

## Spatial distribution of microplastics in Shimane Peninsula, Japan

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Marine plastics and microplastics are becoming a global problem. Shimane peninsula is located along the Sea of Japan coast in the Chugoku Region, and has a problem of drifted wastes. We examined spatial distribution of microplastics in Shimane Peninsula. Surface sand samples were collected from four sandy beach in eastern part of Shimane Peninsula. We analyzed size fraction between 1 mm and 4.75 mm, and identified microplastics using Raman spectroscopy.

Foamed plastics were the most abundant in each beach. On the Mitsu coast, the number of foamed plastics and resin pellets decreases with increasing distance from the shoreline. This may be because the waves transport the foamed plastics near the shoreline. Foamed plastics accounted for 80.2% of all microplastics.

From the results of Raman Spectroscopy and morphological characteristics, polypropylene was 78.3% and polyethylene was 21.7% as the material for the drifted resin pellets on the Mitsu coast. Since resin pellets are an intermediate material for making plastics, they are considered to be related to the production volume of plastic products. However, the composition of resin pellets around the coast of Tokyo Bay is about 60% polyethylene and 40% polypropylene (Kuriyama et al., 2002), so it is considered that there is a regional difference in the origin.

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