

**DETERMINATION OF BIOACTIVE COMPOUNDS
FROM AQUEOUS EXTRACT OF**

Kappaphycus alvarezii

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by

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ABSTRACT

Marine macro algae are common botanical species naturally found along all coastlines in Sri Lanka. It is recognized as one of nature's greatest biologically active resources and possess large number of bioactive compounds. Bioactive compounds in red seaweeds is one of the organic substances highly benefit to human health. Therefore, the objective of this study is to determine bioactive compounds from red seaweeds under different treatments and check the physiochemical properties of the crude extract. Aqueous extraction of secondary metabolites was carried out using distilled water (DW) under 4 °C and room temperature with washed and unwashed conditions and determined physiochemical properties of the extract. Aqueous extract was separated at 24 and 48 hrs intervals and lyophilized. All samples were replicated (n=3). Extracts from different treatments showed a color variation from purple to pink resulting a structure change in the crude. Antimicrobial activity was determined using well diffusion method with locally isolated *E coli* strain. As conclusion, aqueous crude extract of *Kappaphycus alverazii* displayed antioxidant, amylase inhibitory and antibacterial activities and contained polyphenolics and phycobiliproteins.

Keywords: Seaweeds, antimicrobial, physiochemical, secondary metabolites