

## Supporting information

Seasonal variations in microplastic abundance and key driving factors in the aquatic environment of a typical river-connected lake

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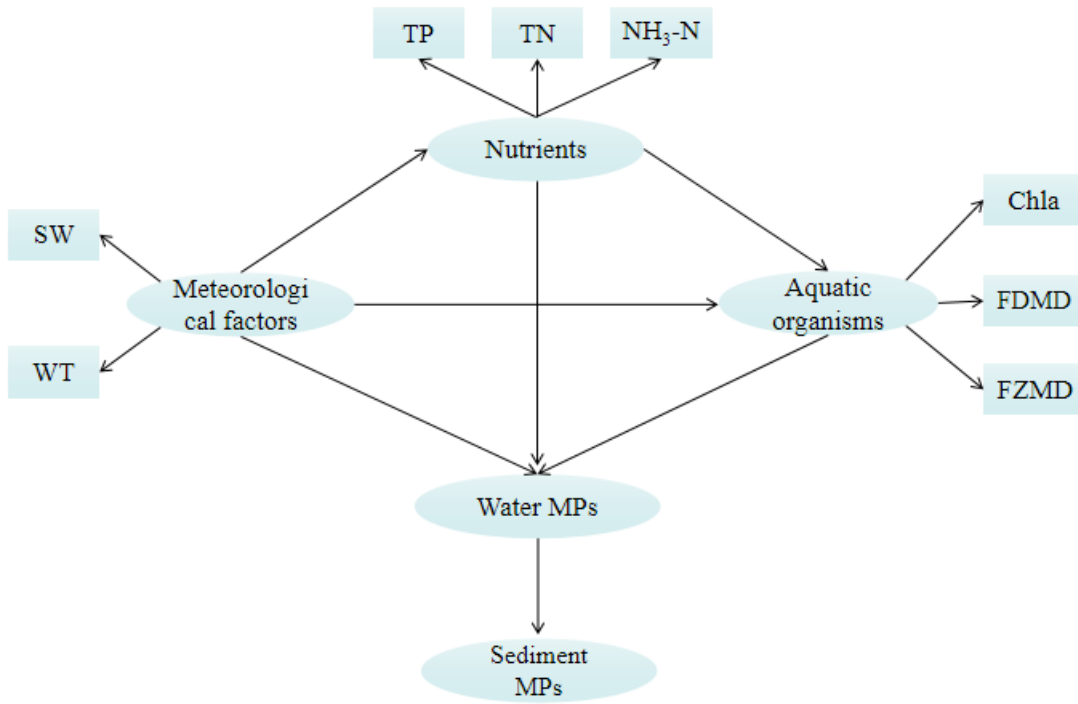
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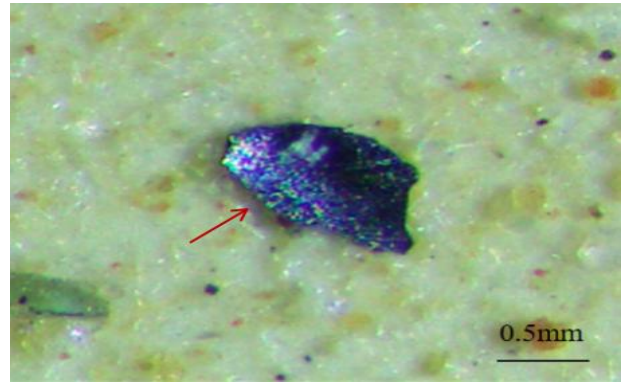
E-mail: hainan@mail.hzau.edu.cn



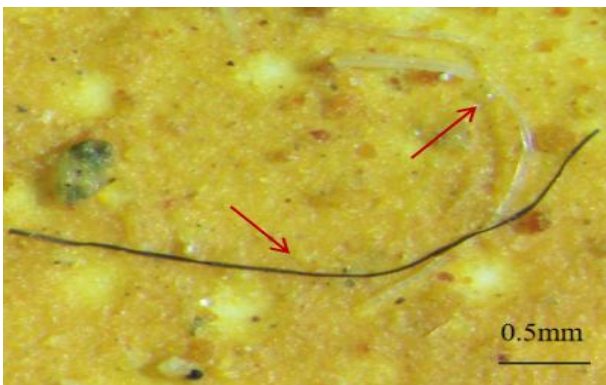
**Figure S1: Structural Equation Conceptual Model for the Relationships Between Meteorological Factors, Nutrient Levels, Aquatic Organisms, and MPs**



A: Film

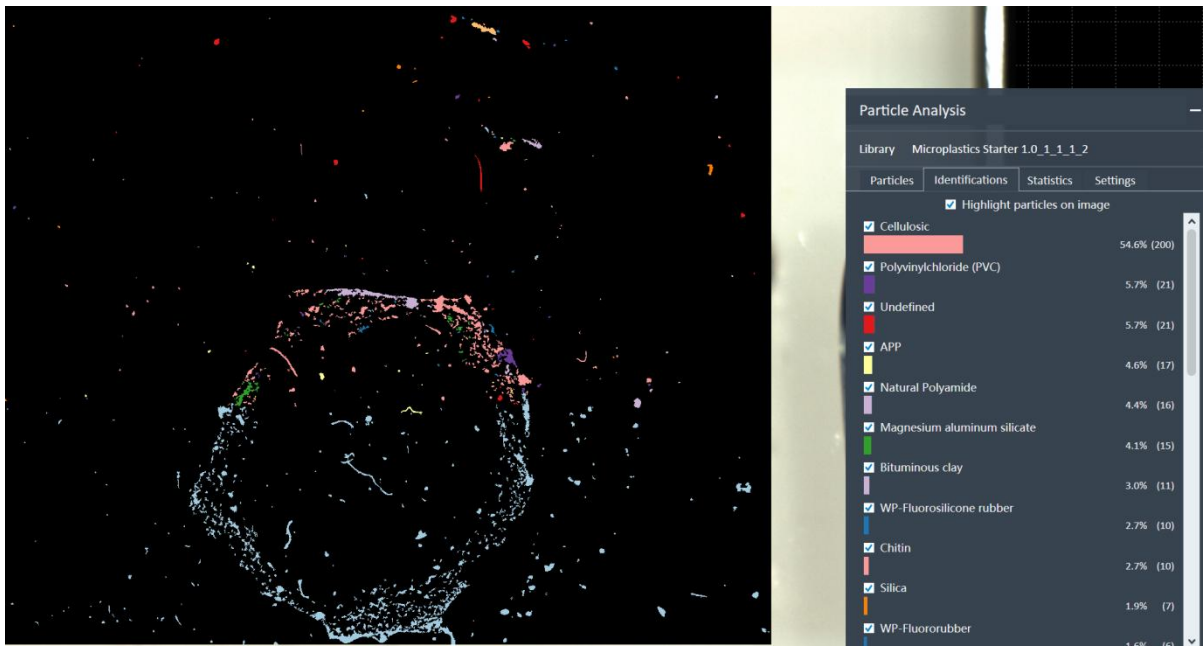
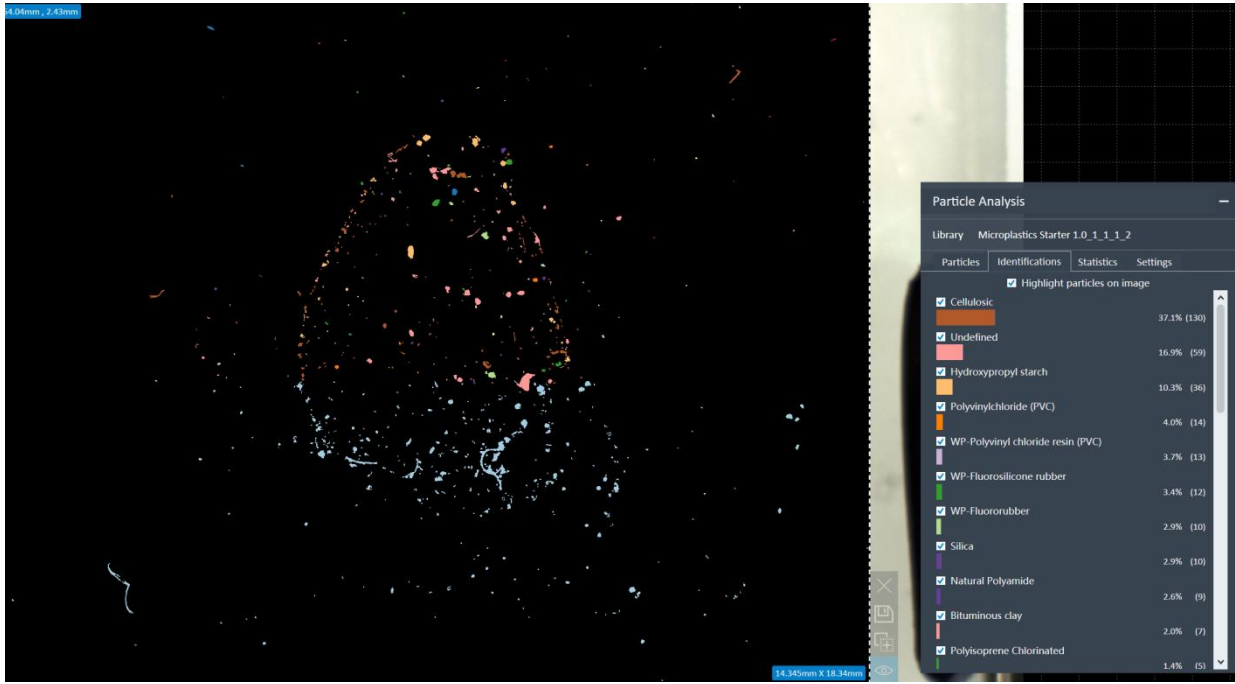


B: Fragment



C: Fiber

**Figure S2: Microscopic Images of Suspected MPs Shapes**



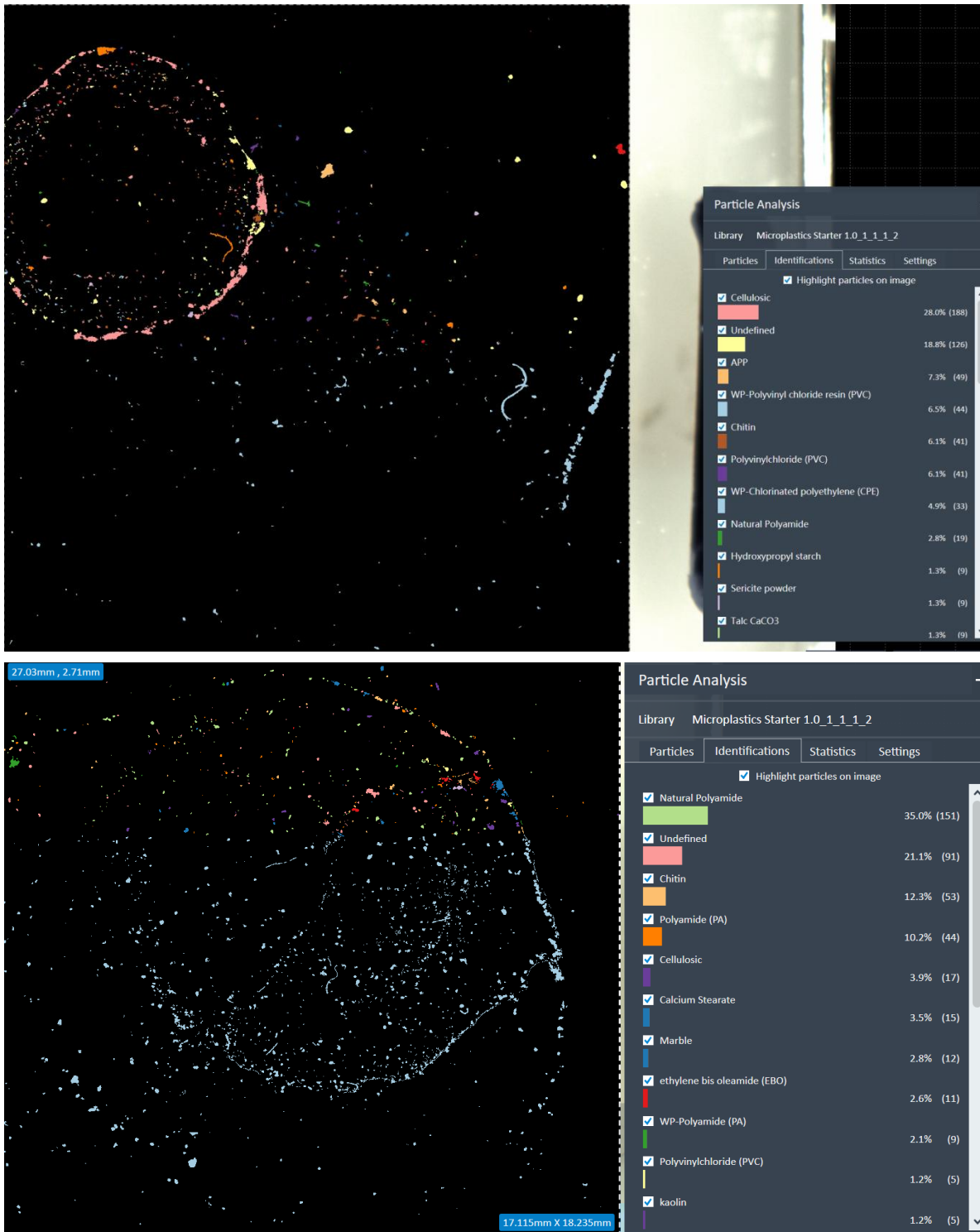
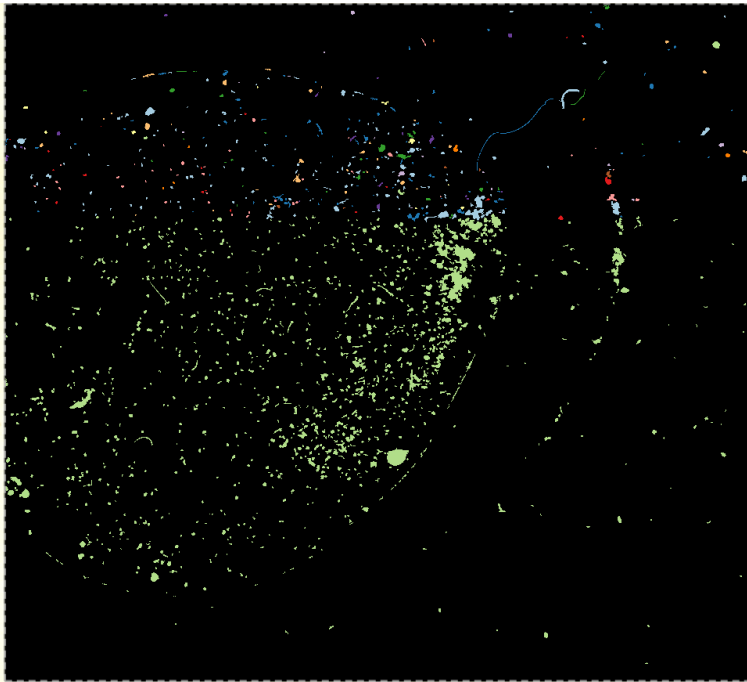


Figure S3: Polymer Types of Microplastics at Selected Water Sampling Sites



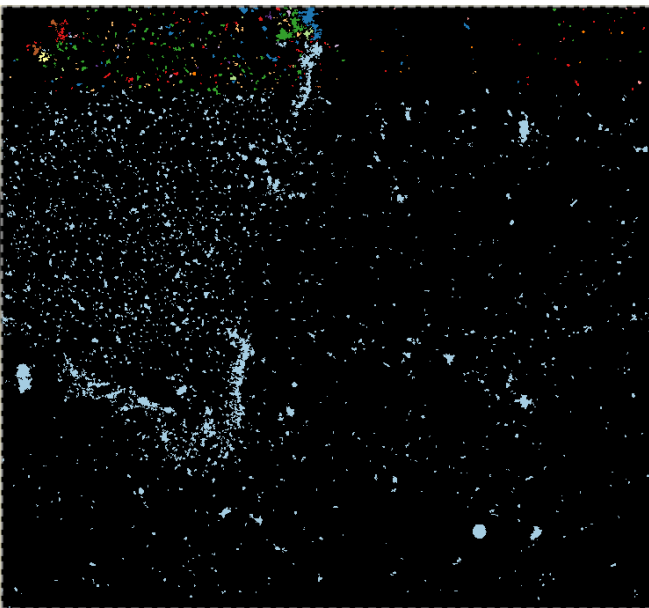
### Particle Analysis 1

Library Microplastics Starter 1.0\_1\_1\_1\_2

Particles Identifications Statistics Settings

Highlight particles on image

<input checked="" type="checkbox"/> Cellulosic	32.5% (134)
<input checked="" type="checkbox"/> Undefined	10.0% (41)
<input checked="" type="checkbox"/> Bituminous clay	8.3% (34)
<input checked="" type="checkbox"/> Magnesium aluminum silicate	6.3% (26)
<input checked="" type="checkbox"/> Natural Polyamide	5.8% (24)
<input checked="" type="checkbox"/> Polyurethane (PU)	4.4% (18)
<input checked="" type="checkbox"/> WP-Fluorosilicone rubber	3.4% (14)
<input checked="" type="checkbox"/> Chitin	2.9% (12)
<input checked="" type="checkbox"/> Bleaching clay	2.9% (12)
<input checked="" type="checkbox"/> Polyethylene Terephthalate (PET)	2.4% (10)



### Particle Analysis 1

Library Microplastics Starter 1.0\_1\_1\_1\_2

Particles Identifications Statistics Settings

Highlight particles on image

<input checked="" type="checkbox"/> Cellulose chemically modified	27.6% (97)
<input checked="" type="checkbox"/> Cellulosic	22.2% (78)
<input checked="" type="checkbox"/> Polyurethane (PU)	19.1% (67)
<input checked="" type="checkbox"/> WP-Acrylate copolymer (ACR)	9.4% (33)
<input checked="" type="checkbox"/> WP-Ethylene vinyl acetate copolymer (EVA)	3.1% (11)
<input checked="" type="checkbox"/> WP-Chlorinated polyethylene (CPE)	3.1% (11)
<input checked="" type="checkbox"/> Natural Polyamide	2.8% (10)
<input checked="" type="checkbox"/> Organobentonite tableting	2.3% (8)

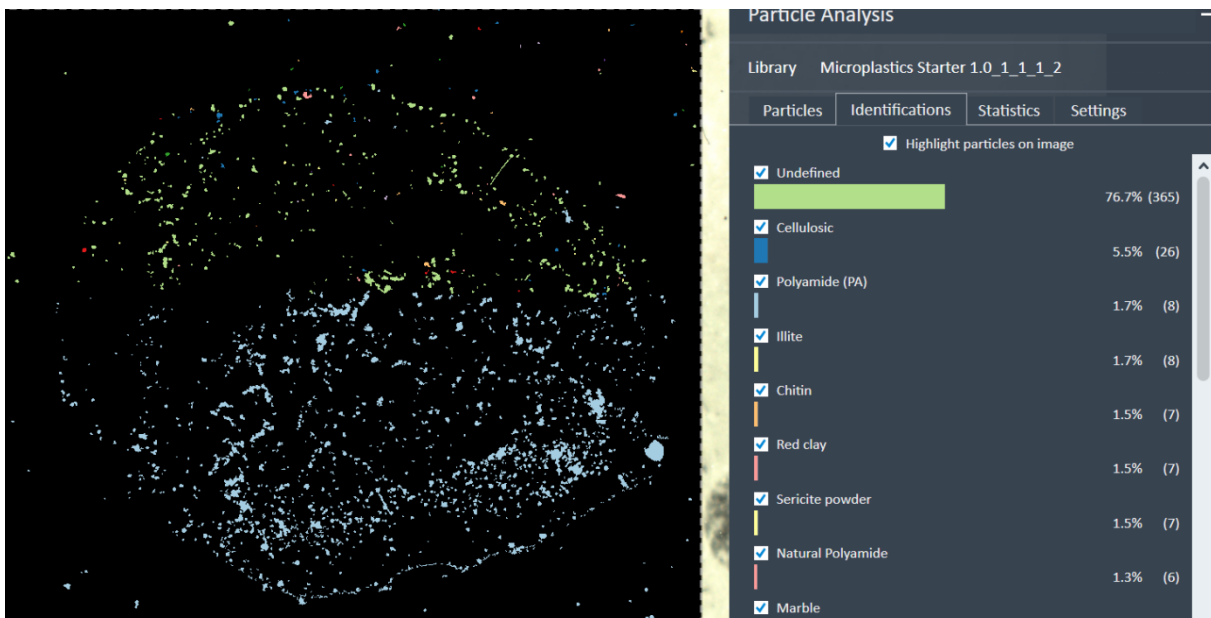
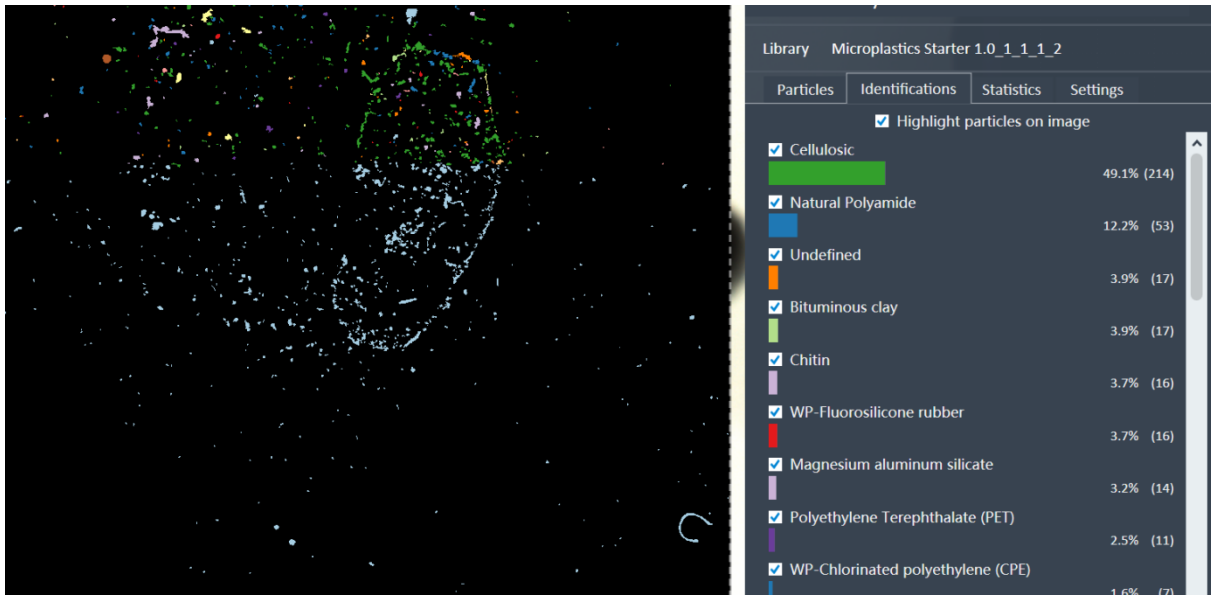


Figure S4: Polymer Types of MPs at Selected Sediment Sampling Sites

**Table S1: Abundance of MPs in the surface water of nearshore areas worldwide (The abundance of MPs “items/L” was converted to “items/m<sup>3</sup>”).**

Study area	Relative abundance		Major shape	Major types	Sampling device	Sampling device (season)	Reference
	Water (items/m <sup>3</sup> )	Sediment (items/kg d.w.)					
Xiangshan Bay, China	0.036 ± 0.033	9.49 ± 4.88	fiber and fragment and foamy	R, Y, PS	Trawling net, 330 µm	DS	Yang et al., 2023
	0.233 ± 0.192	11.03 ± 10.40		PP, PS			
Sarab Niloofar Lake, Iran	/	2483.59 ± 805.30	fiber and fragment	PE, PS, PU, and PP	/	WS	Nayeri et al., 2023
Caohai Lake, China	650±200	2904±923	film and fibers	/	Steel sieve, 30µm	DS	Wu et al., 2023
	560±330	1872±1107	film and fibers	/			
Four Minnesota lakes, USA	/	80±30; 270±200; 180±130; 30±20	fibers	PE, PP and PS	NQS manta tow net, 330 µm	WS	Conowall et al., 2023
Al-Hubail Lake et al, Saudi Arabia	700 - 9000	/	fiber and fragment	/	Clean glass, 333 µm	DS	Pico et al., 2021
Ox-Bow Lake, Nigeria	1004 - 8329	4031	fibers	PET and PVC	Steel sieve	DS	Oni et al., 2020
	8369	507 - 7593	fibers	PVC and PE			
Michigan, USA	/	32.9 - 6229	foam, fragments	PP, PS and PE	Neuston net, 333 µm	WS	Lenaker et al., 2019
Simcoe Lake, Canada	/	8.3 - 1070	fragments	PP and PE	Manta trawl, 335 µm	/	Felismino et al., 2021
Victoria Lake	/	0 - 1102	filament and film	PP, PET, PVC and PE	/	/	Egessa et al., 2020
lagoon of Bizerte, bizerte	/	7960	fibers	PP and PE	/	DS	Abidli et al., 2019
Poyang Lake, China	594.44 ± 475.83	349.60 ± 301.50	fiber and fragment	PP, PU, PA, ACR et al	Trawling net, 30 µm	WS	Our research
	386.36 ± 179.00	275.29±222.29					
	0.021 ± 0.013	16.22±3.58			Trawling net, 300 µm	WS	
	0.012 ± 0.132	47.7±6.40					

Note: “/” means “not sampled”, “DS” means “dry season”, “WS” means “wet season”.

## References

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**Table S2: Raw Data Set for Sampling Point N1**

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A283	50	75	58.09	2650	208.99	WP-Polypropylene (PP)	0.955	true
A33	180	125	115.00	10387.5	619.91	WP-Polypropylene (PP)	0.933	true
A723	69	43	37.21	1087.5	250.21	WP-Polypropylene (PP)	0.898	true
A133	116	71	75.38	4462.5	338.49	Bituminous clay	0.889	true
A1088	51	29	28.77	650	146.57	Cellulosic	0.867	true
A1468	18	35	21.11	350	92.43	Natural Polyamide	0.862	true
A25	135	115	122.64	11812.5	425.06	Polyethylene (PE)	0.859	true
A250	69	73	60.37	2862.5	286.78	WP-Polypropylene (PP)	0.857	true
A274	59	120	58.77	2712.5	318.49	Natural Polyamide	0.853	true
A726	103	24	37.21	1087.5	243.64	Cellulosic	0.852	true
A1271	18	36	24.59	475	98.28	Bituminous clay	0.851	true
A1178	42	18	26.76	562.5	103.64	Bituminous clay	0.848	true
A1134	25	30	27.64	600	92.43	Natural Polyamide	0.847	true
A449	37	83	48.04	1812.5	210.21	Cellulosic	0.846	true
A1349	20	35	23.26	425	92.43	Natural Polyamide	0.845	true
A1450	30	15	21.48	362.5	75.36	Natural Polyamide	0.843	true
A596	60	45	41.84	1375	196.57	Bituminous clay	0.843	true
A533	40	55	44.60	1562.5	163.64	Bituminous clay	0.841	true
A797	35	35	35.46	987.5	119.50	Bleaching clay	0.840	true
A1310	20	30	23.94	450	88.28	Chitin	0.835	true
A752	60	32	36.56	1050	160.71	Natural Polyamide	0.835	true
A713	45	40	37.64	1112.5	171.92	Polypropylene (PP)	0.834	true
A1277	25	25	24.27	462.5	85.36	Bituminous clay	0.832	true
A667	25	75	39.09	1200	176.57	Bituminous clay	0.828	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A1336	32	25	23.60	437.5	103.64	Bituminous clay	0.828	true
A68	82	124	92.28	6687.5	368.49	Chitin	0.827	true
A738	22	74	37.00	1075	176.57	Cellulosic	0.825	true
A117	65	115	77.87	4762.5	364.35	Bleaching clay	0.824	true
A987	44	25	31.16	762.5	119.50	Natural Polyamide	0.821	true
A1225	25	25	25.54	512.5	91.21	Bituminous clay	0.816	true
A172	57	148	68.17	3650	382.13	Bleaching clay	0.814	true
A595	25	93	41.84	1375	220.71	Bituminous clay	0.814	true
A345	37	108	52.78	2187.5	268.49	Bleaching clay	0.809	true
A430	67	39	48.53	1850	188.99	WP-Fluororubber	0.809	true
A218	55	78	62.83	3100	238.99	Cellulosic	0.807	true
A724	150	20	37.21	1087.5	334.35	Cellulosic	0.802	true
A179	134	53	67.23	3550	412.13	WP-Fluororubber	0.801	true
A899	35	35	33.14	862.5	123.64	Cellulosic	0.801	true
A487	27	98	46.35	1687.5	236.07	Bituminous clay	0.800	true
A1160	25	30	27.06	575	92.43	Natural Polyamide	0.800	true

**Table S3: Raw Data Set for Sampling Point W1**

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A72	167	52	86.489	5875	409.71	WP-Polypropylene (PP)	0.969	true
A530	25	25	24.267	462.5	93.64	Natural Polyamide	0.943	true
A429	25	30	28.209	625	98.28	Natural Polyamide	0.937	true
A617	25	15	21.851	375	80.00	WP-Polypropylene (PP)	0.930	true
A21	100	340	130.314	13337.5	902.76	Cellulosic	0.925	true
A503	30	20	25.231	500	88.28	Marble	0.865	true
A426	46	18	28.209	625	110.71	Cellulosic	0.852	true
A421	25	35	28.490	637.5	105.36	Bleaching clay	0.849	true
A184	28	127	51.090	2050	297.28	Marble	0.847	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A243	40	40	41.074	1325	146.57	WP-Fluororubber	0.840	true
A135	60	60	61.932	3012.5	211.92	Silica	0.832	true
A360	35	30	30.902	750	112.43	WP-Fluororubber	0.829	true
A450	20	40	27.350	587.5	105.36	Chitin	0.828	true
A370	40	25	30.383	725	112.43	Bituminous clay	0.823	true
A187	65	50	50.934	2037.5	230.21	WP-Fluororubber	0.821	true
A287	43	32	36.564	1050	132.43	WP-Polyvinyl chloride resin (PVC)	0.820	true
A525	25	25	24.267	462.5	85.36	Natural Polyamide	0.816	true
A110	90	65	69.558	3800	273.14	WP-Fluororubber	0.809	true
A551	30	20	23.602	437.5	85.36	Cellulosic	0.808	true
A215	49	45	45.661	1637.5	167.78	Cellulosic	0.807	true
A164	48	81	55.279	2400	213.14	Bituminous clay	0.806	true
A592	25	25	22.568	400	98.28	Acrylates	0.805	true
A153	104	33	57.259	2575	263.14	Natural Polyamide	0.805	true
A487	30	20	25.854	525	88.28	Bituminous clay	0.803	true
A359	28	35	30.902	750	106.57	WP-Polyvinyl chloride resin (PVC)	0.801	true
A377	60	19	30.119	712.5	143.64	Red clay	0.799	true
A434	44	22	27.926	612.5	115.36	Silica	0.799	true
A309	72	33	35.007	962.5	186.07	Bituminous clay	0.798	true
A649	15	30	21.110	350	78.28	Bituminous clay	0.797	true
A320	40	30	33.851	900	116.57	Cellulosic	0.795	true
A120	105	74	66.157	3437.5	356.78	Cellulosic	0.794	true
A19	154	141	134.521	14212.5	644.77	WP-Fluororubber	0.794	true
A197	45	65	49.668	1937.5	207.78	WP-Fluororubber	0.787	true
A25	110	135	124.442	12162.5	422.63	APP	0.786	true
A145	192	25	59.841	2812.5	430.21	Cellulosic	0.783	true
A546	39	28	23.602	437.5	147.78	Cellulosic	0.779	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A294	45	30	35.905	1012.5	129.50	Cellulosic	0.778	true
A347	40	30	31.665	787.5	123.64	Cellulosic	0.778	true
A635	20	30	21.484	362.5	89.50	Cellulosic	0.774	true
A527	60	16	24.267	462.5	143.64	Cellulosic	0.770	true
A49	150	88	98.934	7687.5	463.35	Cellulosic	0.770	true
A465	25	45	26.762	562.5	129.50	Natural Polyamide	0.766	true
A322	30	40	33.851	900	116.57	WP-Fluororubber	0.766	true
A373	40	25	30.383	725	112.43	Cellulosic	0.763	true
A302	54	27	35.234	975	136.57	Cellulosic	0.761	true
A364	45	20	30.643	737.5	115.36	Talc CaCO <sub>3</sub>	0.759	true
A167	65	50	54.700	2350	194.85	Natural Polyamide	0.759	true
A227	50	40	43.519	1487.5	153.64	Cellulosic	0.757	true
A418	39	21	28.490	637.5	103.64	Cellulosic	0.757	true
A612	25	20	21.851	375	78.28	Cellulosic	0.756	true
A274	42	46	37.847	1125	158.99	Chitin	0.756	true
A4	125	275	185.111	26912.5	746.48	Ethylene Vinyl Acetate (EVA)	0.756	true
A486	25	30	25.854	525	98.28	Talc CaCO <sub>3</sub>	0.754	true
A358	36	31	30.902	750	116.57	Cellulosic	0.754	true
A633	20	30	21.484	362.5	85.36	Cellulosic	0.752	true
A471	35	25	26.463	550	102.43	Cellulosic	0.751	true
A494	50	25	25.545	512.5	157.78	Cellulosic	0.751	true
A477	25	28	26.160	537.5	89.50	APP	0.749	true
A252	28	72	39.493	1225	178.99	Cellulosic	0.749	true
A624	25	20	21.484	362.5	75.36	Cellulosic	0.749	true
A175	72	46	52.624	2175	213.14	Cellulosic	0.749	true
A614	20	25	21.851	375	78.28	Cellulosic	0.747	true
A397	35	25	29.316	675	108.28	Cellulosic	0.747	true
A226	56	42	43.702	1500	170.71	Cellulosic	0.746	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>IsValid</b>
A200	74	44	49.023	1887.5	226.07	Cellulosic	0.746	true
A8	194	192	158.777	19800	1074.97	Hydroxypropyl starch	0.746	true
A232	40	50	43.152	1462.5	153.64	Silica	0.745	true
A544	30	20	23.602	437.5	85.36	Cellulosic	0.743	true
A616	25	20	21.851	375	78.28	Cellulosic	0.742	true
A71	105	70	87.039	5950	313.14	Polyvinylchloride (PVC)	0.742	true
A326	25	46	33.615	887.5	131.92	Silica	0.741	true
A452	50	27	27.350	587.5	143.64	Cellulosic	0.740	true
A212	30	65	46.008	1662.5	169.50	Cellulosic	0.739	true
A341	69	18	32.164	812.5	157.78	Polyurethane (PU)	0.739	true
A101	88	105	75.061	4425	381.42	Cellulosic	0.738	true
A59	78	130	95.746	7200	397.99	Polyethylene Terephthalate (PET)	0.738	true
A32	181	110	114.796	10350	609.41	Cellulosic	0.738	true
A262	79	30	38.679	1175	214.85	Cellulosic	0.737	true
A659	20	25	20.730	337.5	85.36	Cellulosic	0.737	true
A428	25	30	28.209	625	92.43	Cellulosic	0.737	true
A363	30	35	30.643	737.5	115.36	Cellulosic	0.736	true
A198	45	55	49.507	1925	182.43	Cellulosic	0.736	true
A100	94	113	75.166	4437.5	552.34	Hydroxypropyl starch	0.735	true
A240	35	55	41.267	1337.5	153.64	Cellulosic	0.735	true
A646	20	20	21.110	350	74.14	Cellulosic	0.734	true
A199	80	31	49.185	1900	197.28	Polyisoprene Chlorinated	0.734	true
A407	35	25	29.043	662.5	99.50	WP-Polyvinyl chloride resin (PVC)	0.733	true
A357	40	25	30.902	750	112.43	Hydroxypropyl starch	0.733	true
A163	65	50	55.279	2400	194.85	Acrylates	0.732	true
A283	55	38	36.781	1062.5	201.92	Hydroxypropyl starch	0.732	true
A361	24	46	30.902	750	116.57	Cellulosic	0.732	true
A436	45	20	27.926	612.5	119.50	Bituminous clay	0.731	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>IsValid</b>
A173	68	96	52.775	2187.5	366.78	Cellulosic	0.731	true
A261	35	60	38.679	1175	188.99	Cellulosic	0.729	true
A537	20	30	23.937	450	88.28	Magnesium aluminum silicate	0.729	true
A16	155	135	139.402	15262.5	500.92	Polyethylene Terephthalate (PET)	0.729	true
A109	109	85	69.558	3800	470.42	Cellulosic	0.728	true
A590	44	33	22.568	400	203.14	Polyvinylchloride (PVC)	0.728	true
A204	39	74	47.873	1800	188.99	Cellulosic	0.728	true
A254	29	68	39.493	1225	176.57	WP-Chlorinated polyethylene (CPE)	0.727	true
A39	95	351	110.053	9512.5	921.34	Cellulosic	0.727	true
A203	71	35	48.369	1837.5	186.07	Hydroxypropyl starch	0.727	true
A207	46	51	47.372	1762.5	167.78	Cellulosic	0.727	true
A453	25	30	27.350	587.5	95.36	Cellulosic	0.727	true
A396	32	25	29.316	675	96.57	Silica	0.726	true
A56	115	117	96.738	7350	510.42	Hydroxypropyl starch	0.726	true
A560	25	25	23.262	425	92.43	Cellulosic	0.726	true
A150	47	96	57.674	2612.5	270.21	Cellulosic	0.725	true
A352	35	30	31.158	762.5	115.36	Hydroxypropyl starch	0.725	true
A79	104	96	84.062	5550	373.85	Hydroxypropyl starch	0.725	true
A391	40	25	29.586	687.5	109.50	Cellulosic	0.725	true
A375	25	48	30.119	712.5	123.64	Cellulosic	0.724	true
A134	49	87	62.572	3075	243.14	Cellulosic	0.724	true
A562	41	23	23.262	425	120.71	Cellulosic	0.724	true
A300	45	30	35.459	987.5	123.64	Hydroxypropyl starch	0.724	true
A608	24	25	21.851	375	82.43	Polyvinylchloride (PVC)	0.723	true
A143	155	48	60.107	2837.5	435.06	Cellulosic	0.723	true
A404	35	25	29.043	662.5	105.36	Cellulosic	0.723	true
A146	70	50	59.441	2775	210.71	Polyvinylchloride (PVC)	0.722	true
A263	34	49	38.679	1175	144.85	Cellulosic	0.722	true

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A630	20	25	21.484	362.5	75.36	Silica	0.721	true
A472	30	25	26.463	550	102.43	Polyvinylchloride (PVC)	0.721	true
A469	30	25	26.463	550	98.28	APP	0.721	true
A290	54	36	36.345	1037.5	201.92	Hydroxypropyl starch	0.721	true
A444	40	20	27.640	600	102.43	Cellulosic	0.720	true
A631	20	20	21.484	362.5	71.21	Cellulosic	0.720	true
A485	21	28	25.854	525	86.57	Cellulosic	0.720	true
A234	51	40	42.782	1437.5	153.64	Cellulosic	0.718	true
A66	80	114	90.798	6475	329.71	Polyurethane (PU)	0.718	true
A661	20	20	20.730	337.5	71.21	Cellulosic	0.717	true
A605	25	20	21.851	375	78.28	Calcined kaolin	0.717	true
A223	105	32	44.781	1575	287.28	Cellulosic	0.717	true
A337	35	30	32.410	825	112.43	Cellulosic	0.716	true
A392	72	21	29.586	687.5	173.64	Cellulosic	0.716	true
A433	42	21	27.926	612.5	113.64	Cellulosic	0.716	true
A615	49	14	21.851	375	110.71	Cellulosic	0.716	true
A336	46	28	32.410	825	134.85	Cellulosic	0.714	true
A629	25	20	21.484	362.5	75.36	Cellulosic	0.714	true
A230	62	43	43.152	1462.5	191.92	Cellulosic	0.713	true
A625	40	17	21.484	362.5	99.50	WP-Polyvinyl chloride resin (PVC)	0.713	true
A340	40	25	32.164	812.5	109.50	Polyisoprene Chlorinated	0.712	true
A303	37	60	35.234	975	183.14	Cellulosic	0.712	true
A409	25	65	29.043	662.5	177.78	Hydroxypropyl starch	0.711	true
A578	30	20	22.917	412.5	85.36	WP-Polyvinyl chloride resin (PVC)	0.711	true
A241	60	32	41.267	1337.5	166.07	Polyethylene Terephthalate (PET)	0.710	true
A368	23	85	30.383	725	224.85	Hydroxypropyl starch	0.709	true
A376	20	45	30.119	712.5	115.36	Lead stearate	0.709	true
A648	28	18	21.110	350	78.28	Sericite powder	0.708	true

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A393	37	33	29.586	687.5	125.36	Cellulosic	0.708	true
A610	33	18	21.851	375	92.43	Cellulosic	0.708	true
A668	30	20	20.342	325	96.57	Cellulosic	0.707	true
A348	51	31	31.665	787.5	157.78	Cellulosic	0.706	true
A526	20	30	24.267	462.5	85.36	Cellulosic	0.706	true
A538	30	25	23.937	450	92.43	Hydroxypropyl starch	0.706	true
A372	30	30	30.383	725	102.43	Cellulosic	0.706	true
A346	30	35	31.665	787.5	115.36	Cellulosic	0.706	true
A272	26	68	38.057	1137.5	169.50	WP-Chlorinated polyethylene (CPE)	0.705	true
A40	112	109	109.546	9425	402.13	Hydroxypropyl starch	0.705	true
A65	73	168	91.496	6575	510.42	Cellulosic	0.705	true
A398	35	25	29.316	675	102.43	Cellulosic	0.704	true
A325	23	65	33.615	887.5	163.64	Cellulosic	0.704	true
A288	40	30	36.345	1037.5	125.36	Polyvinylchloride (PVC)	0.703	true
A54	114	109	98.127	7562.5	449.20	Silica	0.703	true
A28	142	109	120.081	11325	437.99	Cellulosic	0.703	true
A73	74	117	86.212	5837.5	346.78	Cellulosic	0.702	true
A191	45	55	50.777	2025	170.71	Cellulosic	0.702	true
A296	30	52	35.682	1000	144.85	Cellulosic	0.701	true
A315	40	35	34.549	937.5	129.50	Hydroxypropyl starch	0.701	true
A180	59	49	51.862	2112.5	187.78	Hydroxypropyl starch	0.699	true
A259	62	30	38.884	1187.5	161.92	Calcined kaolin	0.699	true
A501	30	25	25.231	500	92.43	Cellulosic	0.699	true
A476	20	30	26.160	537.5	91.21	Cellulosic	0.699	true
A493	39	18	25.545	512.5	103.64	Cellulosic	0.698	true
A531	20	30	24.267	462.5	91.21	Bituminous clay	0.698	true
A519	23	36	24.592	475	106.57	Polyvinylchloride (PVC)	0.698	true
A425	35	25	28.209	625	102.43	Cellulosic	0.698	true

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A512	25	35	24.914	487.5	109.50	Cellulosic	0.698	true
A607	18	31	21.851	375	82.43	Cellulosic	0.697	true
A154	74	47	57.120	2562.5	206.07	Cellulosic	0.697	true
A500	25	25	25.231	500	88.28	Talc CaCO <sub>3</sub>	0.697	true
A466	30	30	26.762	562.5	105.36	Hydroxypropyl starch	0.696	true
A196	40	65	49.828	1950	178.99	Natural Polyamide	0.695	true
A520	25	25	24.592	475	82.43	Cellulosic	0.695	true
A188	60	40	50.934	2037.5	173.64	WP-Fluorosilicone rubber	0.695	true
A69	59	305	89.028	6225	876.69	Cellulosic	0.694	true
A443	25	32	27.640	600	96.57	Cellulosic	0.694	true
A137	78	63	61.287	2950	281.42	Cellulosic	0.693	true
A331	31	36	32.655	837.5	113.64	Cellulosic	0.693	true
A492	21	32	25.545	512.5	89.50	Polyvinylchloride (PVC)	0.692	true
A161	56	85	55.566	2425	287.28	Cellulosic	0.692	true
A561	20	25	23.262	425	78.28	Natural Polyamide	0.691	true
A470	29	27	26.463	550	96.57	Cellulosic	0.691	true
A601	20	30	22.212	387.5	91.21	Polyvinylchloride (PVC)	0.691	true
A190	50	50	50.777	2025	176.57	Calcined kaolin	0.691	true
A127	71	71	64.574	3275	253.14	Hydroxypropyl starch	0.691	true
A524	25	28	24.267	462.5	89.50	Hydroxypropyl starch	0.690	true
A247	67	39	40.291	1275	208.99	Polyvinylchloride (PVC)	0.690	true
A189	69	47	50.934	2037.5	230.21	WP-Fluororubber	0.690	true
A381	76	20	29.854	700	183.14	Cellulosic	0.690	true
A545	21	25	23.602	437.5	79.50	Talc CaCO <sub>3</sub>	0.689	true
A383	35	25	29.854	700	108.28	WP-Ethylene acrylic acid (EAA)	0.689	true
A271	32	46	38.057	1137.5	133.64	Silica	0.689	true
A591	25	20	22.568	400	78.28	WP-Polyvinyl chloride resin (PVC)	0.689	true

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A382	35	25	29.854	700	102.43	WP-Polyvinyl chloride resin (PVC)	0.689	true
A46	90	130	103.955	8487.5	400.92	Chitin	0.689	true
A216	65	44	45.661	1637.5	196.07	APP	0.686	true
A321	30	35	33.851	900	112.43	WP-Fluorosilicone rubber	0.685	true
A399	31	43	29.316	675	154.85	Cellulosic	0.685	true
A577	25	25	22.917	412.5	85.36	Polysulfone	0.684	true
A172	51	58	53.226	2225	184.85	WP-Fluorosilicone rubber	0.684	true
A611	20	20	21.851	375	74.14	WP-Fluorosilicone rubber	0.684	true
A374	26	45	30.119	712.5	123.64	Cellulosic	0.683	true
A186	112	31	50.934	2037.5	264.35	Cellulosic	0.683	true
A670	20	20	20.342	325	68.28	Cellulosic	0.682	true
A83	99	81	81.953	5275	309.71	Hydroxypropyl starch	0.682	true
A291	33	54	36.345	1037.5	159.50	Hydroxypropyl starch	0.681	true
A435	28	35	27.926	612.5	109.50	Cellulosic	0.681	true
A148	59	61	58.632	2700	203.14	Hydroxypropyl starch	0.680	true
A427	52	24	28.209	625	140.71	Polyvinylchloride (PVC)	0.680	true
A10	220	115	143.619	16200	665.27	Cellulosic	0.680	true
A529	25	25	24.267	462.5	85.36	Silica	0.680	true
A105	72	78	73.777	4275	267.28	Cellulosic	0.680	true
A672	15	30	20.342	325	78.28	Cellulosic	0.679	true
A14	131	156	139.573	15300	514.56	Hydroxypropyl starch	0.679	true
A140	50	75	60.239	2850	214.85	WP-Fluorosilicone rubber	0.679	true
A413	30	30	28.768	650	102.43	Cellulosic	0.678	true
A496	30	20	25.545	512.5	91.21	Chitin	0.678	true
A371	28	35	30.383	725	112.43	Cellulosic	0.677	true
A580	20	25	22.917	412.5	81.21	WP-Polyvinyl chloride resin (PVC)	0.677	true
A626	21	28	21.484	362.5	85.36	Hydroxypropyl starch	0.676	true

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A627	20	20	21.484	362.5	71.21	Polyvinylchloride (PVC)	0.676	true
A286	40	30	36.564	1050	122.43	Polyisoprene Chlorinated	0.675	true
A609	25	20	21.851	375	78.28	Cellulosic	0.675	true
A317	30	50	34.318	925	160.71	WP-Fluorosilicone rubber	0.675	true
A475	34	25	26.160	537.5	99.50	WP-Fluorosilicone rubber	0.674	true
A332	40	30	32.655	837.5	125.36	Cellulosic	0.674	true
A219	70	33	45.135	1600	207.28	Cellulosic	0.673	true
A62	158	66	94.744	7050	423.85	Cellulosic	0.673	true
A647	50	20	21.110	350	132.43	WP-Polylactic acid (PLA)	0.673	true
A67	95	93	89.740	6325	345.56	Hydroxypropyl starch	0.672	true
A602	25	20	22.212	387.5	81.21	WP-Polyvinyl chloride resin (PVC)	0.671	true
A660	30	20	20.730	337.5	85.36	Hydroxypropyl starch	0.670	true
A669	21	21	20.342	325	72.43	Hydroxypropyl starch	0.670	true
A523	30	20	24.267	462.5	85.36	WP-Fluorosilicone rubber	0.669	true
A535	18	36	23.937	450	92.43	Hydroxypropyl starch	0.669	true
A419	20	45	28.490	637.5	115.36	WP-Polyvinyl chloride resin (PVC)	0.669	true
A484	19	47	25.854	525	112.43	Cellulosic	0.668	true
A510	46	21	24.914	487.5	123.64	Hydroxypropyl starch	0.667	true
A410	27	42	29.043	662.5	119.50	Hydroxypropyl starch	0.667	true
A548	23	27	23.602	437.5	85.36	WP-Fluorosilicone rubber	0.666	true
A454	30	20	27.350	587.5	97.07	Silica	0.665	true
A208	70	33	47.372	1762.5	177.78	Cellulose chemically modified	0.665	true
A99	75	75	75.166	4437.5	256.07	Polyvinylchloride (PVC)	0.665	true
A253	35	49	39.493	1225	144.85	Natural Polyamide	0.665	true
A9	230	129	146.581	16875	736.98	WP-Fluororubber	0.664	true
A528	25	25	24.267	462.5	85.36	Cellulosic	0.664	true

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A451	54	20	27.350	587.5	133.64	WP-Polyvinyl chloride resin (PVC)	0.664	true
A42	120	105	108.597	9262.5	392.63	Hydroxypropyl starch	0.664	true
A318	35	35	34.086	912.5	119.50	Chitin	0.664	true
A411	56	23	29.043	662.5	153.64	Hydroxypropyl starch	0.664	true
A169	50	55	54.262	2312.5	183.64	WP-Phenol-formaldehyde resin	0.663	true
A369	42	27	30.383	725	126.57	Hydroxypropyl starch	0.663	true
A289	47	34	36.345	1037.5	133.64	Hydroxypropyl starch	0.662	true
A297	50	30	35.682	1000	166.57	Cellulosic	0.662	true
A30	125	110	118.480	11025	419.71	Polyisoprene Chlorinated	0.662	true
A513	20	30	24.914	487.5	91.21	Cellulosic	0.662	true
A220	50	65	45.135	1600	228.99	Hydroxypropyl starch	0.660	true
A593	25	20	22.568	400	78.28	WP-Polyvinyl chloride resin (PVC)	0.660	true
A459	25	30	27.058	575	92.43	Cellulosic	0.659	true
A147	75	45	58.768	2712.5	231.92	WP-Fluorosilicone rubber	0.659	true
A74	91	87	86.027	5812.5	304.35	Cellulosic	0.659	true
A279	35	53	37.424	1100	160.71	Polyethylene Terephthalate (PET)	0.659	true
A239	38	69	41.459	1350	198.99	Hydroxypropyl starch	0.659	true
A671	22	22	20.342	325	78.28	WP-Fluorosilicone rubber	0.658	true
A600	42	13	22.212	387.5	99.50	Cellulose Acetate	0.658	true
A390	40	25	29.586	687.5	119.50	Polytetrafluoroethylene(P TFE)	0.658	true
A87	82	141	78.380	4825	524.56	Cellulosic	0.658	true
A304	40	30	35.234	975	122.43	Cellulosic	0.658	true
A632	18	38	21.484	362.5	95.36	WP-Polyvinyl chloride resin (PVC)	0.657	true
A281	35	35	37.211	1087.5	125.36	Polyisoprene Chlorinated	0.656	true
A405	16	63	29.043	662.5	143.64	Cellulosic	0.655	true
A432	27	40	27.926	612.5	119.50	Polyvinylchloride (PVC)	0.654	true

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A628	44	16	21.484	362.5	109.50	Cellulosic	0.654	true
A280	35	40	37.424	1100	130.71	Cellulosic	0.653	true
A534	20	25	23.937	450	78.28	Polybutadiene	0.653	true
A170	252	19	54.115	2300	553.85	Cellulosic	0.652	true
A128	93	55	64.574	3275	253.14	WP-Fluororubber	0.651	true
A511	21	39	24.914	487.5	103.64	Polybutadiene	0.651	true
A353	40	35	31.158	762.5	139.50	Cellulosic	0.651	true
A474	25	46	26.160	537.5	139.50	Cellulosic	0.651	true
A267	40	35	38.473	1162.5	129.50	WP-Fluorosilicone rubber	0.651	true
A201	49	64	48.533	1850	231.42	Cellulosic	0.650	true
A442	46	25	27.640	600	140.71	Polyisoprene Chlorinated	0.650	true
A47	104	109	101.397	8075	369.71	WP-Fluororubber	0.650	true
A589	25	20	22.568	400	78.28	Polyisoprene Chlorinated	0.650	true
A139	64	62	61.026	2925	218.99	Hydroxypropyl starch	0.649	true
A133	55	75	62.825	3100	218.99	Polyisoprene Chlorinated	0.648	true
A107	80	67	70.693	3925	263.14	Polybutadiene	0.647	true
A125	90	60	65.188	3337.5	274.35	Polyisoprene Chlorinated	0.647	true
A550	25	20	23.602	437.5	81.21	Polytetrafluoroethylene(P TFE)	0.646	true
A166	53	57	54.845	2362.5	181.92	Natural Polyamide	0.646	true
A178	46	80	52.321	2150	267.28	Polybutadiene	0.645	true
A310	40	30	35.007	962.5	119.50	Natural Polyamide	0.645	true
A106	118	62	72.581	4137.5	436.78	Chitin	0.645	true
A63	116	85	94.407	7000	377.99	WP-Fluorosilicone rubber	0.643	true
A157	50	70	56.560	2512.5	211.92	WP-Polyvinyl chloride resin (PVC)	0.643	true
A613	20	20	21.851	375	74.14	WP-Polyvinyl chloride resin (PVC)	0.642	true
A2	366	385	288.896	65550	1513.68	Cellulosic	0.641	true
A193	60	45	50.463	2000	198.99	Hydroxypropyl starch	0.640	true

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A327	58	28	33.378	875	150.71	Cellulosic	0.640	true
A536	43	27	23.937	450	132.43	Cellulose chemically modified	0.640	true
A634	25	21	21.484	362.5	79.50	Natural Polyamide	0.639	true
A114	48	334	67.349	3562.5	771.34	Polyurethane (PU)	0.639	true
A90	104	66	76.842	4637.5	332.63	Hydroxypropyl starch	0.638	true
A406	25	30	29.043	662.5	101.21	Polyisoprene Chlorinated	0.636	true
A113	72	119	68.054	3637.5	600.62	Cellulosic	0.634	true
A307	60	36	35.007	962.5	196.07	Hydroxypropyl starch	0.634	true
A408	32	39	29.043	662.5	129.50	Cellulosic	0.634	true
A76	77	94	85.191	5700	291.42	Polyethylene Terephthalate (PET)	0.633	true
A483	30	25	25.854	525	92.43	WP-Chlorinated polyethylene (CPE)	0.631	true
A75	80	90	85.749	5775	287.28	Hydroxypropyl starch	0.631	true
A308	40	31	35.007	962.5	123.64	Polybutadiene	0.630	true
A662	47	17	20.730	337.5	119.50	Hydroxypropyl starch	0.629	true
A43	141	94	107.196	9025	403.85	Hydroxypropyl starch	0.629	true
A231	49	39	43.152	1462.5	147.78	APP	0.629	true
A91	122	62	76.738	4625	343.85	Cellulosic	0.628	true
A495	35	25	25.545	512.5	113.64	Cellulosic	0.627	true
A57	110	87	96.409	7300	345.56	WP-Fluorosilicone rubber	0.626	true
A18	119	200	137.157	14775	618.70	Cellulosic	0.626	true
A420	35	25	28.490	637.5	99.50	WP-Polyvinyl chloride resin (PVC)	0.625	true
A606	27	20	21.851	375	82.43	Natural Polyamide	0.623	true
A117	68	108	66.517	3475	363.85	Cellulosic	0.622	true
A266	33	59	38.473	1162.5	177.78	Hydroxypropyl starch	0.620	true
A22	307	109	126.849	12637.5	853.05	Cellulosic	0.620	true
A218	72	48	45.311	1612.5	264.35	Cellulosic	0.619	true
A579	39	19	22.917	412.5	103.64	Natural Polyamide	0.619	true

<b>Id</b>	<b>Width (<math>\mu\text{m}</math>)</b>	<b>Height (<math>\mu\text{m}</math>)</b>	<b>Diameter (<math>\mu\text{m}</math>)</b>	<b>Area (<math>\mu\text{m}^2</math>)</b>	<b>Perimeter (<math>\mu\text{m}</math>)</b>	<b>Identification</b>	<b>Quality</b>	<b>Is Valid</b>
A441	39	46	27.640	600	213.14	Cellulosic	0.615	true
A41	103	117	109.109	9350	382.13	Natural Polyamide	0.615	true
A502	41	19	25.231	500	110.71	Polybutadiene	0.614	true
A26	132	143	123.156	11912.5	581.63	Cellulosic	0.614	true
A35	155	85	112.485	9937.5	406.78	WP-Phenol-formaldehyde resin	0.612	true
A44	144	101	106.227	8862.5	501.63	Natural Polyamide	0.611	true
A547	25	20	23.602	437.5	81.21	WP-Polymerized Styrene Butadiene Rubber (SBR)	0.609	true
A581	25	20	22.917	412.5	81.21	Polybutadiene	0.607	true
A599	25	20	22.212	387.5	75.36	Cellulosic	0.607	true
A15	114	256	139.459	15275	686.98	Cellulosic	0.605	true
A95	65	85	75.694	4500	258.99	Polyamide (PA)	0.603	true
A23	151	123	126.094	12487.5	554.06	Natural Polyamide	0.590	true
A549	25	25	23.602	437.5	95.36	WP-Polyvinyl chloride resin (PVC)	0.587	true
A34	95	135	112.555	9950	413.85	Cellulosic	0.582	true