

Supplementary materials

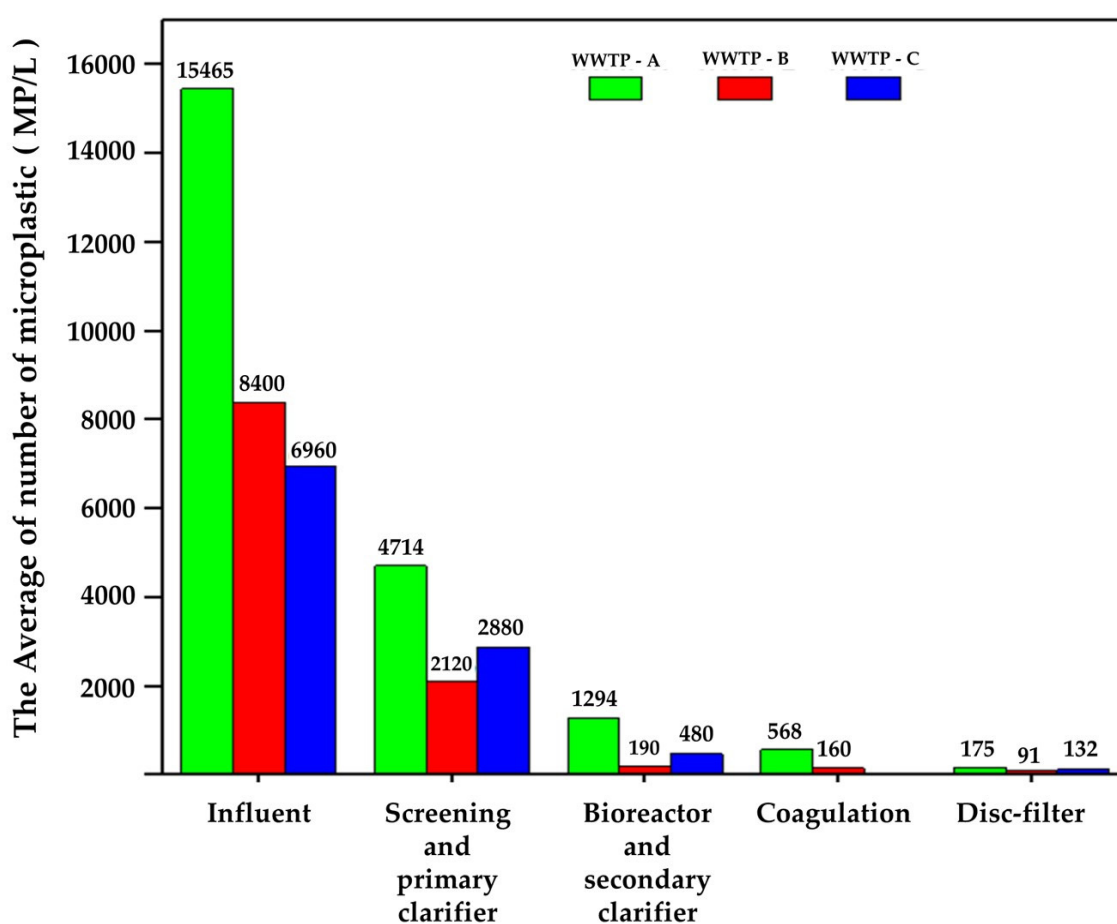
# Elimination of Microplastic at Different Stage in Wastewater Treatment Plants

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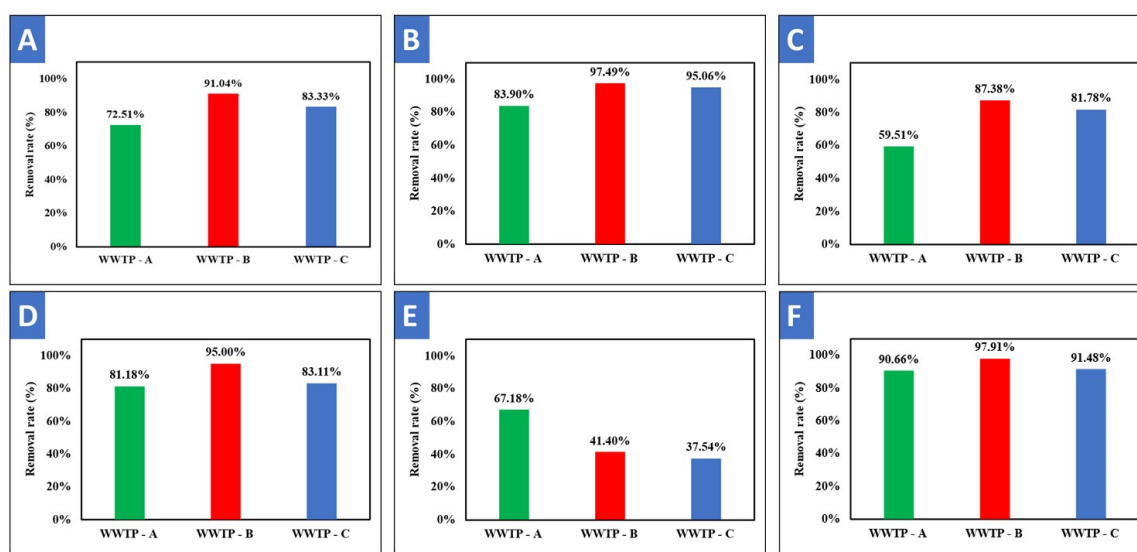
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**Figure S1.** Average number of microplastics in different treatment unit



**Figure S2.** Comparisons removal rate of microplastic and water quality in Bioreactor and secondary clarifier. (A) Microplastic removal rate of bioreactor and secondary clarifier; (B) Removal rate of biological organic demand (BOD); (C) Removal rate of chemical oxygen demand (COD); (D) Removal rate of suspended solids (SS); (E) Removal rate of total nitrogen (T-N); (F) Removal rate of total phosphorus (T-P).

**Table S1.** Sampling locations and date

WWTP	1st	2nd	3rd
A	October 14 <sup>th</sup> , 2019	October 28 <sup>th</sup> , 2019	November 11 <sup>th</sup> , 2019
B			
C			

**Table S2.** Percentages removal efficiency at each treatment stages for organic material (BOD and COD), suspended solids (SS), total nitrogen (T-N), and total phosphorus (T-P).

WWTP	Parameter	Screening and primary clarifier	Bioreactor and secondary clarifier	Coagulation	Disc-filter
WWTP - A	BOD	74.98%	83.90%	4.76%	60.67%
	COD	66.06%	59.51%	2.02%	22.42%
	SS	63.83%	81.18%	3.13%	16.13%
	T-N	20.83%	67.18%	15.35%	10.59%
	T-P	27.33%	90.66%	13.74%	56.34%
WWTP - B	BOD	70.48%	97.49%	40.74%	12.50%
	COD	53.92%	87.38%	19.10%	2.78%
	SS	65.85%	95.00%	8.11%	11.78%
	T-N	51.61%	41.40%	2.96%	6.81%
	T-P	50.62%	97.91%	76.39%	35.29%
WWTP - C	BOD	5.28%	95.06%		74.40%
	COD	32.87%	81.78%		48.75%
	SS	61.61%	83.11%		94.21%
	T-N	32.08%	37.54%		56.30%
	T-P	31.57%	91.48%		47.69%

**Table S3.** Overall percentages removal rate for organic material (BOD and COD), suspended solids (SS), total nitrogen (T-N), and total phosphorus (T-P).

WWTP	Parameter	Screening and primary clarifier	Bioreactor and secondary clarifier	Coagulation	Disc-filter
WWTP - A	<b>BOD</b>	74.98%	96.82%	98.28%	99.40%
	<b>COD</b>	66.06%	92.40%	94.47%	95.63%
	<b>SS</b>	63.83%	84.23%	97.43%	97.84%
	<b>T-N</b>	20.83%	87.76%	96.19%	96.42%
	<b>T-P</b>	27.33%	94.26%	99.88%	99.96%
WWTP - B	<b>BOD</b>	70.48%	98.92%	99.33%	99.67%
	<b>COD</b>	53.92%	96.14%	96.73%	97.38%
	<b>SS</b>	65.85%	98.66%	98.85%	99.00%
	<b>T-N</b>	51.61%	97.10%	97.44%	97.54%
	<b>T-P</b>	50.62%	99.90%	99.96%	99.99%
WWTP - C	<b>BOD</b>	5.28%	95.32%		98.80%
	<b>COD</b>	32.87%	87.77%		93.73%
	<b>SS</b>	61.61%	93.52%		99.62%
	<b>T-N</b>	32.08%	57.57%		81.46%
	<b>T-P</b>	31.57%	94.17%		96.95%