

SECTION E

E - 03

ANALYSIS OF SEAWEEDS FOR SOME TRACE ELEMENTS

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Marine algae have been used as food¹, fertiliser², animal feed³ etc. The protein content and amount of sodium, potassium, calcium, magnesium, phosphorus and iron present in 11 species of seaweeds from the Mandaitivu coastal area of Jaffna District has been reported⁴. The present study was carried out to determine whether the seaweeds contained appreciable amounts of elements, which are toxic to human and animals.

Eighteen species of seaweeds were analysed. Of these species 8 were red, 7 brown, 2 green and 1 Angiosperm. Atomic absorption spectrophotometry⁵ was used for the estimation of the elements. Lead was also estimated by complexing with dithizone⁶. No detectable amount of cobalt was present in any of these species.

Element	Species containing the highest amount	Species containing the lowest amount
Copper	<i>Padina Pavonica</i> (41 ppm)	<i>Hypnea musciformis</i> (2.7 ppm)
Manganese	<i>Gracilaria edulis</i> (397 ppm)	<i>Stoecho spermum marginatum</i> (21 ppm)
Nickel	<i>Struwea anastomosans</i> (37 ppm)	<i>Turbinaria ornata</i> (9.7 ppm)
Lead	<i>Jania natalensis</i> (19 ppm)	<i>Turbinaria ornata</i> (3.7 ppm)
Cadmium	<i>Padina Pavonica</i> (3.9 ppm)	<i>Stoecho spermum marginatum</i> (1.26 ppm)
Zinc	<i>Struwea anastomosans</i> (20 ppm)	<i>Ulva reticulata</i> (5.86 ppm)

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References

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