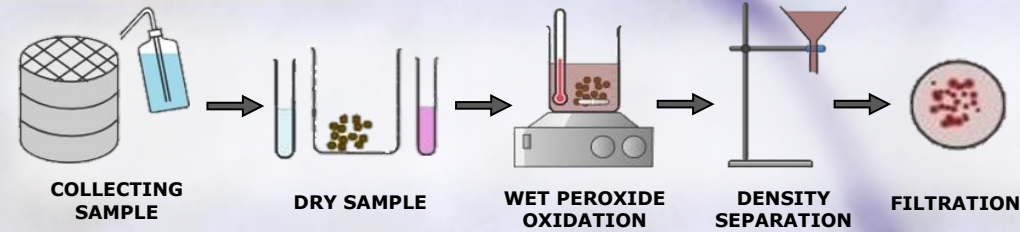


INTRODUCTION

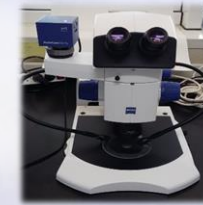
OCCURRENCE OF MICROPLASTICS AT WASTEWATER TREATMENT PLANTS IN GUADALETE – BARBATE RIVER BASIN (CADIZ, SPAIN)



METHODOLOGY



MORPHOLOGICAL CHARACTERIZATION



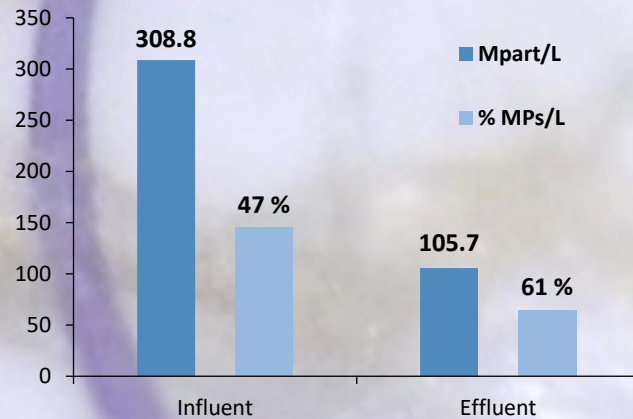
SIZE AND SHAPE

CHEMICAL CHARACTERIZATION



FT-IR SPECTROSCOPY
POLYMER TYPE

RESULTS



Shape	Influent (Mpart/L)	Effluent (Mpart/L)
Flake	68.8	12.3
Filament	32.8	5.1
Fragment	81.6	22.3
Fiber	121.6	65.1
Spheres	4	0.9

MICROPLASTICS REMOVAL > 70%

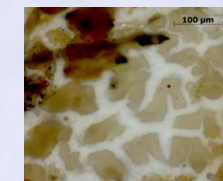
Size (µm)	Influent (MPs/L)	Effluent (MPs/L)
5000 – 1000	31.42 ± 11.52	13.41 ± 6.23
1000 - 355	11.05 ± 12.16	18.95 ± 6.74
355 - 100	129.82 ± 38.08	29.84 ± 8.17



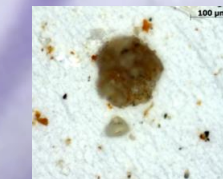
SPHERE



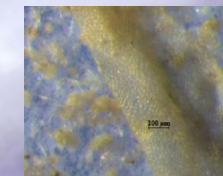
FIBER



FRAGMENT



FLAKE



FILAMENT

Polymer	Influent (MPs/L)	Effluent (MPs/L)
HDPE	5.56	3.55
LDPE	5.56	-
Nylon	11.12	3.55
PA	5.56	7.11
PE	33.35	14.22
PP	72.25	15.99
PS	5.56	5.33
PVC	16.67	1.78
OTHERS	16.68	14.22
TOTAL	172.29	62.2