# INVESTIGATING MICROPLASTICS IN TERRESTRIAL ANIMALS

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Microplastics are no longer just an ocean problem—they are everywhere, from soils to urban ecosystems. These tiny particles can be mistaken for food by animals, filling their stomachs without providing any nutrition. Over time, this can disrupt feeding behaviour, reduce survival, and even lead to starvation. Despite growing awareness, we still know surprisingly little about how terrestrial animals interact with microplastics.

In this project, you will uncover whether familiar Australian animals - bobtail lizards, magpies, possums and quenda - are ingesting microplastics by examining scats & crops and dissecting carcasses. You will work with real biological samples collected from the field and investigate:

- Do these animals ingest microplastics?
- How much plastic is present?
- What types of microplastics are they consuming?

This is a hands-on, lab-based project where you will:

- Extract particles from biological samples
- Isolate and identify potential microplastics
- Use spectral analysis techniques (e.g., FTIR/IR spectroscopy) to determine polymer types (figure 1 below)
- Quantify and classify the plastics you find

You'll gain practical experience with analytical techniques used in environmental chemistry and ecotoxicology. This research could contribute to ongoing studies and may even form the basis of a publication or conference presentation

Understanding how microplastics move through terrestrial food webs is critical for predicting long-term impacts on wildlife and ecosystems. Your work could help inform conservation strategies and environmental policy.

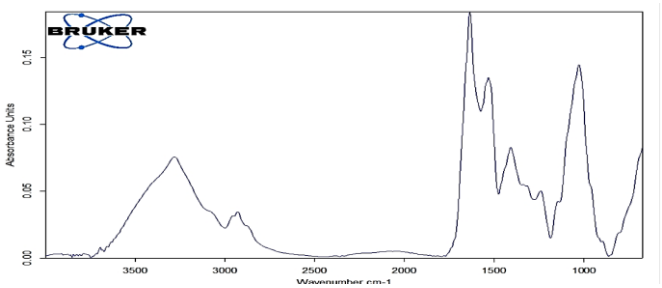



Figure 1. The origin and type of microplastics can be inferred by simple spectral analysis. The spectral fingerprint above suggests the scanned microplastic fragment is from domestic PVC origin.