

***IN-VITRO* ANTI α -AMYLASE ACTIVITY TOWARDS THE
EFFECTIVENESS OF ANTI-DIABETIC PLANTS USED
BY BAJAU SAMAH COMMUNITIES ALONG TELUK
MENGKABONG, TUARAN SABAH**

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ABSTRACT

***IN-VITRO* ANTI α -AMYLASE ACTIVITY TOWARDS THE EFFECTIVENESS OF ANTI-DIABETIC PLANTS USED BY BAJAU SAMAH COMMUNITIES ALONG TELUK MENGKABONG, TUARAN SABAH**

This study focus on the anti-diabetic plants used by Bajau Samah communities in Kampung Bombong, Kampung Raganan and Kampung Timbok located along Teluk Mengkabong, Tuaran Sabah. This study was conducted from August 2019 until November 2019, to document the plant species that are used to treat Diabetes. The objectives of this study are to identify the species of plants and plant parts that are used as treatments for Diabetes among Bajau Samah community, to determine the most effective plant species utilized by Bajau Samah using the quantitative analysis which are Relative Frequency of Citation (RFC) and to test the viability of the plant species to treat Diabetes. The method used in this study is semi-structured questionnaire interview and preparation of specimen voucher. Then, the RFC is determined using the standard equation and the effectiveness is evaluated using *In-Vitro* Anti α -amylase and Glucose Diffusion Retardation Index (GDRI). There are 15 different species of plants belong to 15 families from 30 informants. Leaves is highest reported plant part used which is 32 %. The highest growth habit of plants is shrub by 66.7 % while tree is 26.7 % and herb is 6.7 %. Drinking as the all routes of administration and their method of preparation is by boiling (81 %), mash (13 %) and drying (6 %). All the plant species in this study are below 0.5 and categorized as Low RFC, the lowest value is 0.03 which is *Hibiscus rosa-sinensis* L. (Bunga Raya) and the highest value is 0.37 which is *Physalis angulata* L. (Telapak). The most effective plant is *Physalis angulata* L. (Telapak) followed by *Murraya koenigii* (L.) Sprengel (Daun Kari), *Amaranthus spinosus* L. (Bayam Duri), *Annona muricata* L. (Durian Belanda) and *Aloe vera* (L.) Burm.f. (Lidah Buaya). The results obtained from this study can be more additionally explored to approve the local Bajau Samah indigenous knowledge scientifically and assist in preservation and conservation.