HYPOGLYCEMIC ACTIVITY OF PALMYRAH FLOUR BY USING INVITRO GLUCOSE UPTAKE ASSAY BY *Saccharomyces cerevisiae*

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ABSTRACT

The objectives of this study were to analyze the hypoglycemic potential tuber flour as plukkodiyal flour extracts of Palmyrah by using the in-vitro technique namely glucose update assays by the yeast cells. Commercial yeast was used for the experiment, and to obtained high growth of yeast, optimization was carried out with different activation times (16, 18, 20, and 2hrs) and inoculum size (1, 2, 3, and 4ml). Then that of activation time, inoculum size showed best turbidity at18 hrs. And 3ml respectively. Palmyrah tuber flour solvent was concentrated using a rotatory evaporator after extract was prepared in a soxhlet extractor for seven-run with petroleum ether, ethanol, and water separately based on polarity index. Then inoculated with the activated commercial yeast which was grown in a medium having Yeast (0.3g), Peptone (0.5g), and Dextrose (1g). Based on the concentration of glucose in the external solution water extract was selected for further studies. Different solvent extracts (50mg /ml) were added to glucose solution (5-25 mM) and incubated for 10 min at 37 °C and absorbance was measured and the percent increase in the uptake of glucose by the yeast cells was calculated and showed to proportional to the concentration of glucose and got increase with an increase in the molar concentration of the glucose solution. The Palmyrah flour water extract can serve as a beneficial agent and can be used as a potential source of novel bioactive compounds also observed these effects further, need to be confirmed by employing different *in vivo* models and clinical trials for treating type 2 diabetes mellitus.

Keywords: Palmyrah, extract, glucose