

Bioactive compounds within NZ kelp

Chemical compositions and the antioxidant potential of brown seaweeds from New Zealand's coastal ecosystems



Macrocystis pyrifera



Dictyota



Ecklonia radiata



Undaria pinnatifida



Halpoteris spp.

Research Question: To understand how the chemical composition of bioactive compounds and secondary metabolites differ, and how the antioxidant potential differs between brown kelp species. Compounds are found in the cell walls of seaweeds, most are produced during photosynthesis.

How: Harvest and dry seaweed from local coastal environments and performing lab-based extractions to obtain the chemicals and test antioxidant activity.

Why: Understanding the composition and concentration of bioactive compounds and secondary metabolites can help identify appropriate species for aquaculture. The compounds to be extracted are widely used in the pharmaceutical, biomedical and cosmetic industries, so gathering antioxidant information helps us understand the potential economic value of kelp in New Zealand.

Seaweed has been used to aid human health for at least 14,000 years!



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