ABSTRACT:

Red delicious apples were used to produce natural apple cider with and without inclusion of maceration. Traditional surface and industrial submersion methods were then applied to make vinegar from apple ciders. Apple cider vinegar samples produced with inclusion of maceration in the surface method had the highest total phenolic content, chlorogenic acid, ORAC, and TEAC levels. Cholesterol and apple vinegar samples were administered using oral gavage to all groups of rats except the control group. Apple cider vinegars, regardless of the production method, decreased triglyceride and VLDL levels in all groups when compared to animals on high-cholesterol diets without vinegar supplementation. Apple cider vinegars increased total cholesterol and HDL and LDL cholesterol levels and decreased liver function tests when compared to animals on a high-cholesterol diet without vinegar supplementation. A high-cholesterol diet resulted in hepatic steatosis. VSBM and VSB groups significantly decreased steatosis.