

## PLASTIC POLLUTION IN SHORELINE WATER AND BEACH SEDIMENT CORES: AN ANNUAL STUDY

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**Abstract:** Sediment core samples from high tide lines and in submerged zones as well as surface water samples from eight beaches of Tenerife were analysed. Sampling was conducted over a period of one year in intervals of 5 weeks. The majority of particles were found in the high tide sediment (66%), followed by water samples (23%) and finally in sediment from submerged zones (11%). Regarding the particle amount per volume (items/L), accumulation in sediment samples was statistically higher compared to water samples. Mean values of items/L were higher in high tide sediments. In high tide and water samples, mostly white and transparent particles >1 mm were found. More than 70% were represented by fragments. In sediments from submerged zones, yellow and blue microparticles (<1 mm) were predominant and 61.9% consisted of fibres. Larger particles were mainly identified as PP, PE, PS, PTFE and PVC, while polymer types of smaller particles were more variable.

**Key words:** Microplastic, Marine pollution, Beach pollution, Sediment, Core sampling

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