

SUMMARY

Many commercialized synthetic antioxidants are used under strict regulation in certain countries because of their potential health hazards. Thus, the search for alternative antioxidants from natural products Indonesia is needed, and one of the potential material is from seaweed extract. Indonesia is a country rich in seaweed, one of the example is red seaweed. Red seaweed is very potential to be developed as a raw material for medicines and cosmetics because it has antioxidant activity which from it's phenolic compound that can remove the free radicals and can inhibit tyrosinase enzyme activity. The purpose of this research is to know the the species of red seaweed in the East Nusa Tenggara sea, its phenolic content, antioxidant activity, and also inhibitory activity of tyrosinase in red seaweed. The research will be conducted by quantitative methods with descriptive analysis. Parameters to be measured are the number of IC₅₀ that obtain from DPPH, inhibition percentage of Tyrosinase analysis and the number of total phenolic compound.

This research was conduct in biotechnology lab of Ministry of Maritime Affairs and Fisheries, Jakarta. The result shows that there is 10 species of red algae in Kupang, East Nusa Tenggara and its consists of 4 genera. Some of species of those red seaweed are potential as antioxidant and tyrosinase inhibitors source. And the research also shows positive correlation between total phenolic content of the seaweed extract with antioxidant activity and its capability to inhibits the tyrosinase enzyme.

Keywords: *red seaweed, antioxidant, tyrosinase inhibitor, phenolic compoud*

