PIRANHA (*Pygocentrus nattereri*) FISH FROM THE PANTANAL: FATTY ACID COMPOSITION AND CHANGES WITH PROCESSING AND STORAGE


In this study we evaluated the nutritional quality, fatty acid composition, the effect of thermal processing and storage in the state of preservation of muscle tissue of the piranha (*Pygocentrus nattereri*) fish from the Pantanal region of Mato Grosso do Sul. The heat treatment was realized after heating frozen samples in autoclave up to 121°C, leaving cool normally. The sample of heat treated piranha showed higher protein content when compared to fresh sample (27.04% and 14.13%, respectively) and in relation to the amount of total lipids, the fresh sample had a higher content than sample processed (respectively, 8.70% and 2.44%). The fatty acid profile was similar for samples with and without heat treatment, being the predominant fatty acids the insaturated acids, and with higher concentrations of the palmitic acid and oleic acid, showing values of respectively 21.53% and 28.49% and 29.67% and 25.90%. The proportion of the ω-3 and ω-6 fatty acid found in the heat treated and fresh samples was respectively 7.57% and 9.77% and 4.69 and 4.45%. The studied samples showed ω-6/ω-3, thrombogenicity (IT) and hipocholesterolemic/hypercholesterolemic (HH) ratios as favorable nutritional quality indices. Only the polyunsaturated/saturated (P/S) ratio was lower than the reference value. The values found for the total volatile bases (BVT) were lower than the reference values for all the analysis, along the storage. In relation to Thiobarbituric Acid Reactive Substances (TBARS), values showed low concentrations of degradation products of lipids, not characterizing the oxidative rancidity, after 45 days of storage at -18°C.