

**SCREENING OF SEAWEED EXTRACTS FOR BACTERICIDAL  
AND FUNGICIDAL ACTIVITY**

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The recent chemical literature provides numerous examples to indicate that the marine algae are prolific producers of chemically and biologically interesting secondary metabolites. The existence of an abundance of marine algae in the coastal waters of Sri Lanka, prompted us to initiate a programme of screening of seaweed

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extracts for the presence of bactericidal (against *Staphylococcus aureus* and *Escherichia coli*) and fungicidal (against yeast) activity. Nineteen species of seaweeds have thus far been screened (see Table) amongst which nine species exhibited bactericidal and/or fungicidal activity. Extracts with pronounced activity were isolated from *Turbinaria conoides*, *Vanvoorstia spectabilis*, *Valoniopsis pachynema* and *Ulva lactuca*. The activity of each of these four extracts i.e. the zone of inhibition of growth of a particular organism was comparable and in two cases (*T. conoides* and *U. lactuca*) were greater than that of the standard drugs used under identical conditions.

Seaweeds were extracted by the slow percolation of aq. methanol, dichloromethane and light petroleum (40-60°) respectively. Bacteriological testing was carried out using the standard disc method (6 mm and 9 mm discs).

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TABLE : SCREENING OF SEAWEED EXTRACTS\*

Seaweed	Yeast	<i>S.aureus</i>	<i>E.coli</i>
<i>Dictyosphaeria favulosa</i>	-	-	-
<i>Caulerpa taxifolia</i>	-	-	-
<i>Cladophora</i> sp	+(petrol)	+(MeOH)	+(MeOH)
<i>Valoniopsis pachynema</i>	+(petrol)	+(MeOH) +(CH <sub>2</sub> Cl <sub>2</sub> )	+(MeOH)
<i>Ulva lactuca</i>	-	+(MeOH)	+(MeOH)
<i>Cystoseira trinodis</i>	-	-	-
<i>Sargassum</i> sp.	+(MeOH)	+(MeOH)	+(MeOH)
<i>Stoechospermum marginatum</i>	-	+(MeOH)	-
<i>Turbinaria ornata</i>	+(petrol) +(CH <sub>2</sub> Cl <sub>2</sub> )	+(petrol) +(CH <sub>2</sub> Cl <sub>2</sub> ) +(MeOH)	-
<i>T. Conoides</i>	+(petrol) +(CH <sub>2</sub> Cl <sub>2</sub> )	+(petrol) +(CH <sub>2</sub> Cl <sub>2</sub> )	+(petrol) +(CH <sub>2</sub> Cl <sub>2</sub> )
<i>Vanvoorstia spectabilis</i>	+(CH <sub>2</sub> Cl <sub>2</sub> )	+(CH <sub>2</sub> Cl <sub>2</sub> )	-
<i>Sarcodia ceylanica</i>	-	-	+(MeOH)
<i>Gracilaria edulis</i>	-	-	-
<i>Hypnea musciformis</i>	-	-	-
<i>G. fergusonii</i>	-	-	-
<i>Acanthophora delile</i>	-	-	-
<i>Gymnogongrus pygmaeus</i>	-	+(MeOH)	+(MeOH) +(CH <sub>2</sub> Cl <sub>2</sub> )
<i>Chrysiomenia uvaria</i>	-	-	-
<i>Bryocladia thwaitesii</i>	-	-	-

\* active +  
inactive -