

Solvent Extraction of Crude Bio-Oil Produced by Fixed Bed Pyrolysis Derived from *S. japonica*

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Macroalage are considered to be a potential feedstock for alternative fuel. As we all known, because the high content of minerals in macroalge, they can cause the problems of corrosion and slagging. A pretreatment process of *S. japonica* has been required for demineralization and dewatering. In this study, we investigated the yield of products and the characters of bio-oil fractions obtained by solvent extraction. A pyrolysis on two pretreatments of *S. japonica* were carried out in a fixed bed reactor under different temperatures. The yield of bio-char produced by untreated *S.japonica* was higher than that of water pretrated *S.japonica*. Conversely, the yield of bio-oil and gas obtained from water pretreated *S.japonica* were higher than those of untreated *S.japonica*. Solvent extraction was proceeded with distilled bio-oil. Compared with the untreated and water pretreated *S.japonica*, the yield of extracted oil (16.6%) from the former was two times higher than that(7.7%) from the latter.