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Poster(Non-Competing)

**Screening Of Fatty Acid Compound Of *S. Polycystum* For Anti-Cariogenic Potential**

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**Introduction:** Dental caries is the most common yet preventable disease. Study found that seaweed exhibits anti-cariogenic properties. However, little attention have been given to the study on anti-cariogenic properties of seaweed and the bioactive compound that responsible for the anti-cariogenic activities have not adequately investigated. This study was conducted to evaluate the best extraction methods for *S. polycystum* and to determine the fatty acid compounds of *S. polycystum* that have anti-cariogenic potential against oral cariogenic bacteria. **Materials and Methods:** Dried seaweeds were extracted by soxhlet using three different solvents (methanol, dichloromethane and hexane). The crude extracts were kept in a close container at -20 degree Celsius. The bioactive compound of the crude extract of seaweeds was analyzed using Gas Chromatography Mass Spectrometer (GCMS). **Results:** Highest extraction yield in *S. polycystum* was produced by methanol extraction followed by hexane and dichloromethane. GCMS analysis revealed that the presence of palmitic acid (18.02%) as major compound, followed by oleic acid (8.44%), lauric acid (5.23%), myristic acid (3.60%), heptadecanoic acid (2.23%), 9-hexadenoic acid (1.82%) and the lowest is 2-methylhexadecan-1-ol (1.75%). **Conclusion(s):** Methanol extraction is the most efficient solvent as it produced the highest extraction yield in *S. polycystum*.Lauric acid, palmitic acid, myristic acid and oleic acid detected in *S. polycystum* have been reported to exhibit antimicrobial activities thus proved the potentiality of *S. polycystum* as anti-cariogenic agent.

**KEYWORDS:** seaweed, extraction, fatty acid, anti-cariogenic