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# LAMPIRAN



### LAMPIRAN 1

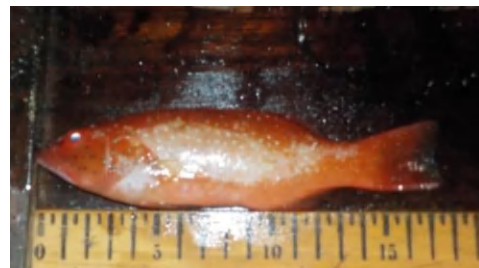
Berat ikan, panjang tubuh ikan dan berat hati ikan yang diperoleh di Kepulauan Bala-balakang

Kode sampel	Panjang Tubuh (Cm)	Berat Sampel (Kg)	Berat Hati (Kg)
Kr1	34	1,188	
Kr2	27	0,491	0,0023
Kr3	26,5	0,544	0,002
Kr4	26	0,434	0,002
Kr5	22,5	0,31	
Kr6	18	0,158	
Kt1	24	0,487	
Kt2	24	0,441	
Kt3	22	0,418	
Kt4	24	0,48	
Kt5	24	0,526	
Kt6	24	0,48	
Fg1	24	0,84	0,024
Fg2	24	0,921	0,028
Fg3	24	0,767	0,019
Fg4	24	0,844	0,039
Fg5	21	0,535	0,013
Fg6	16	0,324	0,026
Jr1	30,5	0,394	
Jr2	27	0,262	
Jr3	23	0,196	
Jr4	22	0,177	
Jr5	20	0,176	
Lp1	17	0,156	
Lp2	17	0,176	
Lp3	18	0,167	
Lp4	17	0,187	
Lp5	16	0,138	
Lp6	17	0,187	
Lp7	17,5	0,185	

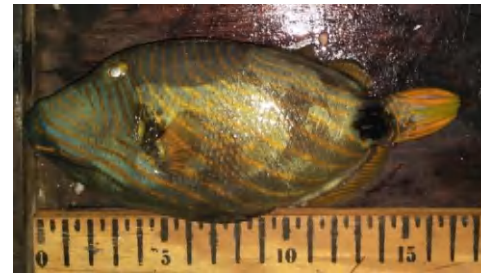
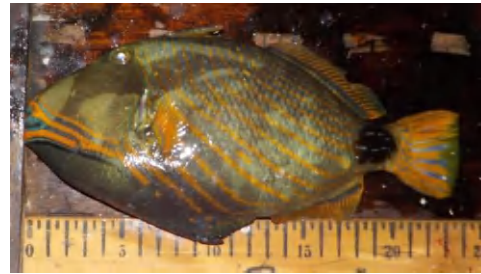


## LAMPIRAN 2

Gambar sampel ikan yang diambil di Kepulauan Bala-balakang







Optimization Software:  
[www.balesio.com](http://www.balesio.com)



## LAMPIRAN 3

## Data Indikasi MPs pada Ikan

No.	Kode sampel	Indikasi Partikel Mikroplastik (PSM)						
		Warna	Tipe	Bentuk	Rata-rata Ukuran (mm)	Perbesaran Lensa	Perbesaran HP	Frekuensi
1	Kr1	Biru	Fiber	Memanjang	1.178	4x10	2x	7
2	Kr2	Transparan	Fiber	Memanjang	2.142	4x10	2x	3
3	Kr3	Biru	Fiber	Memanjang	343	4x10	2x	2
4	Kr4	Biru	Fiber	Memanjang	1228		2x	6
5	Kr5	0						
6	Kr6	0						
7	Kt1	Biru	Fiber	Memanjang	2761	4x10	2x	5
8	Kt2	Biru	Fiber	Memanjang	1389	4x10	2x	2
9	Kt3	Kuning	Fragmen		556	4x10	2x	1
10	Kt4	0						
11	Kt5	0						
12	Kt6	0						
13	Fg1	Transparan	Fragmen		1.337	4x10	2x	1
		Kuning	Fragmen		4.387	1,5x10	1x	1
14	Fg2	Biru	Fiber	Memanjang	2.371	4x10	2x	2
15	Fg3	Hijau	Fragmen		143	4x10	2x	1
		Orange	Fragmen		3.391	2x10	2x	1
	Fg4	0						
	Fg5	0						



18	Fg6	0						
19	Jr1	Transparan	Filamen	Monofilamen	466	4x10	2x	1
20	Jr2	Biru	Fiber	Memanjang	1.342	4x10	2x	5
21	Jr3	Hitam	Filamen	Monofilamen	408	4x10	2x	1
22	Jr4	Hitam	Fiber	Memanjang	0,343	4x10	2x	4
		Merah	Fiber	Memanjang	2,003	4x10	2x	3
23	Jr5	Hitam	Fiber	Memanjang	3,613	2x10	2x	1
24	Lp1	Biru	Fiber	Memanjang	3,896	2,7x10	2x	9
		Biru	Filamen	Memanjang	0,38	4x10	2x	1
25	Lp2	Hitam	Fragmen		0,169	4x10	2x	1
		Hitam	Fragmen		0,314	4x10	2x	1
		Transparan	Filamen	Serat	1,904	4x10	2x	1
26	Lp3	Hitam	Fiber	Memanjang	0,383	4x10	2x	2
27	Lp4	Hitam	Fragmen		0,1	4x10	2x	1
		Hitam	Fragmen		0,123	4x10	2x	1
		Hitam	Fragmen		0,055	4x10	2x	3
28	Lp5	0						
29	Lp6	Merah	Fiber	Memanjang	1,112	4x10	2x	5
30	Lp7	Hitam	Fiber	Memanjang	2,833	3,5x10	2x	1
		Hitam	Fiber	Memanjang	3,073	3x10	2x	1



## Data Indikasi MPs pada Air

Kode sampel	Indikasi Partikel Mikroplastik (PSM)						
	Nomor	Warna	Tipe	Rata-rata Ukuran ( $\mu\text{m}$ )	Perbesaran Lensa	Perbesaran HP	Frekuensi
P1S1	1	Biru	Fiber	1061	4	2	22
	2	Kuning	Fragmen	756	4	2	3
	3	Merah	Fiber	1331	4	2	3
	4	Biru	Fragmen	324	4	2	1
P1S2	1	Hitam	Fiber	2665	2	2	2
	2	Biru	Fiber	1222	4	2	19
P2S1	1	Hitam	Fiber	2522	2	2	1
	2	Biru	Fiber	788	4	2	17
P2S2	1	Hijau	Fiber	1093	4	2	3
	2	Hitam	Fiber	432	4,5	2	1
	3	Biru	Fiber	1571	4	2	16
P3S1	1	Kuning	Fragmen	1413	4	2	1
	2	Orange kekuningan	Fragmen	356	4	2	1
	3	Merah	Fragmen	407	4	2	1
	4	Merah	Fiber	2302	4	2	7
	5	Biru	Fiber	1312	4	2	15
P3S2	1	Biru	Fiber	1977	4	2	31
	2	Biru	Fragmen	130	4,5	2	1
	3	Hitam	Fiber	3132	2	2	2
	4	Transparan	Fiber	1485	4	2	1



## Data Indikasi Mikroplastik pada Sedimen

Kode sampel	Mess	Indikasi Partikel Mikroplastik (PSM)						
		Nomor	Warna	Tipe	Ukuran (mm)	Perbesaran Lensa	Perbesaran HP	Frekuensi
P1S1	0,063 mm	1	Biru Muda	Fragmen	1044,581	4	1	1
		2	Hijau	Fragmen	2008,408	2	1	1
	2 mm	1	Biru	Fiber	3228,984	4	1	13
		2	Pigmentasi	Film	3935,916	2	1	3
P1S2	0,063 mm	1	pigmentasi	Fragmen	2612,267	2,5	1	1
		2	Biru dan Hitam	Fragmen	614,998	4	1	6
		3	biru tua	Fiber	2659,964	4	1	7
		4	Hijau Tua	Fragmen	627,089	4,5	1	1
		5	Abu-abu	Fragmen	1685,367	3	1	2
	2 mm	1	Biru	Fiber	1570,687	4	1	11
P1S3	0,063 mm	1	Merah, Biru	Granula	279,417	4	1	6
	2 mm	1	Biru	Fragmen	360,684	4,5	1	6
		2	Kuning	Fragmen	549,743	4	1	1
		3	Hijau	Fragmen	270,875	4	1	5
		4	Pigmentasi	Fragmen	3329,528	2	1	5
		5	Merah	Fragmen	871,348	4	1	3
P1S4	0,063 mm	1	Hijau Tua, Muda	Granula	114,454	4,5	1	4
	2 mm	0	Merah, biru, Hitam	Fiber	1203,321	4	1	5
	0,063	1	Merah	Filamen	1218,782	4,5	1	1



	mm	2	Merah, Biru	Fiber	1256,415	4	1	8
	2 mm	1	Biru	Fiber	2075,74	4	1	8
		2	Merah	Fiber	1958,701	4	1	3
		3	Ungu	Fiber	2131,132	4	1	1
		4	Hitam	Fiber	1762,837	4	1	4
P1S6	0,063 mm	1	Biru	Fiber	1552,921	4	1	3
	2 mm		Putih	Fragmen	1778,94	4	1	1
P2S1	0,063 mm	1	Biru	Fragmen	395,12	4,5	1	1
		2	Biru	Fiber	1975,224	4	1	19
	2 mm	1	Hijau	Fragmen	239,687	4,5	1	4
		2	Biru	Fiber	2533,201	4	1	5
		3	Merah	Fiber	1782,177	4	1	2
		4	Hitam	Fiber	2533,761	4	1	5
P2S2	0,063 mm	1	Hijau	Fragmen	331,162	4,5	1	1
		2	Merah muda	Filamen	889,705	4,5	1	1
		3	Biru	Fiber	1767,231	4,5	1	5
		4	Hijau	Fiber	3128,251	4,5	1	1
	2 mm	1	Hijau	Fragmen	227,777	4,5	1	2
		2	Biru	Fragmen	228,554	4,5	1	1
		3	Biru	Fiber	2876,218	4	1	46
		3	Merah	Fiber	1656,097	4	1	3
		3	Kuning	Fiber	1575,006	4	1	2
		3	Ungu	Fiber	1295,524	4	1	1
		3	Hitam	Fiber	1034,767	4	1	4



		4	Pigmentasi	Fragmen	250,081	4,5	1	1
		5	Hijau muda	Fragmen	187,541	4,5	1	1
		6	Merah	Fragmen	248,992	4,5	1	1
P2S3	0,063 mm	1	Biru	Fragmen	471,889	4,5	1	1
		2	Merah	Fragmen	377,914	4,5	1	3
		3	Biru	Fiber	1821,213	4	1	16
		3	Merah	Fiber	1645,109	4	1	4
	2 mm	1	kuning	Fiber	1034,882	1,5	1	7
		2	Merah	Fiber	1143,765	4,5	1	2
		3	Biru	Granula	302,106	4,5	1	1
		4	Biru	Filamen	355,014	0,7	1	11
P2S4	0,063 mm	1	Biru	Fiber	943,021	4	1	6
	2 mm	1	biru	Fiber	1760,933	4	1	3
		1	Hijau	Fiber	965,092	4	1	1
P2S5	0,063 mm	1	Hitam	Fiber	961,476	4	1	2
	2 mm	1	Kuning	Fiber	1387,932	2	1	3
		2	Biru	Fragmen	233,166	4,5	1	1
		3	Merah	Fiber	848,938	4,5	1	2
		4	Biru	Fiber	1057,958	4,5	1	21
		5	Hijau	Fiber	1012,429	4	1	1
0,063 mm	1	Biru	Filamen	964,64	4,5	1	1	
	2	Biru	Fiber	1572,234	4	1	1	
	2 mm	1	Biru	Fragmen	222,093	4	1	1





		2	Ungu	Fiber	2137,462	4	1	1
		2	Biru	Fiber	1662,302	4	1	4
		2	Merah	Fiber	1387,622	4	1	2
		2	Hitam	Fiber	2874,236	4	1	1
P3S1	0,063 mm	1	Hijau	Filamen	567,132	4,5	1	1
		1	Merah	Filamen	658,064	4	1	1
		2	Biru	Fiber	2067,217	4	1	2
	2 mm	1	Merah	Fiber	1762,221	4	1	3
		1	Coklat	Fiber	1709,218	4	1	2
		1	Biru	Fiber	1519,061	4	1	17
		1	Hijau	Fiber	2121,761	4	1	2
		1	Hitam	Fiber	3987,136	4	1	2
		1	Kuning	Fiber	1550,891	4	1	2
		2	Biru	Fragmen	282,994	4	1	3
P3S2	0,063 mm	1	Merah	Filamen	758,231	4,5	1	1
		2	Biru	Fiber	1609,119	4	1	3
	2 mm	1	Hijau tua	fragmen	2214,022	0,7	1	4
		2	Transparan	Fiber	1878,113	4	1	1
		2	Biru	Fiber	1372,192	4	1	10
		2	Orange	Fiber	1966,931	4	1	4
		2	Hitam	Fiber	1765,221	4	1	5
		2	Hijau	Fiber	3187,987	4	1	1
		2	Ungu	Fiber	952,982	4	1	1
0,063 mm	1	Merah tua	Fragmen	361,551	2,5	1	2	
	2	Biru muda	Fragmen	528,984	2,5	1	1	



		3	Putih	Fragmen	1213,601	2,5	1	1
		4	Biru muda	Fiber	991,817	4	1	1
		4	Biru	Fiber	1877,231	4	1	3
		4	Hitam	Fiber	2469,082	4	1	1
	2 mm	1	Transparan	Monofilamen	1622,023	4	1	2
		1	Kuning coklat	Fragmen	571,433	2	1	1
		2	Transparan	Monofilamen	3587,497	4	1	4
		2	Merah	Fiber	680,463	4	1	1
		2	Hijau	Fiber	1844,121	4	1	1
		2	Biru	Fragmen	1378,973	4	1	1
	P3S4	0,063 mm	1	Pigmentasi	Fragmen	255,105	4	1
2			Transparan	Fiber	1762,109	4	1	1
2			Biru	Fiber	2923,098	4	1	7
2			Merah	Fiber	1349,327	4	1	1
2			hijau	Fiber	1245,131	4	1	1
3			Biru	Fragmen	1118,176	4	1	1
2 mm		1	Biru	Fiber	1592,022	4	1	2
		2	Transparan	Fiber	3817,193	2	1	3
P3S5	0,063 mm	1	Hijau	Granula	278,114	4,5	1	5
		1	Biru muda	Granula	1378,045	4,5	1	1
		2	Hitam	Fiber	1099,239	4,5	1	5
		2	Merah	Fiber	1482,245	4,5	1	2
		2	Biru	Fiber	2596,233	4,5	1	2
	2 mm	1	Merah	Fiber	1689,212	4	1	12
		1	Kuning	Fiber	1078,356	4	1	2



		1	Transparan	Fiber	1116,299	4	1	7
		1	Biru	Fiber	3672,257	4	1	23
		1	Hijau	Fiber	1389,366	4	1	6
		1	Hitam	Fiber	2311,198	4	1	3
P3S6	0,063 mm	1	Biru	Granula	327,761	4,5	1	1
		2	Orange	Filamen	1940,4112	2	1	1
		3	Orange	Filamen	1224,983	4	1	1
		3	Biru	Fiber	936,112	4	1	2
	2 mm	1	Biru	Fragmen	193,935	4,5	1	1
		2	Biru muda	Fragmen	485,448	4,5	1	1
		3	Biru	Fiber	2651,852	4	1	54
		3	Merah	Fiber	1596,074	4	1	9
		3	Orange	Fiber	1567,441	4	1	43
		3	Biru muda	Fiber	1788,229	4	1	2



## LAMPIRAN 4

## Data Analisis Deskriptif pada sampel Ikan, Air dan Sedimen

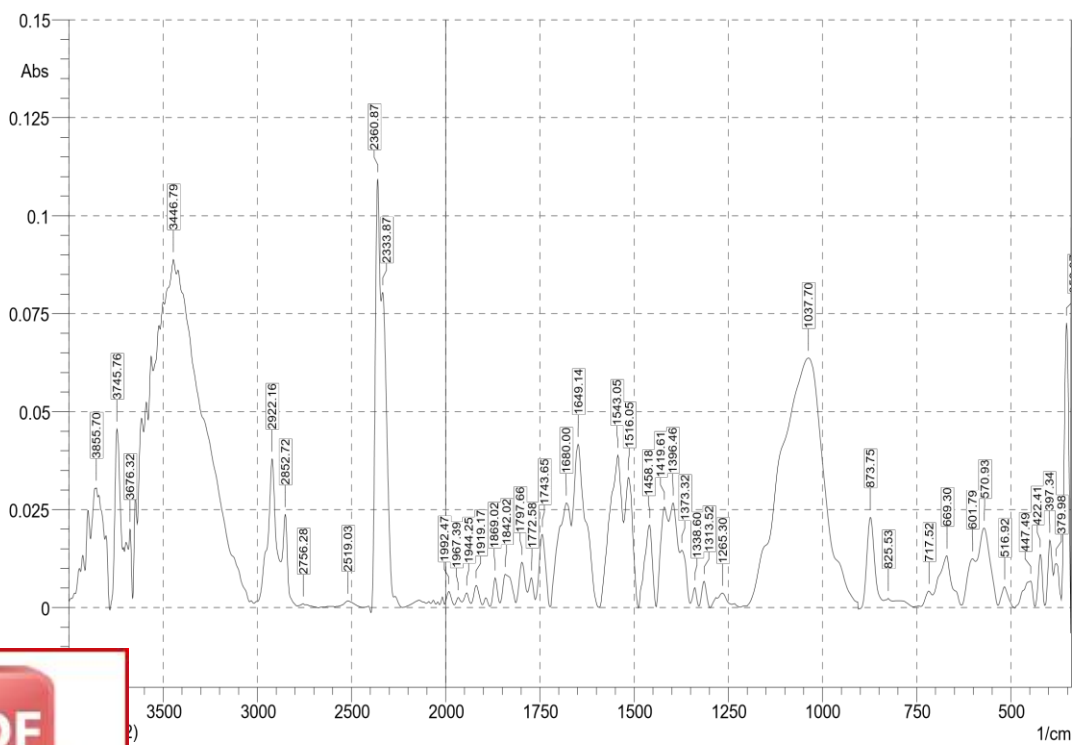
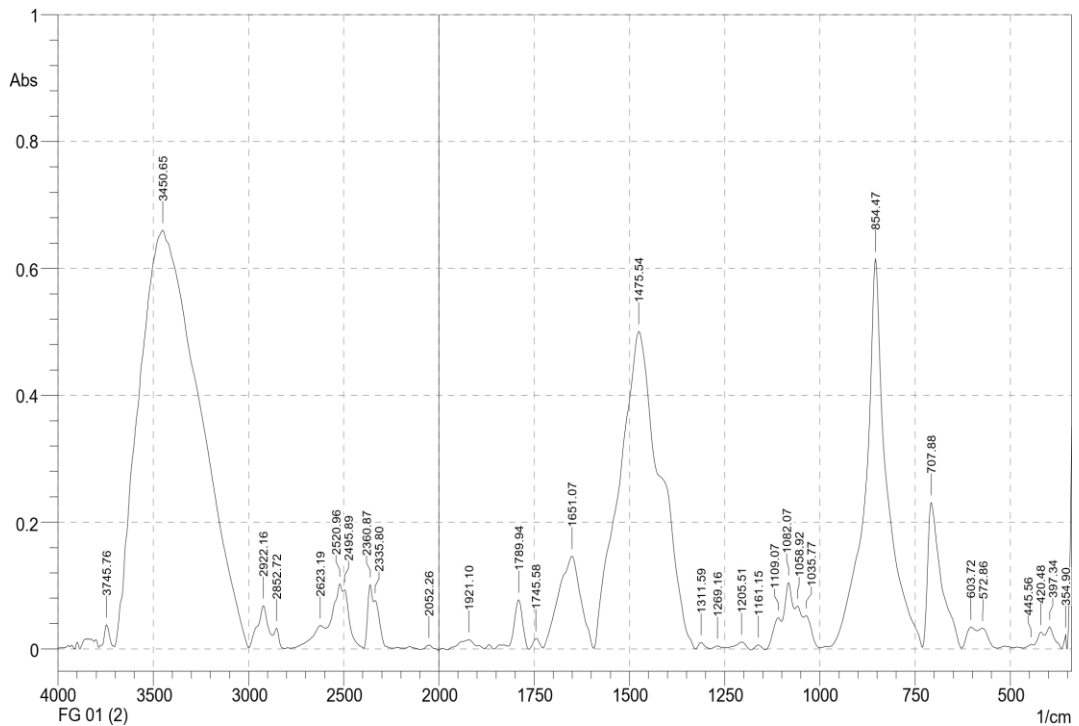
<i>Rata-rata Partikel MPs Air</i>		<i>Rata-rata Partikel MPs Sedimen</i>	
Mean	1,027778	Mean	110,3704
Standard Error	0,109008	Standard Error	21,50626
Median	0,958333	Median	90
Mode	#N/A	Mode	100
Standard Deviation	0,267014	Standard Deviation	91,24333
Sample Variance	0,071296	Sample Variance	8325,345
Kurtosis	-0,27948	Kurtosis	3,863009
Skewness	0,840779	Skewness	1,839564
Range	0,708333	Range	370
Minimum	0,75	Minimum	13,33333
Maximum	1,458333	Maximum	383,3333
Sum	6,166667	Sum	1986,667
Count	6	Count	18

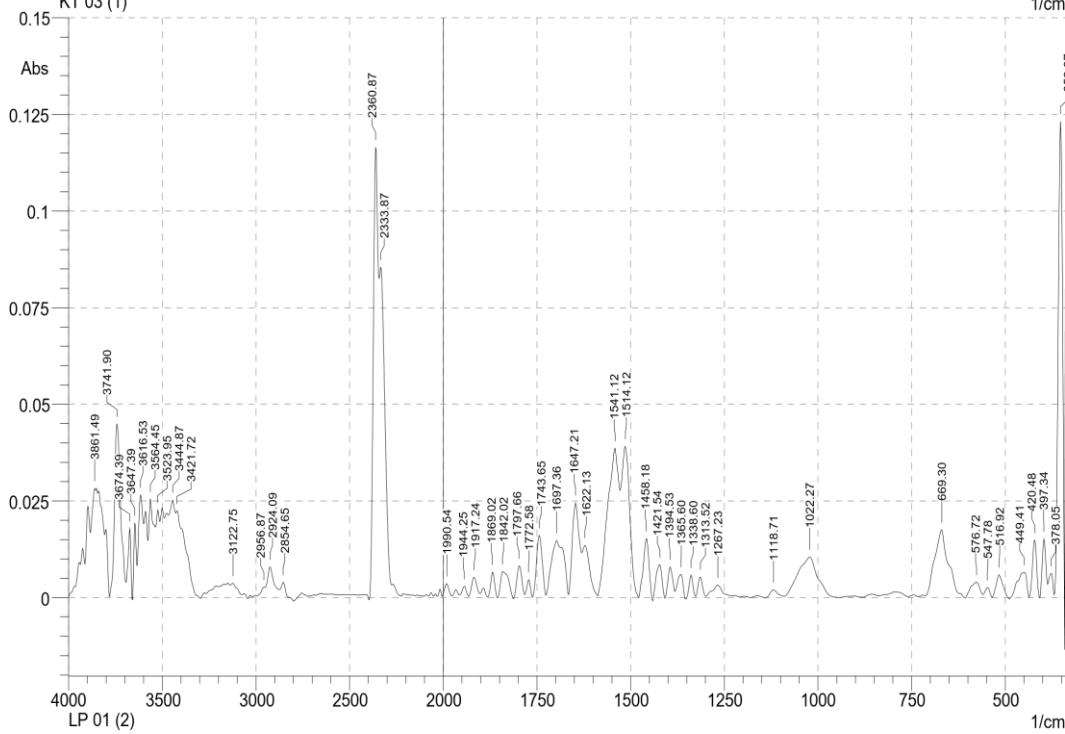
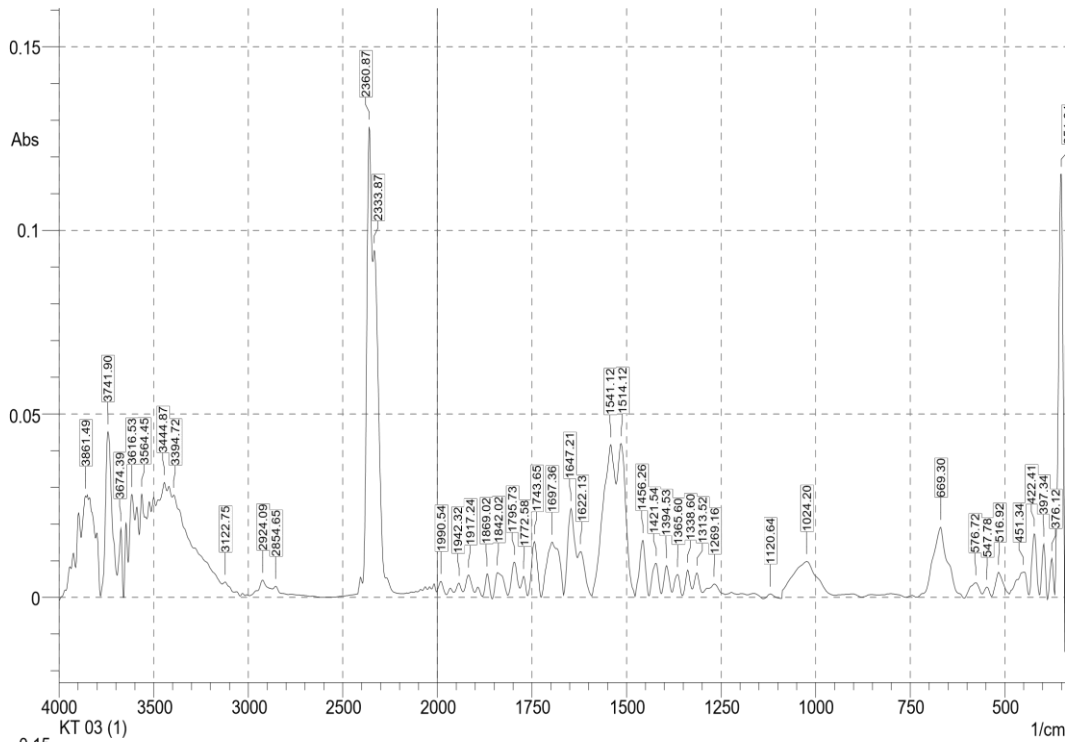
<i>Rata-rata Partikel MPs Ikan</i>	
Mean	2,466667
Standard Error	0,481218
Median	2
Mode	0
Standard Deviation	2,63574
Sample Variance	6,947126
Kurtosis	0,827216
Skewness	1,159973
Range	10
Minimum	0
Maximum	10
Sum	74
Count	30



## LAMPIRAN 5

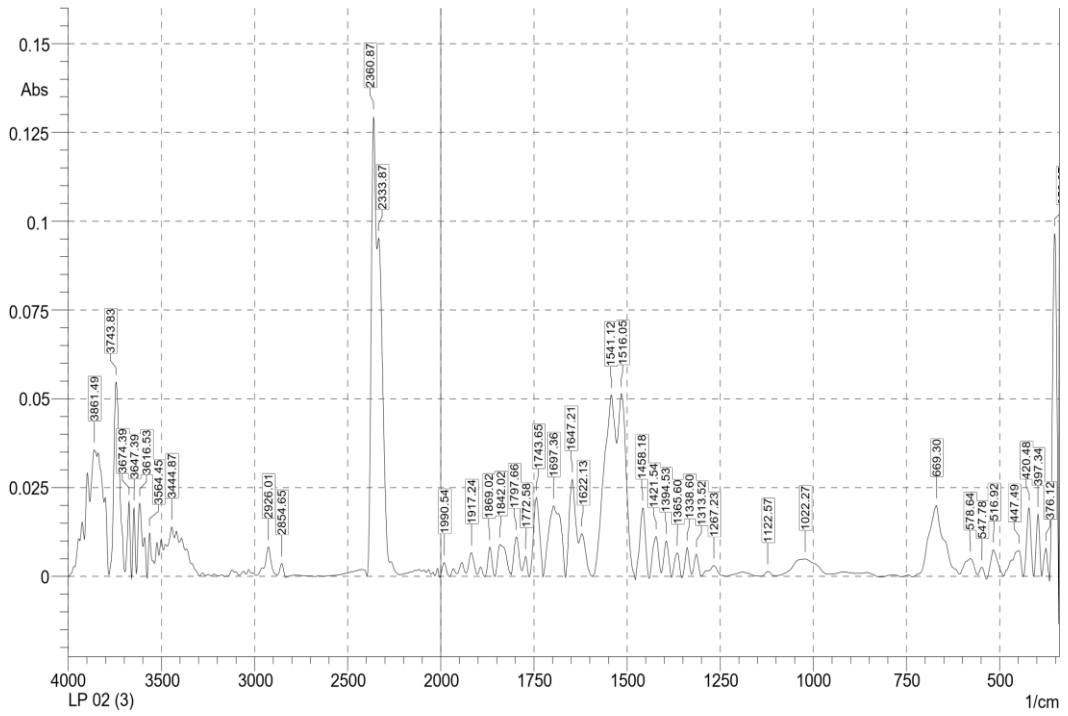
### 1. Hasil FT-IR mikroplastik pada sampel ikan



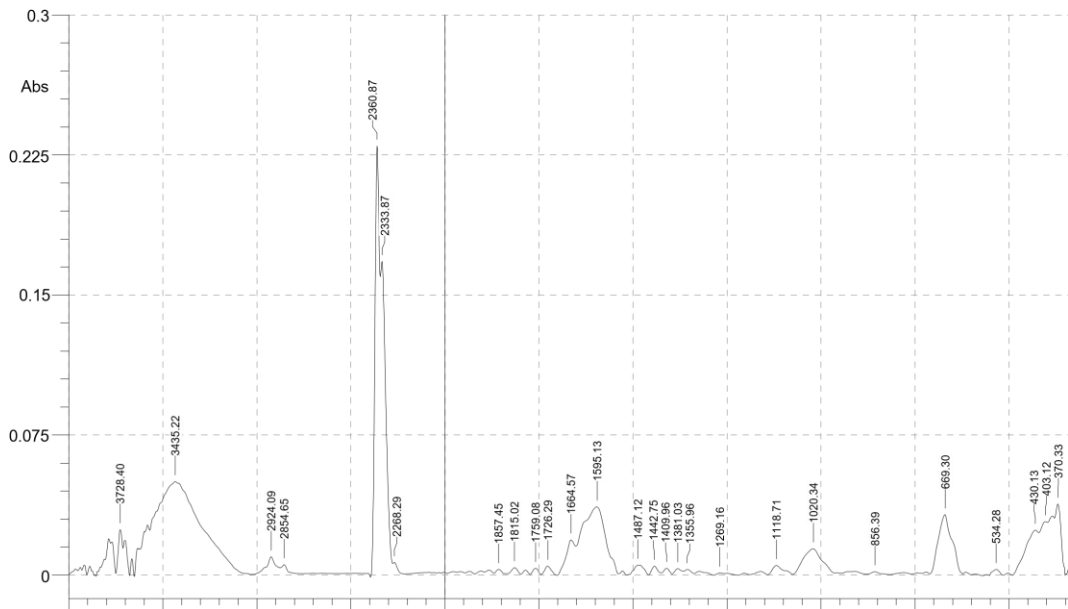




**Optimization Software:**  
[www.balesio.com](http://www.balesio.com)

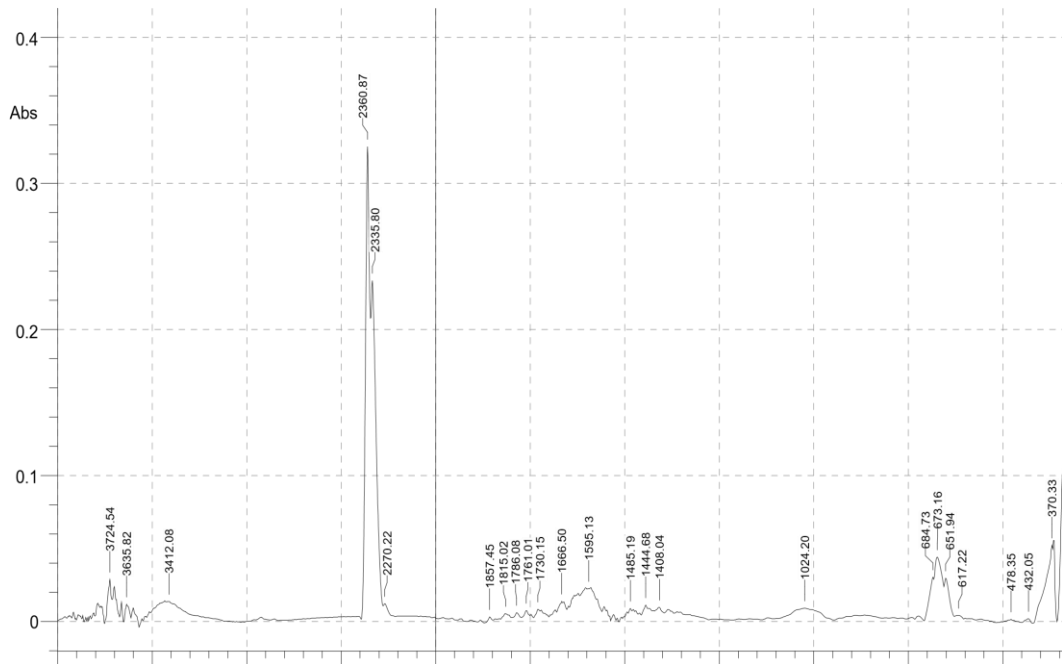


2. Hasil FT-IR mikroplastik pada sampel Air

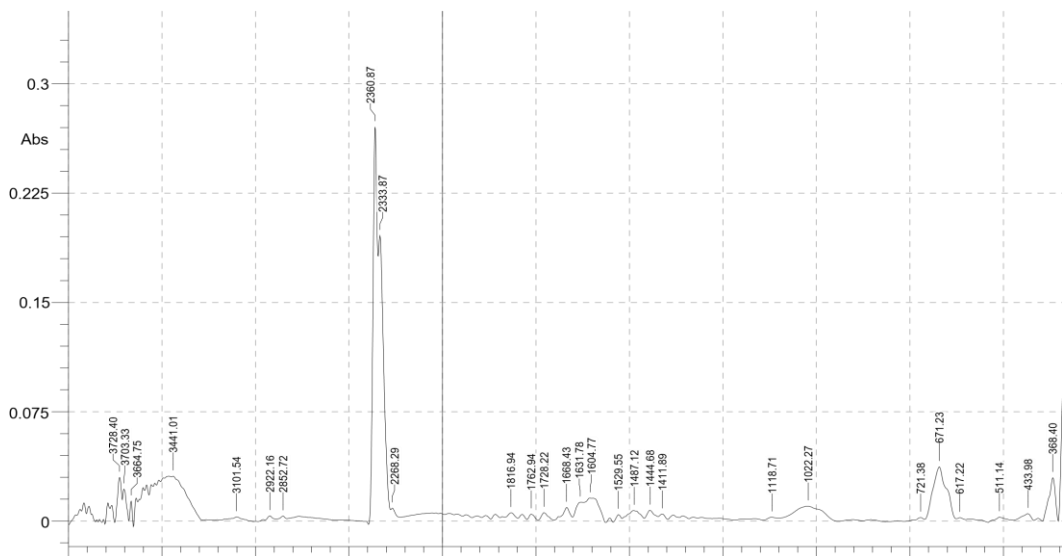


P1 S1 (2) Air





P3 S1 (2) Air

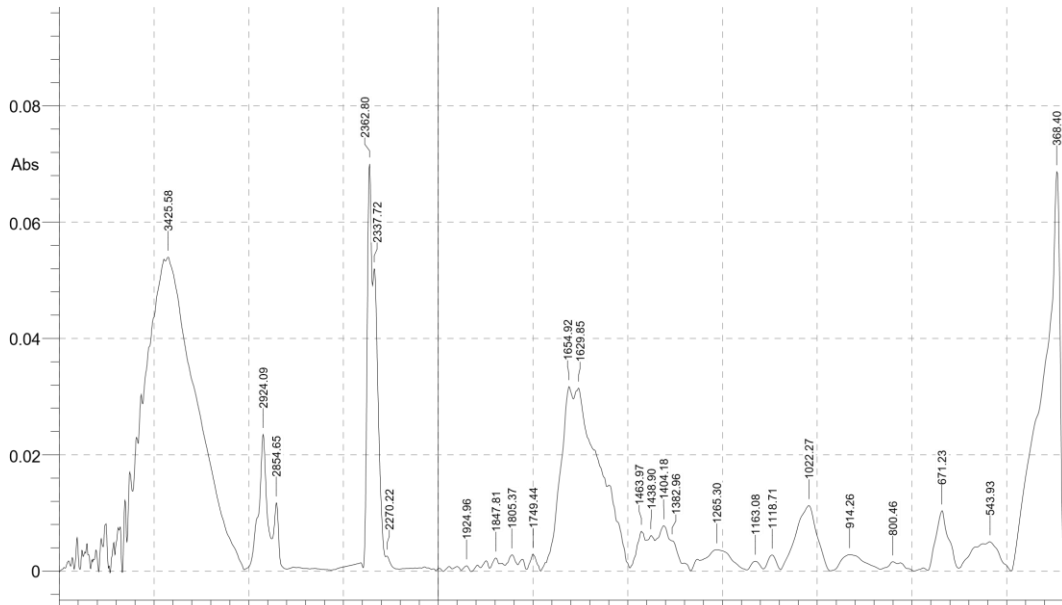


P3 S1 (3) Air

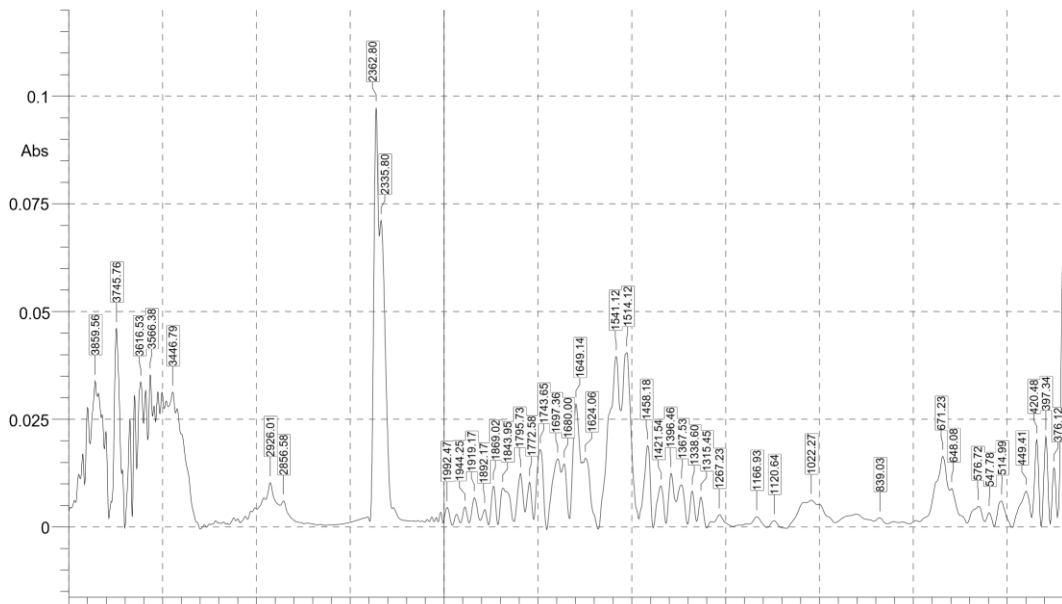




### 3. Hasil FT-IR sampel sedimen

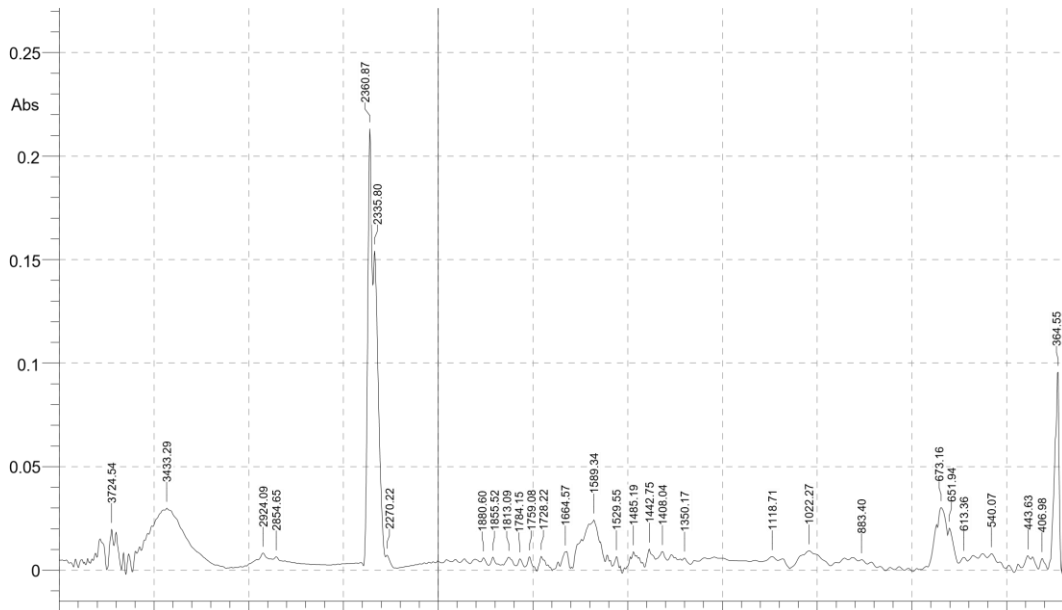


P1 S1 2 mm (1)

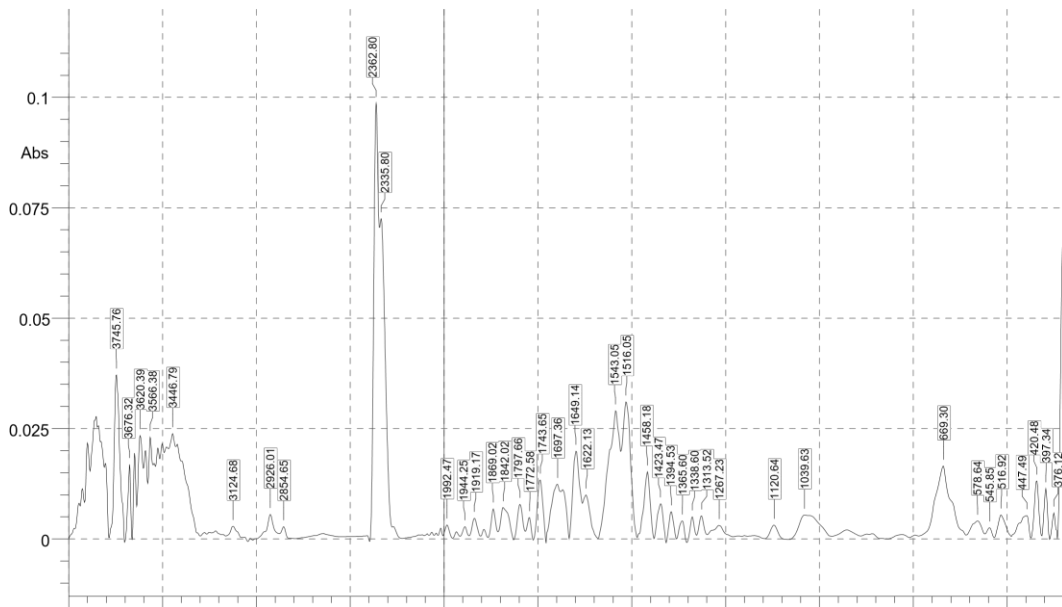


P1 S1 2 mm (2)



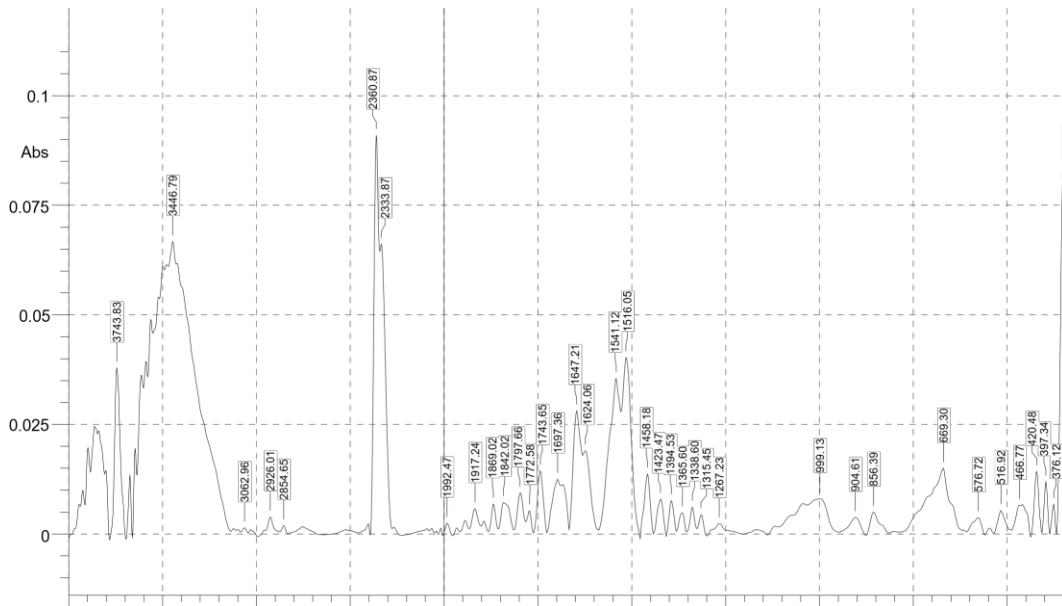


P1 S3 2 mm (2)

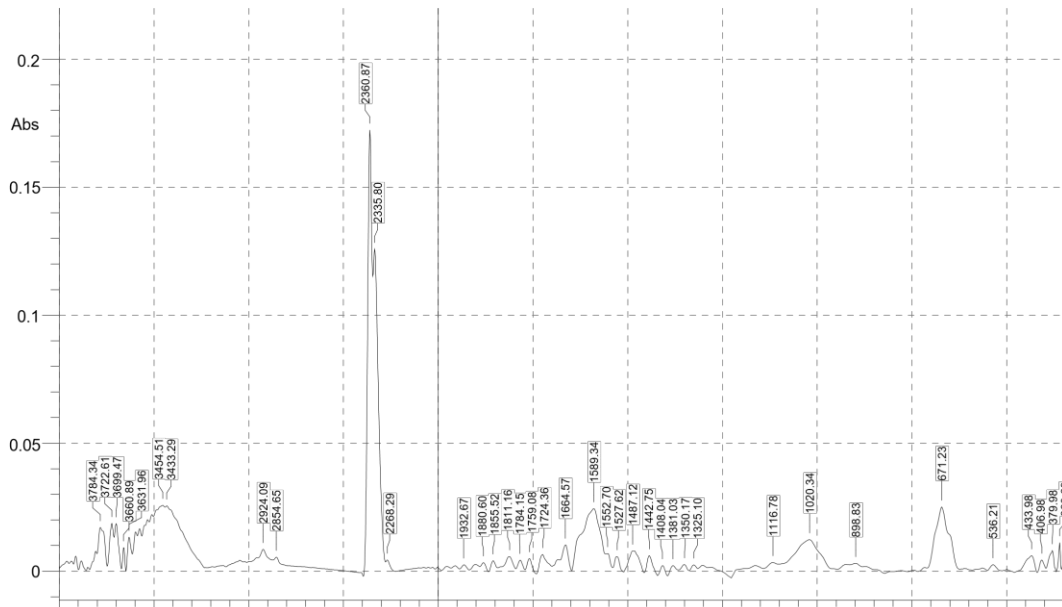


P1 S3 2 mm (4)



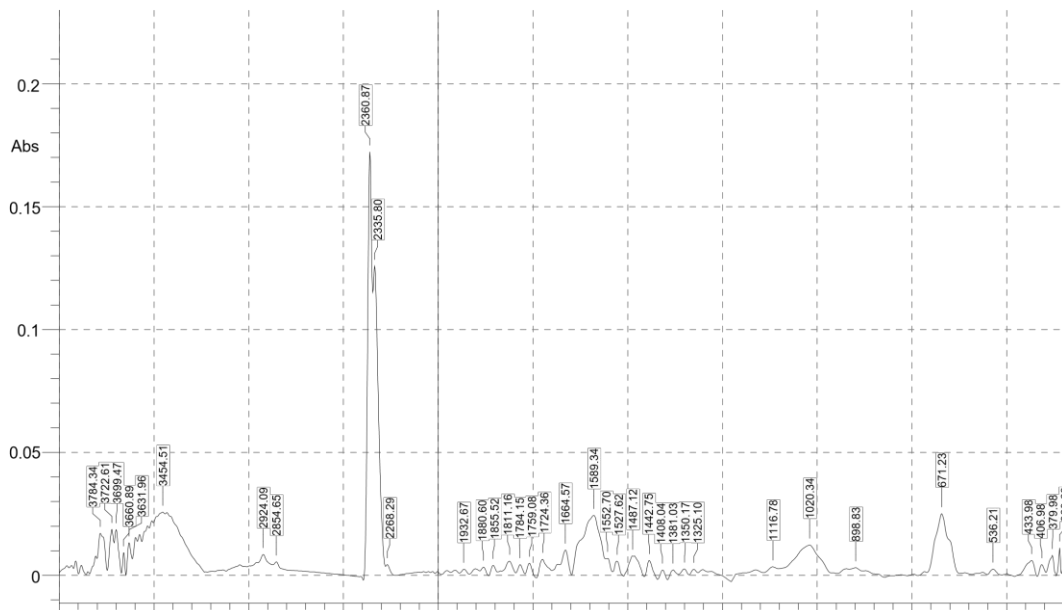


P1 S6 2 mm

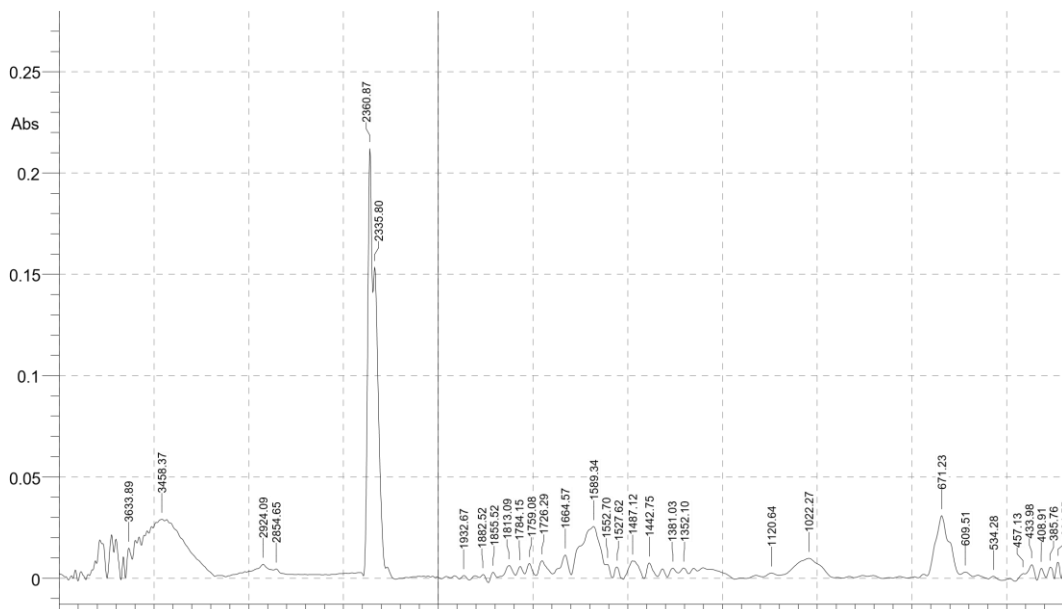


P2 S3 0,063 mm (1)



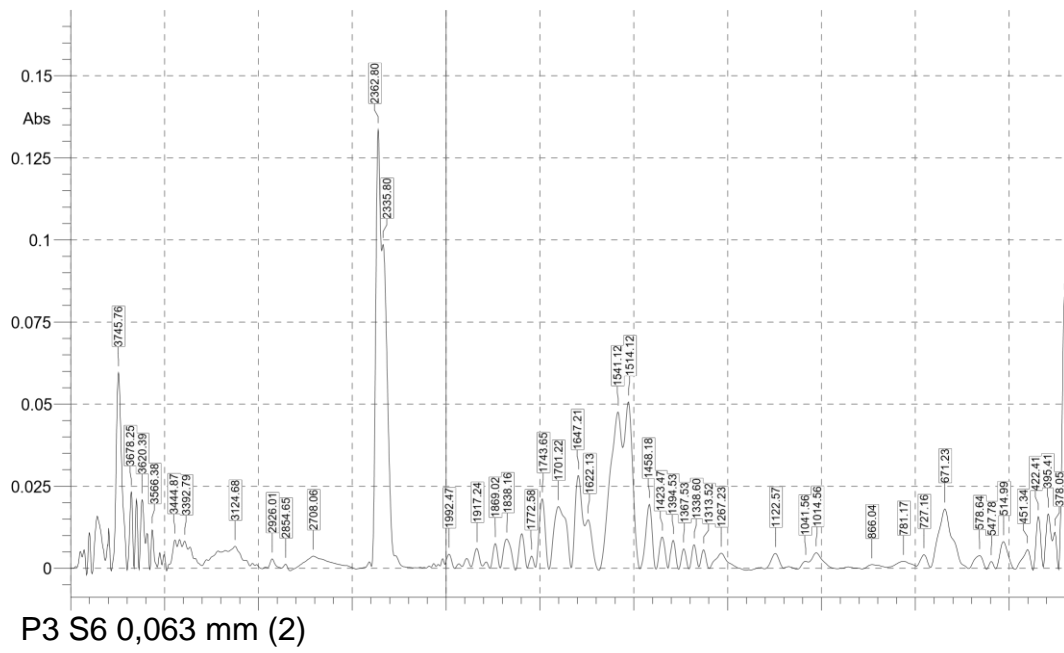


P2 S3 0,063 mm (1)



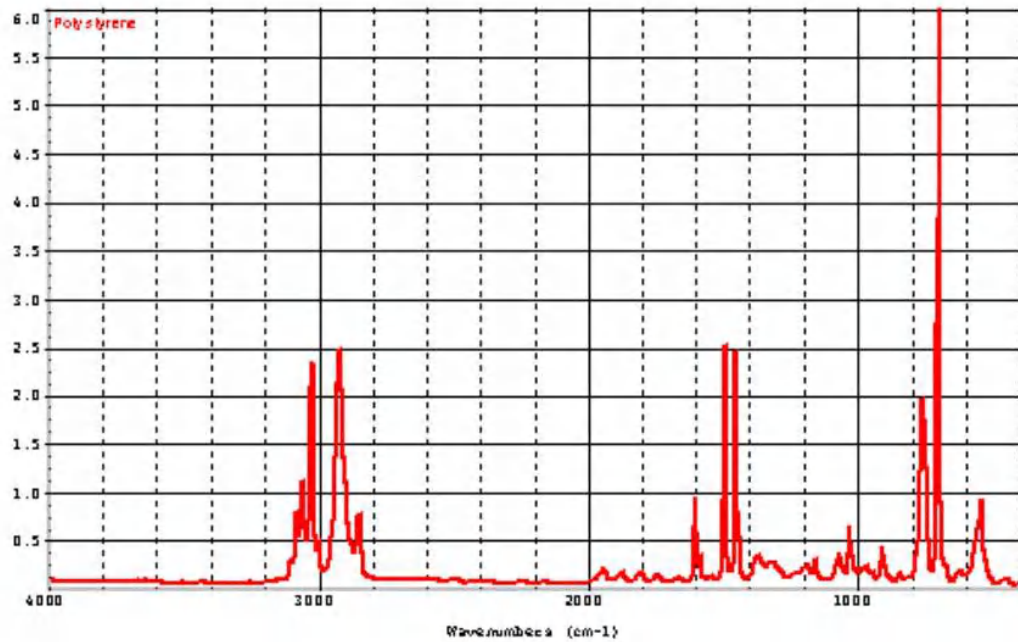
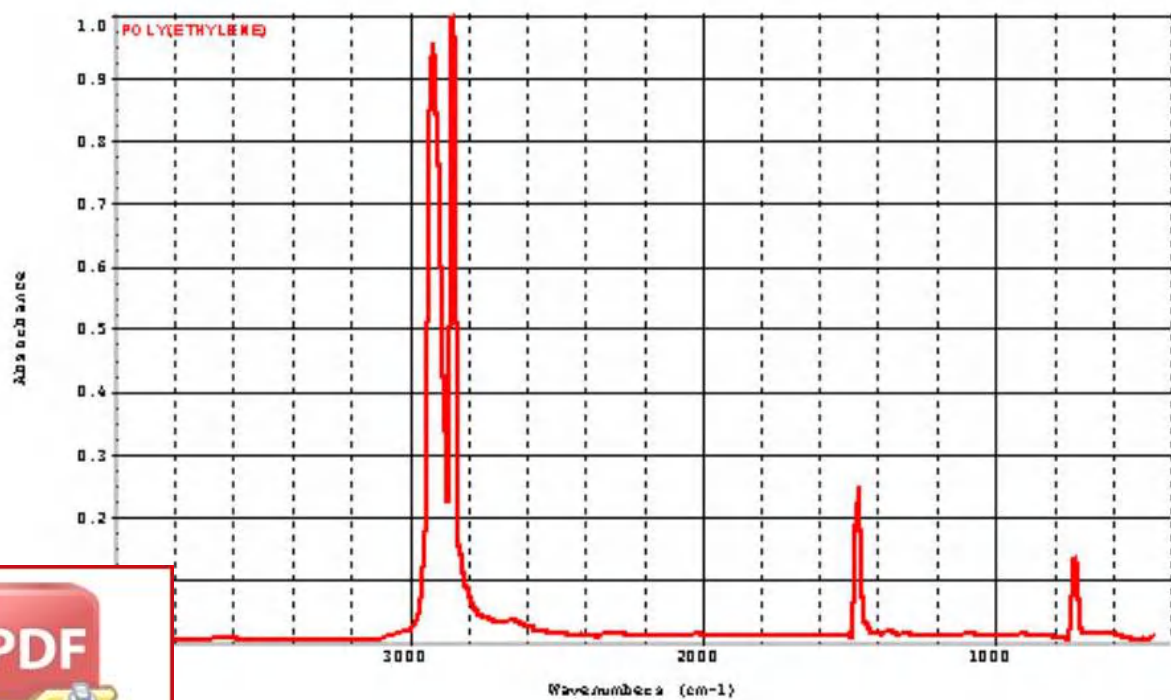
P3 S5 0,063 mm





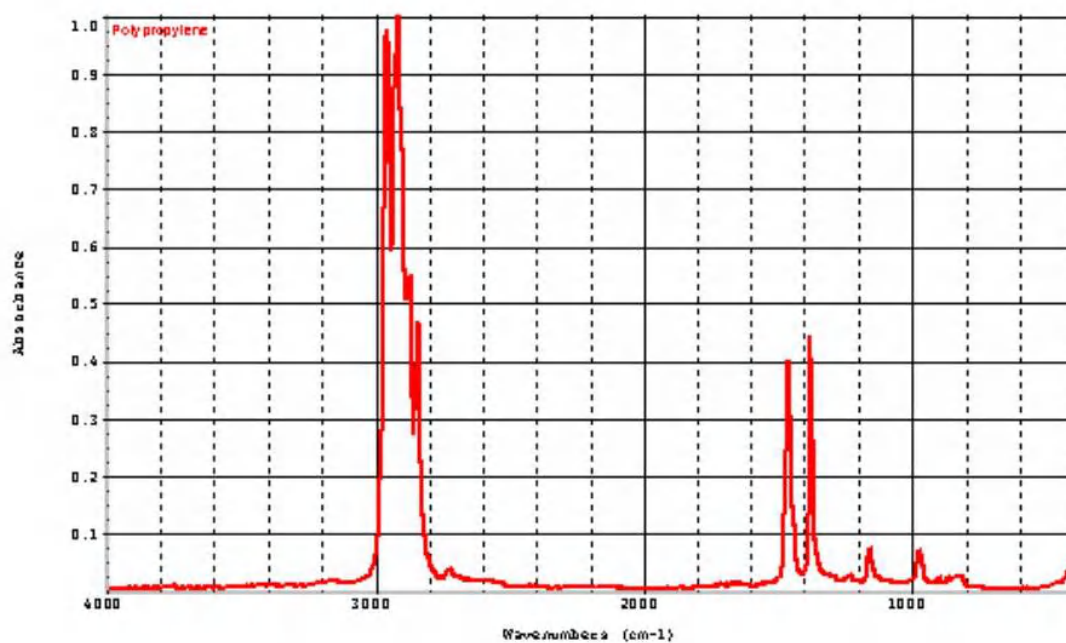
## LAMPIRAN 6

Spektrum Polimer Plastik yang telah diketahui

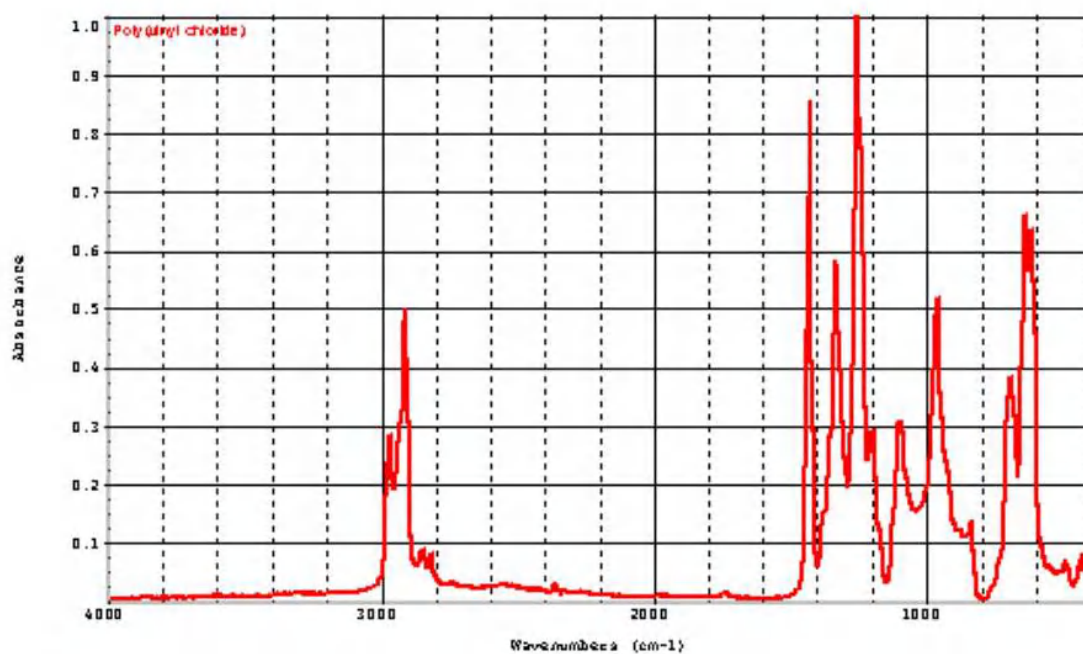
*Polystirene**Polyethylene*

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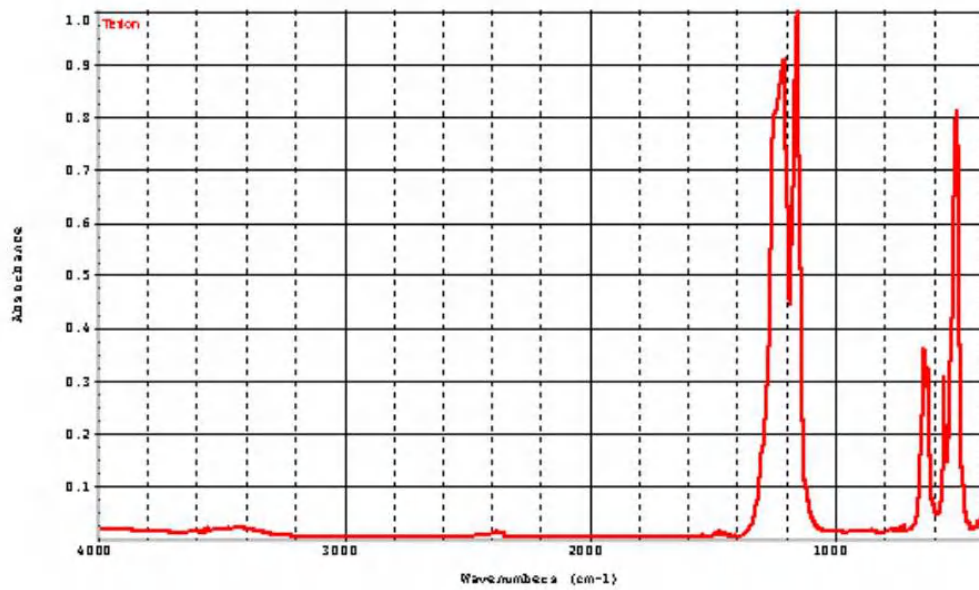
## Polypropylene



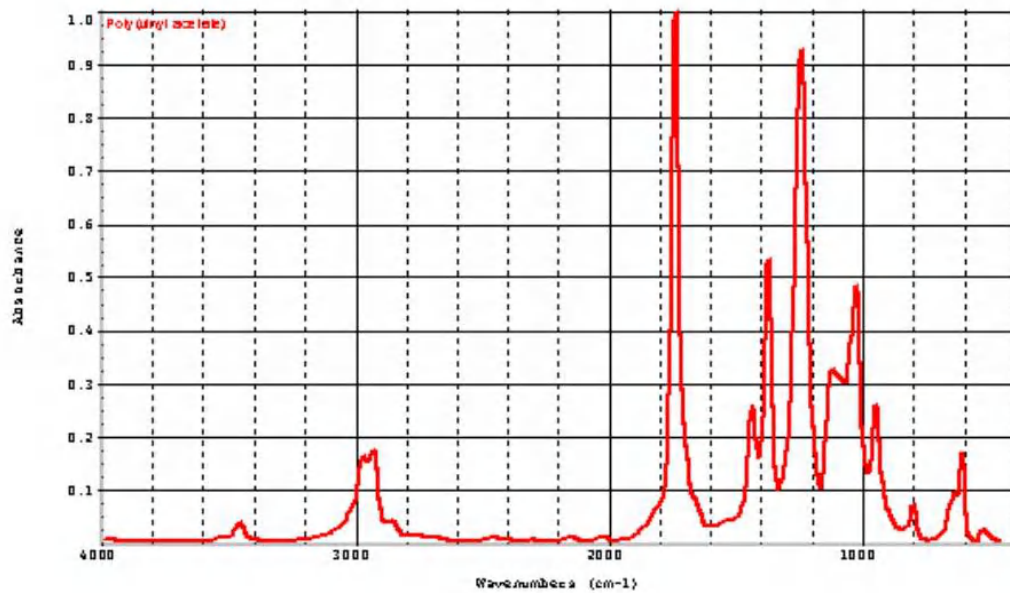
## Polyvinyl Chloride



## Teflon

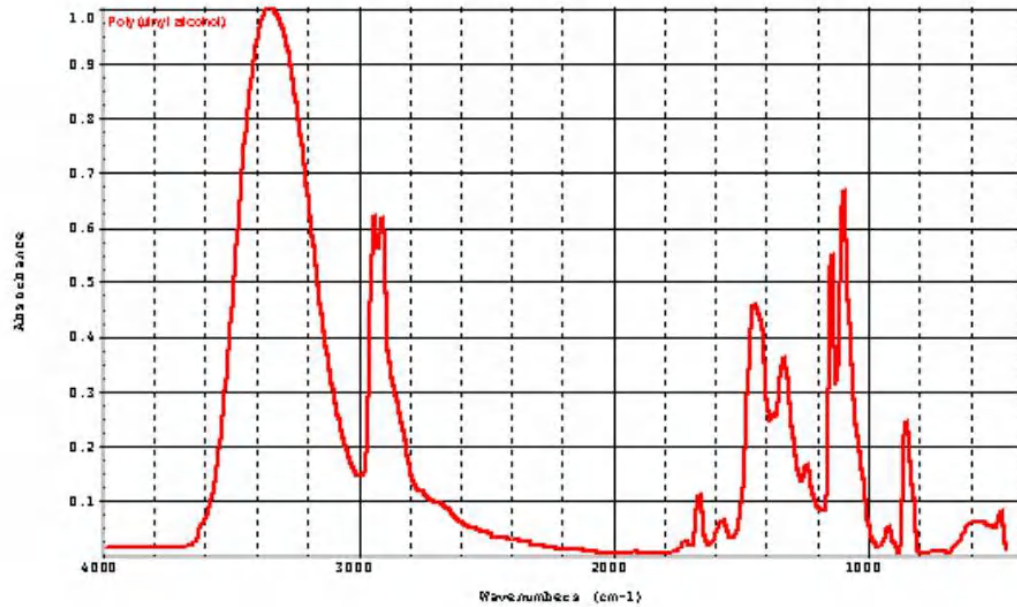


## Polyvinyl Acetate

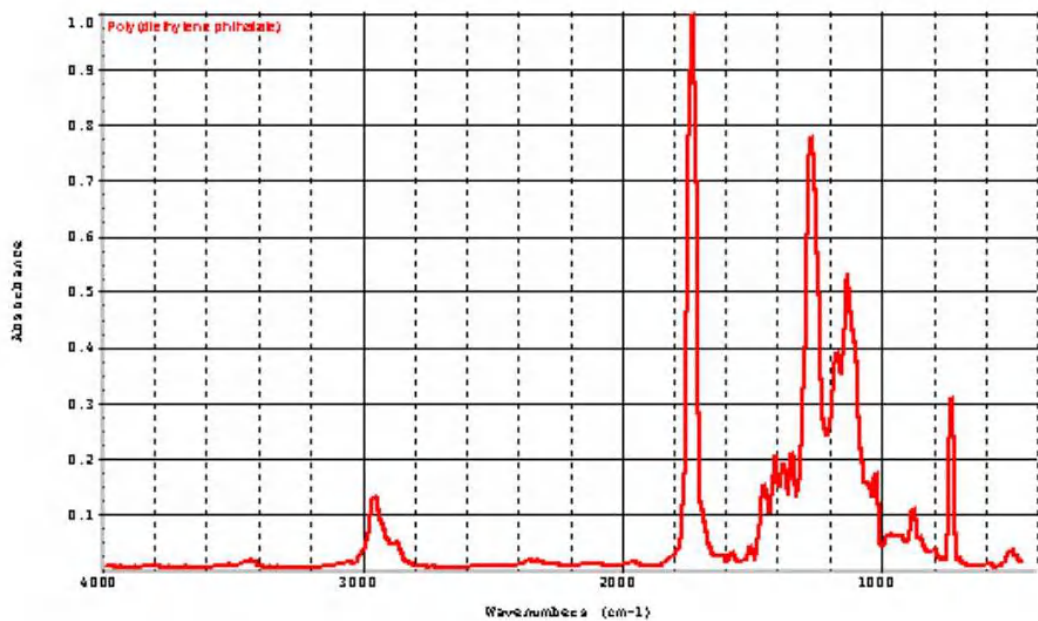




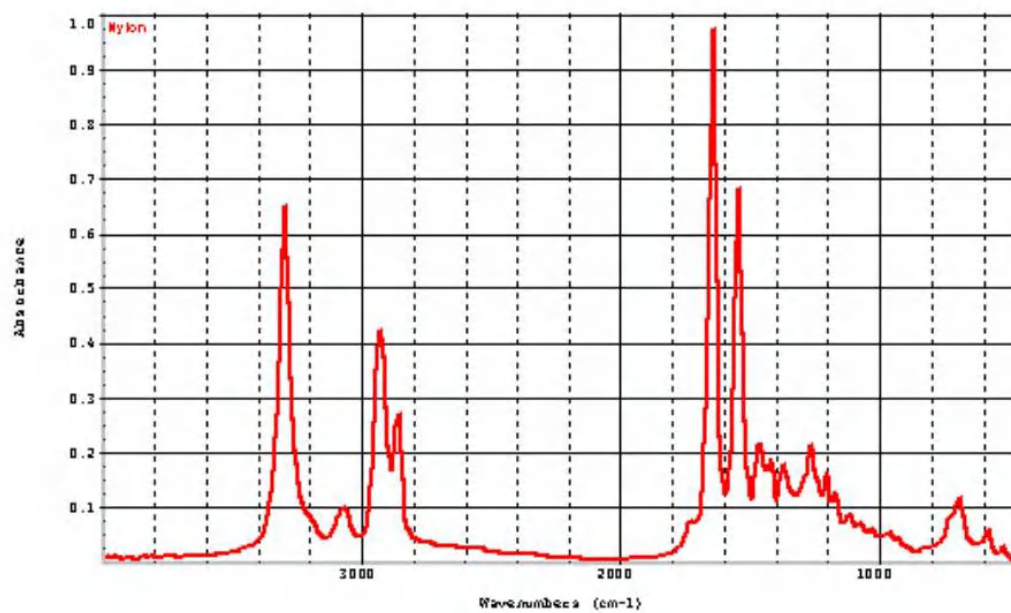
## Polyvinyl Alcohol



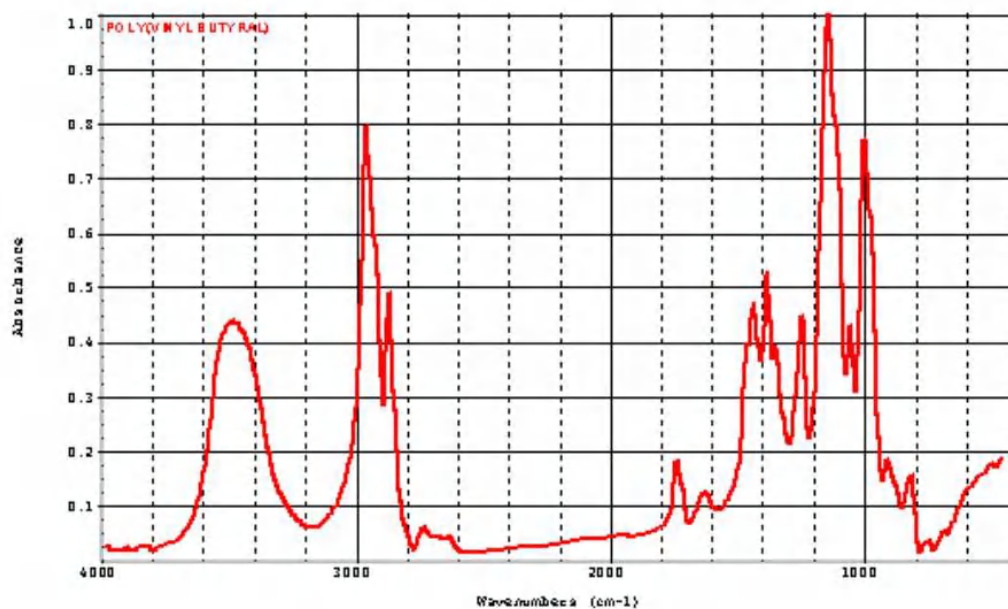
## Polydiethylene phthalate



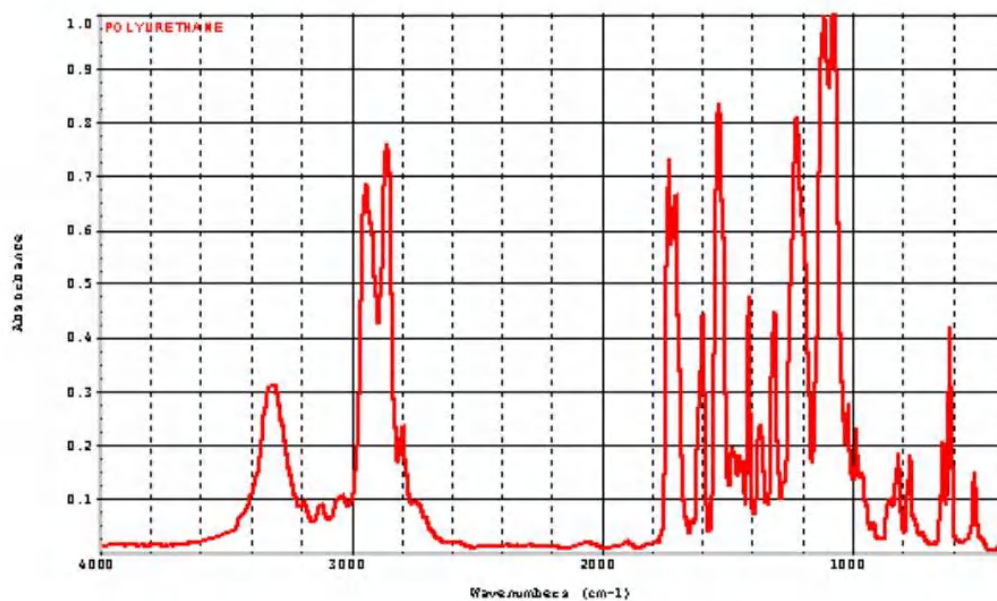
## Nylon



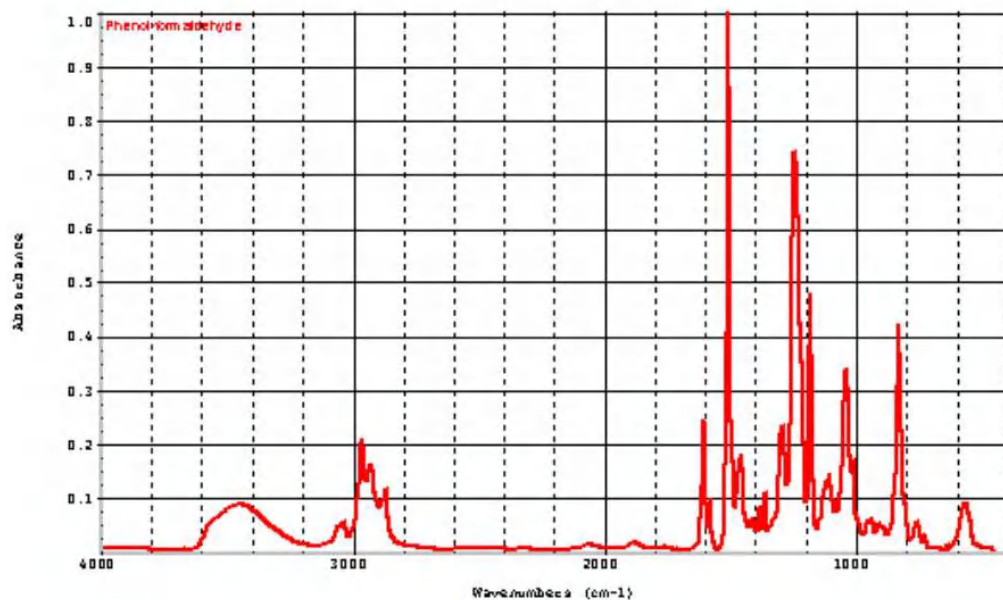
## Polifinil Butyral



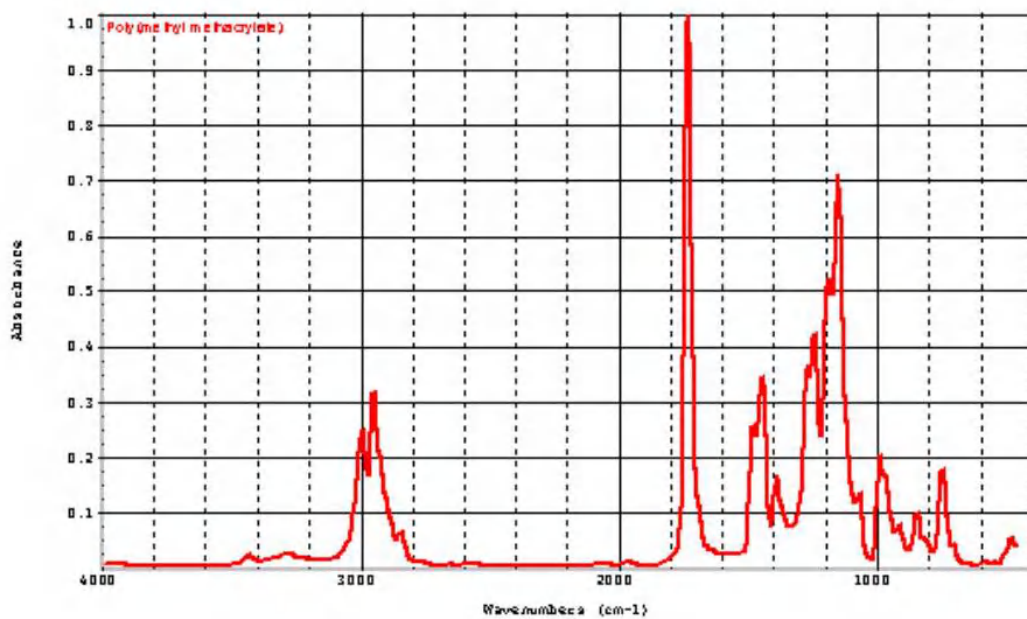
## Polyurethane



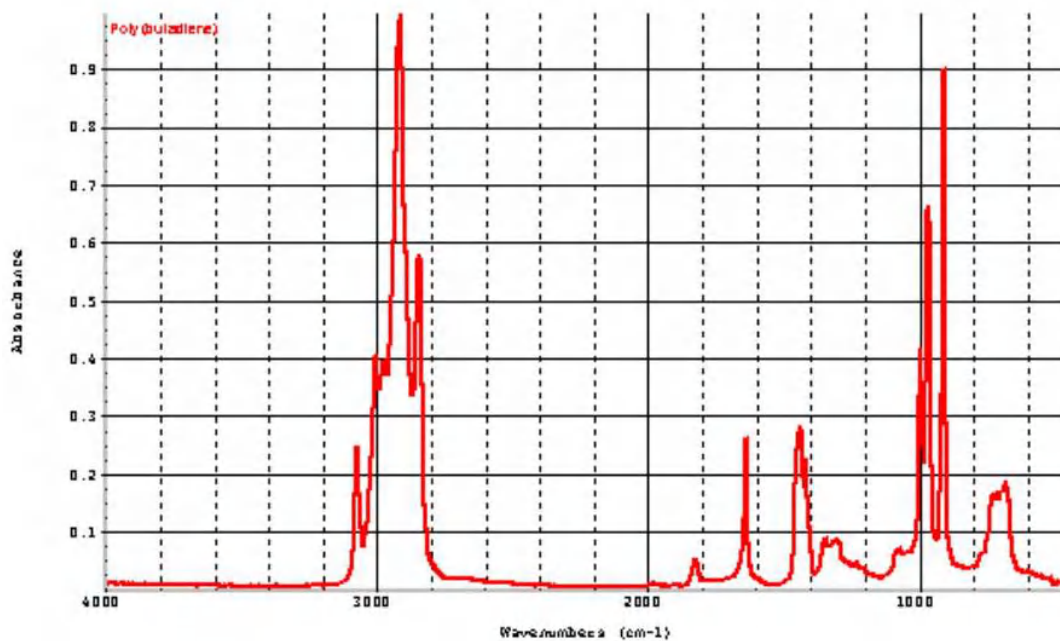
## Penol Formaldehyde



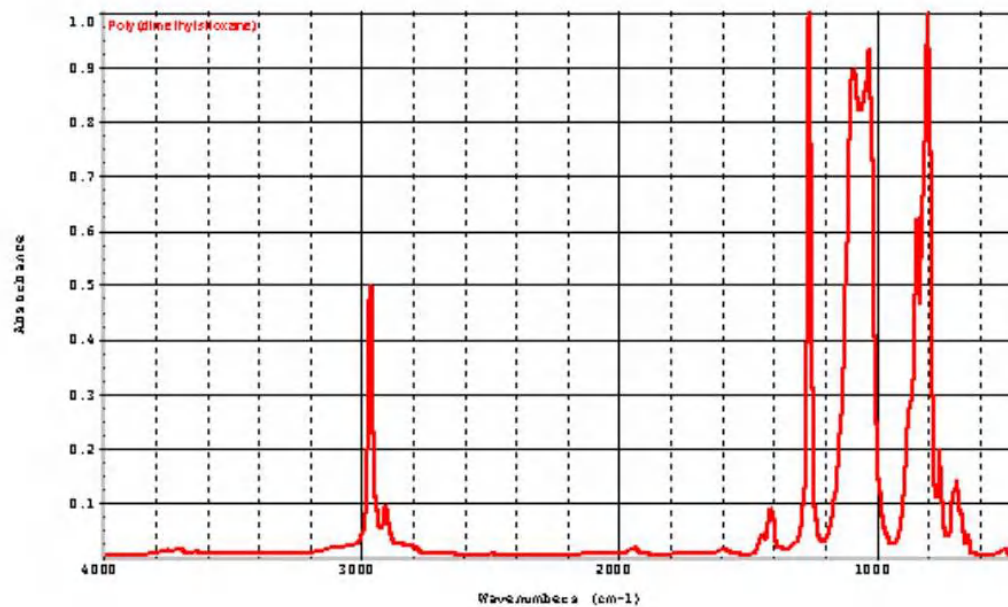
### Polymetil methacrylate



### Polybutadiene



## Polydimethylshoxane



### Lampiran 7

#### Dokumentasi pengambilan sampel.



#### Dokumentasi Pengamatan di Laboratorium

