

## Evaluation of Aqueous Annatto Infusion and Bixin on Serum Lipids in Hypercholesterolemic Hamsters

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Extracts of the annatto seed (*Bixa orellana* L.) contain a mixture of orange-yellowish pigments due to the presence of various carotenoids with the predominance of an atypical one known as bixin and have been described for its hypocholesterolemic effect. In this work the effects of bixin “cake” and aqueous annatto infusion on risk factors for atherosclerosis: serum lipids levels were investigated. Sixty four male Golden Syrian hamsters were distributed into eight groups: Group C received the standard (AIN-93-M) diet, group CCh received the C diet and an aqueous annatto infusion, groups CB15 and CB75 were given the C diet with 0.015 and 0.075% of “bixin cake” respectively, group H received a hypercholesterolemic diet, group HCh received the hypercholesterolemic diet and annatto infusion and HB15 and HB75 were fed the hypercholesterolemic diet with 0.015 and 0.075% “bixin cake” respectively. Results were compared by two-way ANOVA. Total cholesterol reduction associated with increased plasma HDL are benefits in the hypercholesterolemic treatment. However, the treatment with “bixin cake” did not show a hypocholesterolemic effect. Present results indicate that animals fed with hypercholesterolemic diet (HB15) and (HB75) showed higher total cholesterol, non-HDL cholesterol and HDL cholesterol levels when compared with the other(s) groups (H and HCh). In groups CB15, CB75 and HB75 triglycerides levels were diminished. Our data indicate that in the experimental model proposed and in the utilized concentration of “bixin cake” there is an increase in the concentration of serum total cholesterol, non-HDL and HDL cholesterol.

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