# Antioxidant activities of domestic adlay yoghurt and its effect on lipid metabolism of high fat diet


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**ABSTRACT**

Present research studies on the antioxodant activities of domestic adlay and nanolized yought and their effect on lipid metabolism of high fat diet SD rat. Functional testing, including the analysis of adlay yought ’ s physical properties, antioxidant activities and hypolipidemic effect of feed adlay yogurt on SD rats. Results have shown that pH value of adlay yogurt were maintained at 4.6-4.4 during two weeks period of storage time. with the lactic acid bacteria content of 8.79 × 108 CFU / ml. Antioxidant activities of adlay yogurt were high in removing up to 95.7% DPPH radical scavenging and chelating 65% of ferrous ions under testing conditions. Twenty-six six-week-old male SD rats were divided into five groups for hypolipidemic animal experiment, namely: (A) control group, (B) high fat diet group, (C) yogurt group, (D) adlay yoghurt group, (E) narolized adlay yogurt group. Two phases of animals testing were studied Phase I was to investigate the hypolipidemic effect on feeding of adlay and nanolized yogurt lipids on young 6 weeks old SD rats during six weeks time. 1.5 cc blood were sampled from the rat ’ s tail weekly, the level of Asparatate acid aminotransferase、Alanine aminotransferase、Creatinine、Cholesterol、Triglyceride、High Density Lipoprotein-Cholesterol and Low Density Lipoprotein-Cholesterol in serum were studied. The results indicated that the feeding adlay and narolized adlay yogurt of young SD rats had the higher level of HDL and lower level of CRE and body weight when compared to that of other treatments. No increasing in GOT and GPT level for all treatments. Unfortunately, no better hypolipidemic effect was observed for narolized adlay yogurt treatment group. After completion of phase I animal experiments, all the SD rats were continuous generally feed with normal diet until phase II experiment for one-year old rat has begun. The purpose of phase II animal experiment was study to see if the aged rats will be better health if they had feed yogurt when they young, The results showed that adlay yogurt group in aged SD rats have significantly lower level in GOT, CRE, and LDL than those of other treatments. Our results have shown the antioxdative and hypolipidemic effect of adlay yogurt in vitro and in vivo.



Keywords : Adlay、Yoghurt、SD rat、Lipid metabolism、Hypolipidemic


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