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LAMPIRAN

Lampiran 1. Dokumentasi kegiatan penelitian



Proses pengambilan sampel sedimen di Perairan Takalar



Proses pengeringan sampel sedimen dengan oven



Proses penghalusan dan penimbangan sampel sedimen kering

Lampiran 1. Lanjutan



Pembuatan larutan NaCl jenuh



Proses pencampuran dan pengadukan larutan NaCl dengan sampel sedimen



Proses pemisahan endapan

Lampiran 1. Lanjutan



Proses penyaringan supernatan



Hasil penyaringan sampel sedimen



Proses pengamatan mikroplastik

Lampiran 1. Lanjutan



Hasil pengamatan mikroplastik



Proses uji polimer

Lampiran 2. Data mikroplastik yang ditemukan pada sedimen sampling I di Perairan Takalar Sulawesi Selatan

Stasiun	Titik Lokasi	Komposisi Mikroplastik				
		Jenis	Warna	Ukuran (um)	(mm)	Perbesaran
I	GA-1	Fragmen	Biru	164.5079	0.16	4
		Line	Biru	4402.9436	4.40	
				745.7511	0.75	
			Coklat Transparan	331.5016	0.33	
				928.8351	0.93	
				711.8101	0.71	
	Coklat	323.2606	0.32			
		Fragmen	Biru	287.5712	0.29	4
	GA-2	Line	Hitam	628.9518	0.63	
				1691.8802	1.69	
GA-3	Film	Coklat Transparan	761.2937	0.76	4	
	Line	Biru	1391.6344	1.39		

				2568.2684	2.57			
				2452.8778	2.45			
				1146.3617	1.15			
			Hitam	1447.4559	1.45			
II	SA-1	Fragmen	Merah	462.8755	0.46	4,5		
			Biru	135.4361	0.14			
			Film	Biru	1097.0427		1.10	
				235.1272	0.24			
		Line	Putih transparan	2264.8594	2.26			
			Hitam		1151.8451		1.15	
				853.5022	0.85			
			930.7480	0.93				
	SA-2	Fragmen	Biru		109.7152	0.11	4,5	
					123.0467	0.12		
					103.6287	0.10		
		Line	Hitam		2102.8085	2.10		
					1913.7650	1.91		
			Putih transparan		1725.3631	1.73		
				1495.4564	1.50			
	SA-3	Line	Coklat Transparan		1110.4304	1.11	4	
					2667.4086	2.67		
			Putih transparan		2426.9677	2.43		
				3035.9086	3.04			
Biru				2050.9541	2.05			
				1982.7894	1.98			
	Merah		486.6144	0.49				
III	MP-1	Fragmen	Hitam		309.8568	0.31	4	
					262.5881	0.26		
		Film	Putih transparan		469.8410	0.47		
					593.3528	0.59		
		Line	Putih transparan		1126.0015	1.13		
					1412.7997	1.41		
				Merah		301.2101		0.30
						314.0107		0.31
					87.3339	0.09		
					89.7747	0.09		
			Hitam		1675.3216	1.68		
					1006.3966	1.01		
		2071.5279		2.07				
		880.6847		0.88				
	MP-2	Film	Biru		233.3205	0.23	4	
					265.0238	0.27		
		Fragmen	Putih transparan		863.5290	0.86		
					614.0863	0.61		
				381.3839	0.38			
				522.9755	0.52			

				337.6260	0.34					
				312.6654	0.31					
				Hitam	512.5156		0.51			
					228.5035		0.23			
				Coklat Transparan	491.1767		0.49			
					448.0113		0.45			
				Line	Biru		1161.4878	1.16		
							1291.9944	1.29		
							748.3962	0.75		
					Putih transparan		1520.7263	1.52		
							535.0622	0.54		
							MP-3	Fragmen	Coklat Transparan	768.4582
				1079.1856	1.08					
				857.0195	0.86					
	506.4991	0.51								
	581.6494	0.58								
	Film		1569.9091	1.57						
			1181.0794	1.18						
			Coklat Transparan	641.4770	0.64					
	2084.7368	2.08								
	Line	Coklat Transparan	1268.0710	1.27						
			921.3025	0.92						
			1256.3950	1.26						
			Biru	1119.0482	1.12					
	2587.6173	2.59								
	IV	MG-1	Line	Biru	2187.2422	2.19	4,5			
		MG-2	Fragmen	Hitam	1697.0538	1.70	3			
					Hijau Transparan	341.0496	0.34	4,5		
Line			Biru	2345.7987		2.35				
				580.5813	0.58					
			Putih transparan	839.3654	0.84					
				916.6538	0.92					
MG-3		Line	Hitam	736.8493	0.74	3				
				Hijau	3401.6159	3.40	3			
			Merah		1150.5508	1.15				
				677.3168	0.68					
			Hitam	2645.4231	2.65					
				1058.4810	1.06					
				1515.1525	1.52					
				356.6114	0.36					
			Biru	857.1929	0.86					
				380.7234	0.38					
1067.3607		1.07								
Putih transparan	2172.5933	2.17								

Lampiran 3. Data mikroplastik yang ditemukan pada sedimen sampling II di Perairan Takalar Sulawesi Selatan

Stasiun	Titik Lokasi	Komposisi Mikroplastik						
		Jenis	Warna	Ukuran (um)	(mm)	Perbesaran		
I	GA-1	Fragmen	Biru	236.3662	0.24	4		
				239.8738	0.24			
				107.7341	0.11			
		Line	Hitam	3500.7739	3.50			
				310.4190	0.31			
				901.1045	0.90			
	GA-2	Fragmen	Biru	414.9442	0.41	4,5		
				129.7460	0.13			
				70.2919	0.07			
		Line	Hitam	872.9882	0.87			
	1526.7414			1.53				
	GA-3	Line	Hitam	Biru Transparan	463.5388	0.46	4	
				Fragmen	Biru	68.2557		0.07
				Merah	1411.4568	1.41		
				Biru Transparan	3796.4487	3.80		
				Putih transparan	1200.3643	1.20		
				563.8253	0.56			
				1079.1077	1.08			
1004.3873				1.00				
2051.9204	2.05							
1796.1915	1.80							
II	SA-1	Film	Biru Transparan	325.0573	0.33	4,5		
				343.9198	0.34			
		Line	Hitam	951.3750	0.95	3		
				1081.0073	1.08			
				Biru Transparan	1137.7116		1.14	
	Merah Transparan			2089.9801	2.09			
	Putih transparan	4056.4975	4.06					
	SA-2	Fragmen	Biru	237.8806	0.24	4		
				136.0668	0.14			
				78.8027	0.08			
				114.8361	0.11			
				53.9860	0.05			
61.2480				0.06				
Line		Hitam	Putih transparan	4984.2861	4.98			
			Putih transparan	1703.5199	1.70			
			Biru	1977.7592	1.98			
			1072.8001	1.07				
1225.0261	1.23							
1239.6257	1.24							

	SA-3	Film	Putih transparan	612.2670	0.61	4,5	
		Fragmen	Biru	170.6504	0.17		
		Line	Hitam	Biru	2349.9922	2.35	4
					4972.3221	4.97	
					1673.1485	1.67	
					1321.3615	1.32	
					1702.2082	1.70	
					2133.4109	2.13	
				3122.0639	3.12		
		III	MP-1	Fragmen	Biru	85.4827	0.09
Film	Putih transparan			885.9011	0.89		
Line	Merah				1316.3831	1.32	
					2147.7550	2.15	
	Hitam				1069.4474	1.07	
					1635.5006	1.64	
			1037.7369	1.04			
MP-2	Fragmen		Putih transparan		1521.3218	1.52	3
					1337.2623	1.34	
					338.8683	0.34	
					2341.8025	2.34	
	Film		Putih transparan		2341.9427	2.34	3
					805.6994	0.81	
			Merah transparan	147.0820	0.15		
	Line		Merah		1043.1607	1.04	
					2824.8533	2.82	
			Biru		2900.7205	2.90	
					2407.3455	2.41	
					2961.3724	2.96	
			Putih transparan		4812.8815	4.81	
		1395.2052		1.40			
	3006.6888	3.01					
	2068.9879	2.07					
	Hitam	994.3018	0.99				
MP-3	Film	Biru	701.7185	0.70	4		
	Line	Hitam		1496.3324		1.50	
				1071.3109		1.07	
		Biru Transparan	404.8222	0.40			
		Putih transparan	3923.7825	3.92			
MG-1	Film	Putih transparan	635.0966	0.64	4		
	Fragmen	Biru	119.4064	0.12			
	Line	Biru Transparan		2041.5643		2.04	
				3369.5500		3.37	
		Hitam		2655.6725		2.66	
				3642.5521		3.64	
				1257.3246		1.26	
MG-2	Line	Biru	1292.5042	1.29	4		

				1521.4197	1.52	4	
				472.9645	0.47		
			Hitam	1312.7930	1.31		
	MG-3	Fragmen	Putih transparan	1005.1719	1.01		
			Line	Putih transparan	2414.0138		2.41
		Merah			2026.1451		2.03
				Hitam			739.7054
							2039.9922
					1632.6691		1.63
				2327.4005	2.33		

Lampiran 4. Uji Statistik

Uji *One Way* ANOVA

1. Konsentrasi Bentuk Mikroplastik

Table Analyzed	Bentuk Sampling 1
----------------	-------------------

Kruskal-Wallis test	
P value	0.019
Exact or approximate P value?	Gaussian Approximation
P value summary	*
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	3
Kruskal-Wallis statistic	7.924

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Line vs Fragmen	5.792	No	ns
Line vs Film	10.32	Yes	*
Fragmen vs Film	4.525	No	ns

Table Analyzed	Bentuk Sampling 2
----------------	-------------------

One-way analysis of variance	
P value	0.0002
P value summary	***
Are means signif. different? (P < 0.05)	Yes
Number of groups	3
F	12.16
R square	0.5033

ANOVA Table	SS	df	MS
Treatment (between columns)	8180	2	4090
Residual (within columns)	8072	24	336.3
Total	16252	26	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	30.56	5.343	Yes	**	10,36 to 50,75
Line vs Film	40	6.169	Yes	***	17,10 to 62,90
Fragmen vs Film	9.444	1.382	No	ns	-14,70 to 33,58

Lampiran 4. Lanjutan

Table Analyzed	Stasiun 1 S1
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One-way analysis of variance	
P value	0.0851
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	4.857
R square	0.7083

ANOVA Table	SS	df	MS
Treatment (between columns)	2226	2	1113
Residual (within columns)	916.7	4	229.2
Total	3143	6	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	33.33	3.411	No	ns	-15,92 to 82,58
Line vs Film	38.33	3.923	No	ns	-10,92 to 87,58
Fragmen vs Film	5	0.4671	No	ns	-48,95 to 58,95

Table Analyzed	Stasiun 2 S1
----------------	--------------

One-way analysis of variance	
P value	0.0868
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	4.79
R square	0.7054

ANOVA Table	SS	df	MS
Treatment (between columns)	2036	2	1018
Residual (within columns)	850	4	212.5
Total	2886	6	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	25	2.657	No	ns	-22,42 to 72,42
Line vs Film	40	4.251	No	ns	-7,425 to 87,42
Fragmen vs Film	15	1.455	No	ns	-36,95 to 66,95

Lampiran 4. Lanjutan

Table Analyzed	Stasiun 3 S1
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One-way analysis of variance	
P value	0.2519
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	1.75
R square	0.3684

ANOVA Table	SS	df	MS
Treatment (between columns)	4200	2	2100
Residual (within columns)	7200	6	1200
Total	11400	8	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	10	0.5	No	ns	-76,78 to 96,78
Line vs Film	50	2.5	No	ns	-36,78 to 136,8
Fragmen vs Film	40	2	No	ns	-46,78 to 126,8

Table Analyzed	Stasiun 4 S1
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One-way analysis of variance	
P value	0.3114
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	1.584
R square	0.442

ANOVA Table	SS	df	MS
Treatment (between columns)	4369	2	2185
Residual (within columns)	5517	4	1379
Total	9886	6	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	41.67	1.738	No	ns	-79,15 to 162,5
Line vs Film	56.67	2.364	No	ns	-64,15 to 177,5
Fragmen vs Film	15	0.5712	No	ns	-117,4 to 147,4

Lampiran 4. Lanjutan

Table Analyzed	Stasiun 1 S2
----------------	--------------

One-way analysis of variance	
P value	0.0729
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	4.625
R square	0.6491

ANOVA Table	SS	df	MS
Treatment (between columns)	3083	2	1542
Residual (within columns)	1667	5	333.3
Total	4750	7	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	26.67	2.53	No	ns	-21,84 to 75,18
Line vs Film	50	4.243	No	ns	-4,235 to 104,2
Fragmen vs Film	23.33	1.98	No	ns	-30,90 to 77,57

Table Analyzed	Stasiun 2 S2
----------------	--------------

Kruskal-Wallis test	
P value	0.3148
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	3
Kruskal-Wallis statistic	2.311

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Line vs Fragmen	1.167	No	ns
Line vs Film	2.917	No	ns
Fragmen vs Film	1.75	No	ns

Table Analyzed	Stasiun 3 S2
----------------	--------------

One-way analysis of variance	
P value	0.1253
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	3
F	3.237

Lampiran 4. Lanjutan

R square	0.5643
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ANOVA Table	SS	df	MS
Treatment (between columns)	3604	2	1802
Residual (within columns)	2783	5	556.7
Total	6388	7	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	38.33	2.517	No	ns	-31,75 to 108,4
Line vs Film	46.67	3.426	No	ns	-16,02 to 109,4
Fragmen vs Film	8.333	0.5472	No	ns	-61,75 to 78,42

Table Analyzed	Stasiun 4 S2
----------------	--------------

One-way analysis of variance	
P value	0.0091
P value summary	**
Are means signif. different? (P < 0.05)	Yes
Number of groups	3
F	18.95
R square	0.9045

ANOVA Table	SS	df	MS
Treatment (between columns)	2843	2	1421
Residual (within columns)	300	4	75
Total	3143	6	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
Line vs Fragmen	35	6.261	Yes	*	6,826 to 63,17
Line vs Film	45	8.05	Yes	*	16,83 to 73,17
Fragmen vs Film	10	1.633	No	ns	-20,86 to 40,86

2. Konsentrasi Warna Mikroplastik

Table Analyzed	Warna Sampling 1
----------------	------------------

Kruskal-Wallis test	
P value	0.5941
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	6
Kruskal-Wallis statistic	3.695

Lampiran 4. Lanjutan

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Biru vs Coklat	1.925	No	ns
Biru vs Hitam	-0.875	No	ns
Biru vs Putih	-1.5	No	ns
Biru vs Merah	5.25	No	ns
Biru vs Hijau	11.13	No	ns
Coklat vs Hitam	-2.8	No	ns
Coklat vs Putih	-3.425	No	ns
Coklat vs Merah	3.325	No	ns
Coklat vs Hijau	9.2	No	ns
Hitam vs Putih	-0.625	No	ns
Hitam vs Merah	6.125	No	ns
Hitam vs Hijau	12	No	ns
Putih vs Merah	6.75	No	ns
Putih vs Hijau	12.63	No	ns
Merah vs Hijau	5.875	No	ns

Table Analyzed	Warna Sampling 2
----------------	------------------

Kruskal-Wallis test	
P value	0.261
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	4.004

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Biru vs Hitam	3.47	No	ns
Biru vs Putih	9.192	No	ns
Biru vs Merah	5.736	No	ns
Hitam vs Putih	5.722	No	ns
Hitam vs Merah	2.267	No	ns
Putih vs Merah	-3.456	No	ns

3. Konsentrasi Bentuk Mikroplastik pada Sedimen di Perairan Takalar antar Stasiun

Table Analyzed	Stasiun Sampling 1
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Kruskal-Wallis test	
P value	0.6084
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	1.83

Lampiran 4. Lanjutan

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
I vs II	-3.417	No	ns
I vs III	-4.944	No	ns
I vs IV	-4.583	No	ns
II vs III	-1.528	No	ns
II vs IV	-1.167	No	ns
III vs IV	0.3611	No	ns

Table Analyzed	Stasiun Sampling 2
----------------	--------------------

One-way analysis of variance	
P value	0.9225
P value summary	ns
Are means signif. different? (P < 0.05)	No
Number of groups	4
F	0.1594
R square	0.02037

ANOVA Table	SS	df	MS
Treatment (between columns)	331	3	110.3
Residual (within columns)	15921	23	692.2
Total	16252	26	

Tukey's Multiple Comparison Test	Mean Diff,	q	Significant? P < 0,05?	Summary	95% CI of diff
I vs II	-3.333	0.3221	No	ns	-43,86 to 37,19
I vs III	0.4167	0.04147	No	ns	-38,92 to 39,75
I vs IV	6.667	0.6207	No	ns	-35,39 to 48,72
II vs III	3.75	0.3895	No	ns	-33,95 to 41,45
II vs IV	10	0.9662	No	ns	-30,52 to 50,52
III vs IV	6.25	0.6221	No	ns	-33,09 to 45,59

4. Konsentrasi Bentuk Mikroplastik pada Sedimen di Perairan Takalar antar Sampling

Table Analyzed	Sampling
Column A	I
vs	vs
Column B	II

Mann Whitney test	
P value	0.6214
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Are medians signif. different? (P < 0.05)	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	689,5 , 688,5
Mann-Whitney U	310.5

Lampiran 4. Lanjutan

5. Konsentrasi Mikroplastik pada Sedimen di Perairan Takalar antar Stasiun yang Berbudidaya dan yang tidak Berbudidaya Rumput Laut

Table Analyzed	Anova
Column A	Rumput Laut
vs	vs
Column B	Non-Rumput Laut

Paired t test	
P value	0.3605
P value summary	ns
Are means signif. different? (P < 0.05)	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,176 df=2
Number of pairs	3

How effective was the pairing?	
Correlation coefficient (r)	0.6369
P Value (one tailed)	0.2802
P value summary	ns
Was the pairing significantly effective?	No

6. Konsentrasi Mikroplastik pada Sedimen di Perairan Takalar antar Tekstur Sedimen Berlumpur dan Berpasir Halus

Table Analyzed	Anova Sedimen
Column A	Lumpur Berpasir
vs	vs
Column B	Berpasir Halus

Mann Whitney test	
P value	0.1
Exact or approximate P value?	Exact
P value summary	ns
Are medians signif. different? (P < 0.05)	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	15 , 6
Mann-Whitney U	0

Lampiran 5. Data Warna Mikroplastik

Sampling I

Stasiun I						
Titik	Biru	Coklat	Hitam	Putih	Merah	Hijau
GA1	4	3	0	0	0	0
GA2	1	0	2	0	0	0
GA3	4	1	1	0	0	0
Total	9	4	3			
Stasiun II						
Titik	Biru	Coklat	Hitam	Putih	Merah	Hijau
SA1	3	0	3	1	1	0
SA2	3	0	2	2	0	0
SA3	2	1	0	3	1	0
Total	8	1	5	6	2	
Stasiun III						
Titik	Biru	Coklat	Hitam	Putih	Merah	Hijau
MP1	1	0	5	4	4	0
MP2	4	2	2	8	0	1
MP3	2	8	0	4	0	0
Total	7	10	7	16	4	1
Stasiun IV						
Titik	Biru		Hitam	Putih	Merah	Hijau
MG1	1	0	0	0	0	0
MG2	2	0	2	2	0	2
MG3	3	0	4	1	2	1
Total	6		6	3	2	3
Konsentrasi Warna Sampling 1						
Warna	Biru	Coklat	Hitam	Putih	Merah	Hijau
Total	30	15	21	25	8	4

Sampling II

Stasiun I				
Titik	Biru	Hitam	Putih	Merah
GA1	4	3	0	0
GA2	4	2	0	0
GA3	2	5	1	1
Total	10	10	1	1
Stasiun II				
Titik	Biru	Hitam	Putih	Merah
SA1	3	2	1	1
SA2	8	2	2	0
SA3	2	6	1	0
Total	13	10	4	1
Stasiun III				
Titik	Biru	Hitam	Putih	Merah
MP1	1	2	1	3
MP2	3	1	9	4
MP3	2	2	1	0
Total	6	5	11	7
Stasiun IV				
Titik	Biru	Hitam	Putih	Merah
MG1	2	3	2	0
MG2	3	1	0	0
MG3	0	2	3	2
Total	5	6	5	2
Konsentrasi Warna Sampling 2				
Warna	Biru	Hitam	Putih	Merah
Total	34	31	21	11