

**MICROPLASTICS IN SEDIMENTS OF KUALA PERLIS, PERLIS**

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This Final Year Project Report entitled “Microplastics in Sediments of Kuala Perlis, Perlis” was submitted by Sharifah Farah Naimi Binti Sayed Zukinai in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

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## **ABSTRACT**

### **MICROPLASTICS IN SEDIMENTS OF KUALA PERLIS, PERLIS**

A study on microplastics in sediments is held at Kuala Perlis, Perlis due to the lack of study regarding the amount of microplastic in the area. Microplastics are a pollutant capable of causing harm to many organisms and the following trophic levels by entering their food chain and may later affect human health. This study aims to provide information on microplastics in the sediments surrounding Kuala Perlis, Malaysia. Therefore, it is expected that there will be a significant amount of microplastics in the sediments. The sample was collected on three sampling sites around Kuala Perlis, based on 0.5 m x 0.5 m quadrats. Sampling method was sieving the sample collected through 1mm sieve and later was observed, measured, and classified into their size and morphologies. Then the sample was chosen randomly and the composition was identified through Fourier transform infrared spectroscopy (FTIR). The results obtained 53 item/mm<sup>2</sup> of microplastics. The most frequent morphotypes were foams, followed by fragments, fibres, and pellet. The size range of microplastics was high in range 1.1 mm – 2.0 mm meanwhile, microplastics in size range 4.1 mm – 5.0 mm were the lowest. Furthermore, polystyrene (PS), polyethylene terephthalate (PET), and polyvinyl chloride (PVC) are the composition of MPs that were found by using FTIR. Therefore, this research added to our understanding of MP levels in Kuala Perlis.

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