













#### IV. CONCLUSIONS

Seaweed extracts and powder have exhibited bioactive responses as antioxidant, antibacterial and antifungal agents. These positive activities were observed in all seaweed genera used in this study encompassing red, green and brown algae species. The bioactive compounds present in seaweed offer a great opportunity for them to be used as an antioxidant, antimicrobial and Active Pharmaceutical Ingredient (API). The study highlighted the total chlorophyll and carotenoid content in seaweed, which includes the individual carotenoid that is present in the samples. There are four types of carotenoid found in this research including zeaxanthin, lutein, beta-carotene, and violaxanthin. In addition, it was observed that brown seaweed had higher antioxidant activity;  $61.0\% \pm 0.9$  than the other seaweed species. Antibacterial activity of seaweed samples showed the highest activity towards Gram-negative bacteria. Overall, the seaweed extracts were more effective as antimicrobial agents as compared to antifungal.

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