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# Playa Grande (Tenerife) and Arenas Blancas (El Hierro): Two massive arrival points of marine microplastic litter in the Canary Islands during 2019-2021 (preliminary results)

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## Abstract

The presence of plastic litter in the marine environment is a problem that is becoming more and more important and whose environmental impacts are increasingly alarming. Although it is a global problem, some regions are more affected than others due to their geographical location. In this sense, the Canary Islands are highly exposed to the arrival of waste due to the Canary Current, leading to the identification of new hotspots in the archipelago (1, 2). Thus, in recent years, two new hotspots of massive arrival of marine litter (mostly microplastics) have been identified on the coasts of the province of Santa Cruz de Tenerife (Canary Islands, Spain). One of them is Playa Grande, a beach located on the east coast of the island of Tenerife, and the other is Arenas Blancas, located to the west of El Hierro island. The shape and orientation of these beaches as well as the direction of the wind throughout the whole year, are the main responsible of the extremely high presence of marine litter, mostly plastic, practically every month of the year.

In this study, the arrival of microplastics has been monitored through sampling in the period 2019-2021. The plastic particles found at each sampling point have been classified according to their shapes and colours, and their composition has been determined by Fourier-transform infrared (FTIR) spectroscopy.

So far, the results reveal an average concentration of 186.11 g/m<sup>2</sup> of plastic at Playa Grande and 190.67 g/m<sup>2</sup> of plastic at Arenas Blancas. These are mainly colourless and white plastic

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fragments, and to a lesser extent blue and green plastics. Most microplastics analyzed were fragments of polyethylene and polypropylene, two of the most widely manufactured plastics in the world.

1. *Mar. Pollut. Bull.*, 2019, **146**, 26-32.
2. *Mar. Pollut. Bull.*, 2021, **169**, 112548.

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