

Use of Isotopes



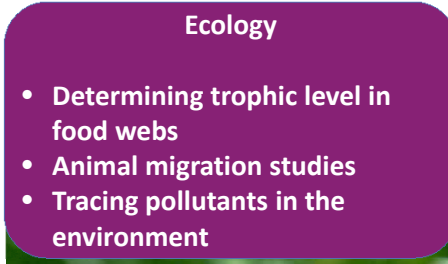
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Isotopes find use in many areas of science with applications which are limited only by our imagination. Here are a few examples where the instruments in this laboratory can be used to provide information of value.



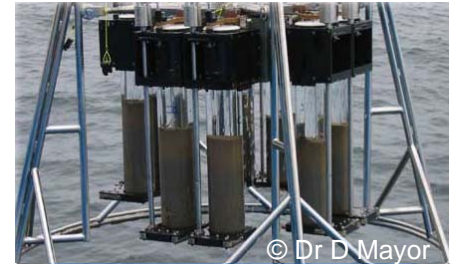
Soil Science

- Understanding carbon and nutrient fluxes
- Greenhouse gas studies
- Composition and functioning of soil microbes



Ecology

- Determining trophic level in food webs
- Animal migration studies
- Tracing pollutants in the environment



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Marine Science

- Biogeochemical cycling
- Climate change effects on sediment functioning
- Determining terrestrial versus marine inputs



Food and Drink Sector

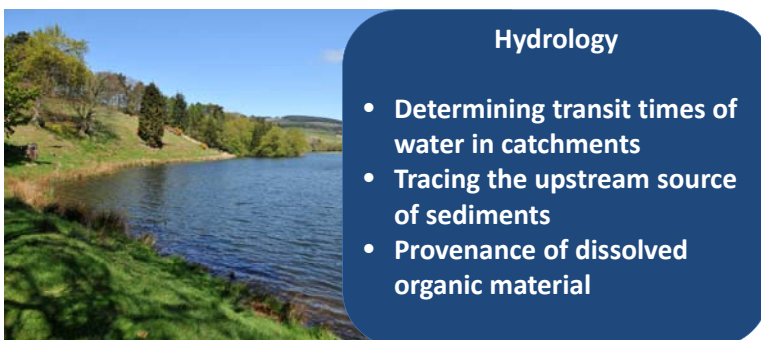
- Source provenance
- Detection of adulteration
- Verify production methods



Archaeology

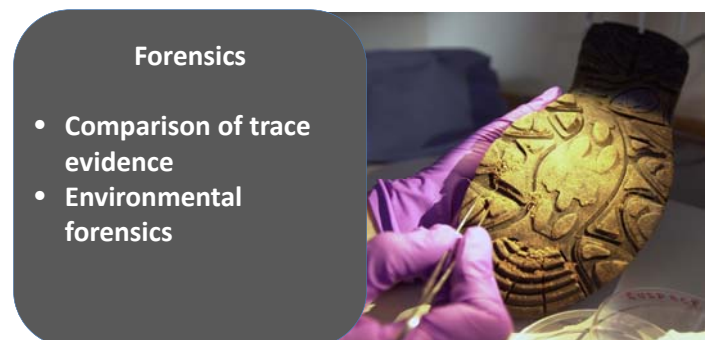
- Determining ancient diets
- Tracing movement and migrations
- Reconstructing past climates and environments

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Hydrology

- Determining transit times of water in catchments
- Tracing the upstream source of sediments
- Provenance of dissolved organic material



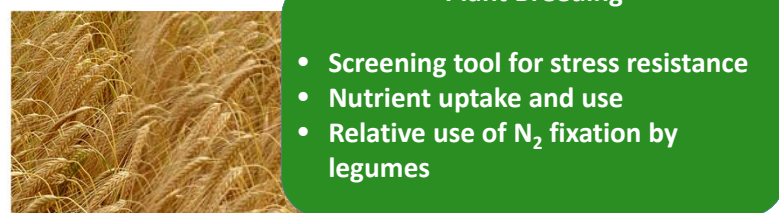
Forensics

- Comparison of trace evidence
- Environmental forensics



Oil and Gas Sector

- Reservoir connectivity
- Marine carbonate stratigraphy
- Impact assessment



Plant Breeding

- Screening tool for stress resistance
- Nutrient uptake and use
- Relative use of N₂ fixation by legumes