

(ملخص البحث الرابع)

المجلة العلمية المحكمة لدراسات وبحوث التربية النوعية

المجلد الثامن - العدد الرابع - مسلسل العدد (١٨) - أكتوبر ٢٠٢٢

Biochemical and Biological Impact of Lemon and Kumquat(Citrus Limon and Citrus Japonica) on Hypercholesterolemic Rats

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Abstract:

Hypercholesterolemia is the major risk factor for cardiovascular diseases, thus, this current study held to explore the positive effects of kumquat and Limon (peel and whole) adiposity and biochemical parameters in rats with hypercholesterolemia, as well as assessed the sensory properties of baked cookies containing 5% doses of kumquat and lemon(both peel and whole) . Thirty male albino rats were administered a basal diet as (control negative -ve) group of 5 rats each ; group (2) administered on hypercholesterolemic diet and the remaining groups(3th,4th,5th,6th) administered diet containing 5% kumquat and5% lemon (both peel and whole) with hypercholesterolemic diet for four weeks. Serum cholesterol and triglycerides, LDL,VLDL,HDL/LDL ,Moreover, ALT,AST, creatinine and uric acid were significantly decreased in groups supplemented with kumquat and Limon (peel and whole) at 5% . Therefore, kumquat and limon may consist of a valid strategy of phenolic compound which can be used in controlling hypercholesterolemia and its harmful consequences and enhance renal function in hypercholesterolemic rats. Also, sensory evaluation results revealed that cookies prepared with kumquat and Limon (peel and whole) at 5% were accepted by panelists with different ratings.

Key words: Citrus fruits, Limon, Kumquat, Dyslipidemia, Adiposity.