Abstract

Introduction: In humans, the normal metabolic activity produces free radicals that constantly, along with other risk factors, including hypercholesterolemia may be responsible for the onset of degenerative diseases. Some bioactive compounds present in blackberry (Rubus spp.) have the ability to act as natural antioxidants can make the food to minimize effects on the body caused by reactive oxygen species. Objective: This study verified the benefits of blackberry nectar through the quantification of triglycerides, total and fraction cholesterol HDL (high density lipoprotein) and LDL-cholesterol (low density lipoprotein), blood glucose and lipid peroxidation in hypercholesterolemic hamsters. Methods: Two groups were treated with hypercholesterolemic diets (0.1% cholesterol), one of them receiving an additional 5 mL of nectar daily, and a third (control group) treated only with a standard diet. In the blood the quantification of lipids, blood glucose and lipid peroxidation was performed. In the brain, liver and small intestine the lipid peroxidation was determined and in other organs, histopathological evaluations were carried out. Results: The blackberry nectar reduced the triglycerides serum levels, total cholesterol and LDL-cholesterol in hypercholesterolemic hamsters, without influencing the HDL and blood glucose concentrations. A decrease in the initiation of lipid peroxidation reactions in the blood, brain and small intestine was also observed. Only the liver showed histopathological changes (steatosis), due to excess cholesterol, with no positive influence from the nectar.

Keywords
Antioxidant capacity, Lipid serum, Hamster.