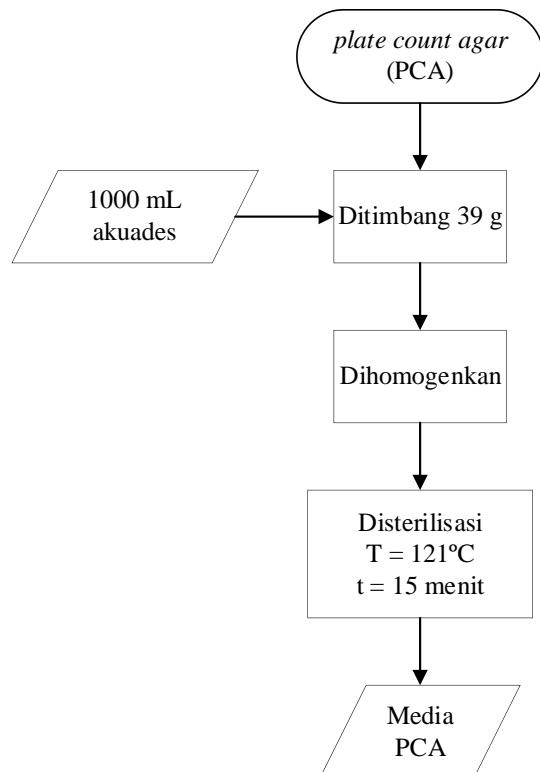


Lampiran 3. Diagram Alir Pengujian pH Ikan Cakalang

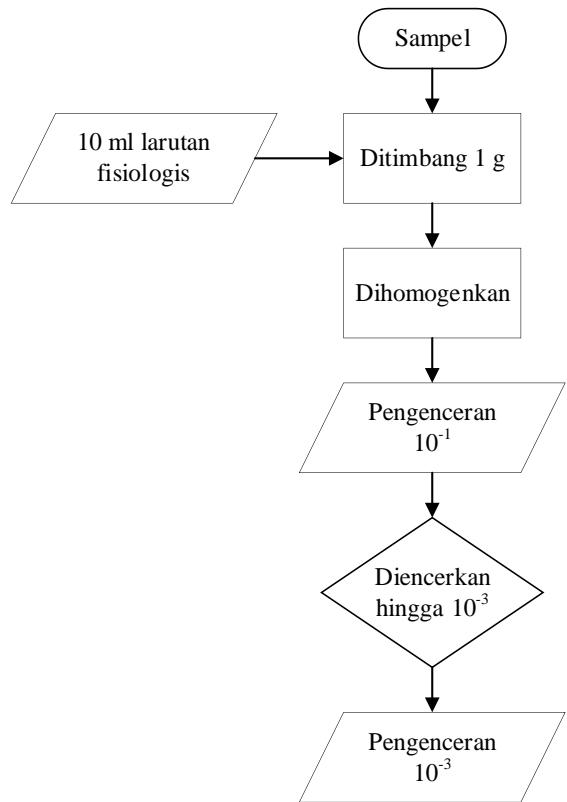


Lampiran 4. Diagram Alir Pengujian TPC Ikan Cakalang

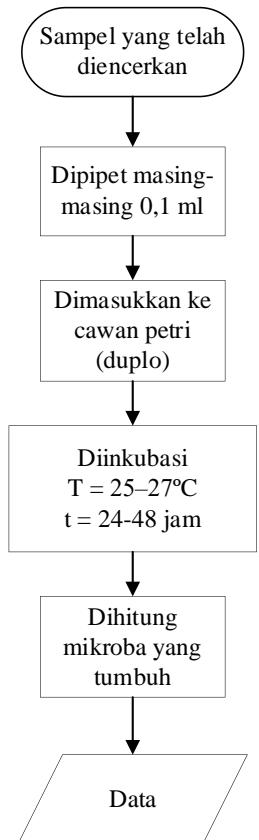
a. Pembuatan Media



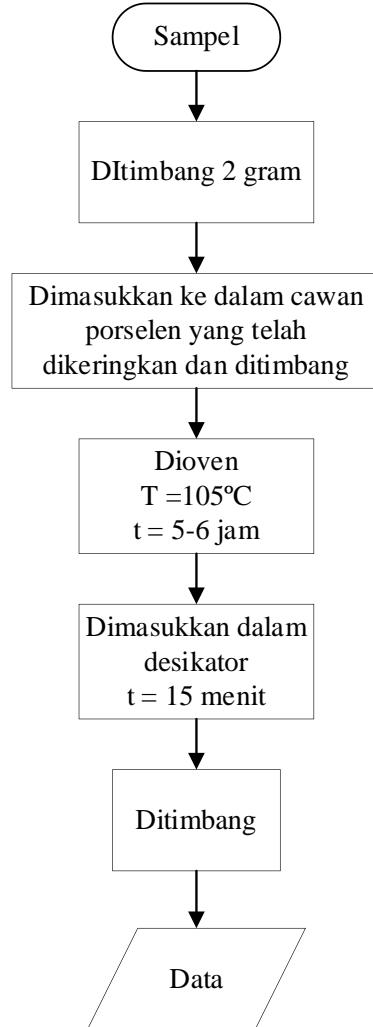
b. Pengenceran



c. Isolasi dan Penghitungan



Lampiran 5. Diagram Alir Pengujian Kadar Air Ikan Cakalang



Lampiran 6. Data Hasil Pengujian

a. Hasil Pengujian Lama *Thawing* Ikan Cakalang (menit)

<b>Perlakuan</b>	<b>Lama Waktu <i>Thawing</i> (menit)</b>			<b>Rata-Rata Waktu <i>Thawing</i> (menit)</b>	<b>STDEV</b>
	<b>Ulangan 1</b>	<b>Ulangan 2</b>	<b>Ulangan 3</b>		
A1	134	149	141	141,33	7,5055535
A2	31	38	33	34	3,60555128
A3	30	39	33	34	4,58257569
A4	64	73	61	66	6,244998

b. Hasil Pengujian Kadar Histamin Ikan Cakalang (mg/kg)

<b>Perlakuan</b>	<b>Kadar Histamin (mg/kg)</b>			<b>Rata-Rata Kadar Histamin</b>	<b>STDEV</b>
	<b>Ulangan 1</b>	<b>Ulangan 2</b>	<b>Ulangan 3</b>		

				(mg/kg)	
A1	8,56	8,75	8,68	8,66333333	0,09609024
A2	5,24	5,09	5,16	5,16333333	0,07505553
A3	3,49	3,63	3,51	3,54333333	0,07571878
A4	5,16	5,02	5,21	5,13	0,09848858

c. Hasil Pengujian pH Ikan Cakalang

Perlakuan	Nilai pH			Rata-Rata Nilai pH	STDEV
	Ulangan 1	Ulangan 2	Ulangan 3		
A1	5,6	5,6	5,63	5,61	0,01732051
A2	5,57	5,57	5,55	5,56333333	0,01154701
A3	5,59	5,58	5,59	5,58666667	0,0057735
A4	5,68	5,67	5,67	5,67333333	0,0057735

d. Hasil Pengujian TPC Ikan Cakalang (log cfu/ml)

Perlakuan	Total Bakteri (cfu/ml)			Rata-Rata Total Bakteri (cfu/ml)
	Ulangan 1	Ulangan 2	Ulangan 3	
A1	$6 \times 10^4$	$2,5 \times 10^4$	$4 \times 10^4$	$4,1 \times 10^4$
A2	$3,5 \times 10^4$	$1,5 \times 10^4$	$3 \times 10^4$	$2,6 \times 10^4$
A3	$5 \times 10^4$	$5 \times 10^4$	$2,5 \times 10^4$	$4,1 \times 10^4$
A4	$11 \times 10^4$	$9 \times 10^4$	$9 \times 10^4$	$9,6 \times 10^4$

Perlakuan	Total Bakteri (log cfu/ml)			Rata-Rata Total Bakteri (log cfu/ml)	STDEV
	Ulangan 1	Ulangan 2	Ulangan 3		
A1	4,77	4,39	4,60	4,58666667	0,19035055
A2	4,54	4,17	4,47	4,39333333	0,19655364
A3	4,69	4,69	4,39	4,59	0,17320508
A4	5,04	4,95	4,95	4,98	0,05196152

e. Hasil Pengujian Kadar Air Ikan Cakalang (%)

Perlakuan	Berat Cawan (g)	Berat Sampel (g)	Berat Total (g)	Hasil Oven 1 (g)	Hasil Oven 2 (g)	Hasil Oven 3 (g)	Hasil Oven 4 (g)	Kadar Air %
A1U1	33,8874	2,0315	35,9189	34,4895	34,451	34,4419	34,4417	72,7147428
A1U2	39,4842	2,0309	41,5151	40,0723	40,0362	40,0284	40,0269	73,27785711
A1U3	39,2054	2,024	41,2294	39,8374	39,7812	39,7805		71,58596838
<b>Rata-Rata</b>								<b>72,52618943</b>
A2U1	48,165	2,089	50,254	48,8063	48,75	48,7378	48,7351	72,70943035
A2U2	41,1838	2,0033	43,1871	41,7821	41,7372	41,7334		72,56526731
A2U3	45,2213	2,0071	47,2284	45,8631	45,7984	45,7951		71,41148921
<b>Rata-Rata</b>								<b>72,22872896</b>
A3U1	31,926	2,0697	33,9957	32,5434	32,497	32,4845	32,4816	73,15552979
A3U2	45,289	2,033	47,322	45,8681	45,8395	45,8286	45,825	73,63502213

A3U3	31,8473	2,0025	33,8498	32,4476	32,3928	32,3923		72,78401998
							<b>Rata-Rata</b>	<b>73,19152397</b>
A4U1	39,2662	2,0619	41,3281	39,9211	39,87	39,8552	39,8531	71,53596198
A4U2	38,7307	2,0542	40,7849	39,3584	39,3185	39,3027	39,3005	72,15461007
A4U3	39,4904	2,0023	41,4927	40,1256	40,051	40,0476		72,1720022
							<b>Rata-Rata</b>	<b>71,95419141</b>
<b>Perlakuan</b>	<b>Kadar Air (%)</b>				<b>Rata-Rata Kadar Air (%)</b>	<b>STDEV</b>		
	<b>Ulangan 1</b>	<b>Ulangan 2</b>	<b>Ulangan 3</b>					
A1	72,7147428	73,27785711	71,58596838		72,52618943		0,861560299	
A2	72,70943035	72,56526731	71,41148921		72,22872896		0,711411518	
A3	73,15552979	73,63502213	72,78401998		73,19152397		0,42664136	
A4	71,53596198	72,15461007	72,1720022		71,95419141		0,362301694	

#### Lampiran 7. Hasil Uji ANOVA

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Waktu Thawing	Between Groups	23073.000	3	7691.000	237.866	.000
	Within Groups	258.667	8	32.333		
	Total	23331.667	11			
Kadar Histamin	Between Groups	42.069	3	14.023	1.851E3	.000
	Within Groups	.061	8	.008		
	Total	42.130	11			
Nilai pH	Between Groups	.020	3	.007	53.778	.000
	Within Groups	.001	8	.000		
	Total	.021	11			
Total Mikroba	Between Groups	.545	3	.182	6.759	.014
	Within Groups	.215	8	.027		
	Total	.760	11			
Kadar Air	Between Groups	2.544	3	.848	2.172	.169
	Within Groups	3.123	8	.390		
	Total	5.667	11			

#### Lampiran 8. Hasil Uji Lanjut DMRT

##### a. Uji Lanjut Waktu *Thawing* Ikan Cakalang

Waktu Thawing						
Duncan						
Perlakuan Thawing	N	Subset for alpha = 0.05				
		1	2	3		

A2	3	34.00		
A3	3	34.00		
A4	3		66.00	
A1	3			141.33
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

#### b. Uji Lanjut Kadar Histamin Ikan Cakalang

<b>Kadar Histamin</b>				
Duncan				
Perlakuan Thawing	N	Subset for alpha = 0.05		
		1	2	3
A3	3	3.5433		
A4	3		5.1300	
A2	3		5.1633	
A1	3			8.6633
Sig.		1.000	.652	1.000

Means for groups in homogeneous subsets are displayed.

#### c. Uji Lanjut Nilai pH Ikan Cakalang

<b>Nilai pH</b>					
Duncan					
Perlakuan Thawing	N	Subset for alpha = 0.05			
		1	2	3	4
A2	3	5.5633			
A3	3		5.5867		
A1	3			5.6100	
A4	3				5.6733
Sig.		1.000	1.000	1.000	1.000

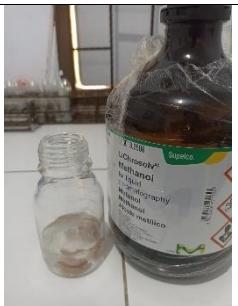
Means for groups in homogeneous subsets are displayed.

#### d. Uji Lanjut Total Mikroba Ikan Cakalang

<b>Total Mikroba</b>				
Duncan				
Perlakuan Thawing	N	Subset for alpha = 0.05		
		1	2	
A2	3	4.3933		
A1	3	4.5867		
A3	3	4.5900		
A4	3		4.9667	
Sig.		.193		1.000

Means for groups in homogeneous subsets are displayed.

### Lampiran 9. Dokumentasi Penelitian

Penentuan Waktu Thawing			
			
Pengujian Kadar Histamin			
			
			
Pengujian pH			
			
Pengujian TPC			
			

<p>Pengujian Kadar Air</p>		