



## ***In vitro* Inhibitory Activities of $\alpha$ -Amylase and Pancreatic Lipase of Some Fruit Extracts**

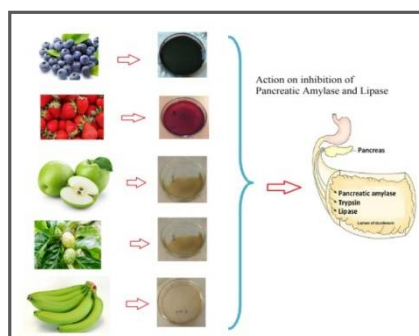
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### **ABSTRACT**

To explore the alcoholic extracts of some fruits on inhibition of amylase and lipase enzyme systems. Fruits like *Vaccinium corymbosum* (Blueberry), *Fragaria ananassa* (Strawberry), Granny smith apple (Green apple), *Musa paradisiaca* (Banana) and *Morinda citrifolia* (Indian Mulberry) were selected for the study. The alcoholic extracts of the fruits were examined for their phenolic, flavanoidal and anthocyanin content. Amylase and lipase inhibitory activity of the extracts were determined according to the reported methods. All the alcoholic extracts exhibited potent inhibitory activities for amylase and lipase at  $100 \mu\text{g mL}^{-1}$ . The activity is compared with that of reference standard acarbose and orlistat respectively. *Vaccinium corymbosum* exhibited a potent activity against amylase with  $\text{IC}_{50}$  of  $19.7 \pm 0.654$  and Granny smith apple against Lipase inhibition with  $\text{IC}_{50}$  of  $22.8 \pm 1.985$ . The other fruit extracts also showed the inhibitory activities with their  $\text{IC}_{50}$  values below  $60 \mu\text{g mL}^{-1}$ . The presence of polyphenolic compounds resulted in the inhibitory actions of the extracts. Thus, the extracts can be used for reducing the progression of acute pancreatitis if they are used as dietary supplements.

### **Graphical Abstract**



**Keywords:** Amylase, Lipase, Pancreatitis, Polyphenolics.