Oil and alginate content in *Hydroclathrus clathratus* of the St. Martin’s Island, Bangladesh

**Oil and alginate content in Hydroclathrus**

Seaweeds are sedentary macrophytes growing vastly on rocks and other plants in the inter–tidal and sub–tidal zone of the marine environment. In Bangladesh commercially important species of seaweeds is reported to be very low. The rocky shore of the St. Martin’s Island is a wealthy source of various naturally growing seaweeds. *Hydroclathrus clathratus* is one of the available seaweeds found in the St. Martin’s Island but like other seaweed species it is still not exploited commercially in Bangladesh. This plant is usually 10–20 cm in diameter, very irregularly globose and much convoluted, with variously sized perforations over the whole thallus having a wall of 3–6 layers of cells. The species is reported to be used partially as food and fertilizer in India and as a commercial food species in Philippines. Wang et al. isolated antiviral polysaccharides from *H. clathratus* in Hong Kong. Till now there is no record on oil and alginate content in *H. clathratus* is available. This study was undertaken to determine the oil and alginate content in *H. clathratus* which is flourish naturally in the St. Martin’s Island during dry season. Seaweed samples (Figure 1) were collected using sharp knife from the intertidal shore area, at two locations Latitude 20°37’N and Longitude 92°19’E and Latitude 20°36’N and Longitude 92°19’E of the St. Martin’s Island during February to April, 2006.

![Figure 1](image1)

**Figure 1** Hydroclathrus clathratus found in the St. Martin’s Island, Bangladesh.

**Table 1** Oil and sodium alginate content in *H. clathratus* of the St. Martins Island

<table>
<thead>
<tr>
<th></th>
<th>Oil content (g/kg)</th>
<th>Sodium alginate content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fresh basis</td>
<td>Sun dry basis</td>
</tr>
<tr>
<td>Max.</td>
<td>2.31</td>
<td>3.12</td>
</tr>
<tr>
<td>Min.</td>
<td>2.155</td>
<td>2.83</td>
</tr>
<tr>
<td>Mean</td>
<td>2.215</td>
<td>2.97</td>
</tr>
<tr>
<td>±SD</td>
<td>0.155</td>
<td>0.21</td>
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</tbody>
</table>

Correlation coefficient showed (Figure 2) that there is a significant positive correlation (= 0.843558, p< 0.05) between Sodium alginate content in sun dried seaweed sample with Oil content on fresh wt. basis in *H. clathratus*. No significant variations were recorded in oil and alginate content in *H. clathratus* during the study period on February to April, 2006. High percentage of Sodium alginate and significant amount of oil content were found in *H. clathratus* of St. Martin’s Island. Therefore this brown alga may be used for extraction of oil and also as an ingredient of valuable pharmaceutical products.
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Conflict on interest

The authors declare there is conflict on interest.

References
