

TITLE: PHYSICAL-CHEMICAL AND MICROBIOLOGICAL ANALYSIS OF FISH TUNUNARÉ (*Cichia ssp*) COMMERCIALIZED IN THE MUNICIPALITY OF TUCURUÍ - PA.

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ABSTRACT:

The fishing activity has a relevant role in the Amazon, guaranteeing for generations the maintenance of communities that traditionally inhabit the region. Among the commercialized fish, the Tucunaré (*Cichia ssp*) is the most consumed by the flavor of its meat and for not being, as the riverine says, "remoso", that is, to present strong aroma, fatty meat and able of causing inflammations. However, it is a food highly susceptible to deterioration, due to chemical composition and, above all, its pH close to neutrality, which favors microbial development. In this sense, the main objective of this work was to analyze the physical-chemical and microbiological quality of fish samples obtained at different commercialization points in the municipality of Tucuruí, state Pará, Brazil. Twelve samples were collected during August and September 2018 to investigate microbiological parameters (total coliforms, thermotolerant coliforms, molds and yeasts, aerobic mesophilic microorganisms and *Staphylococcus aureus*) and physicochemical parameters (humidity, pH and soluble solids). The physical-chemical analyzes revealed humidity varying from 40.43% to 80.48%; the pH from 6.25% to 7.20%; and soluble solids from 0 to 0.4%. Microbiological parameters revealed total coliform values ranging from 7.2 to 2.4×10^2 MPN / g, without current legislation for acceptable limits, but their presence indicates a possible contamination. The results of thermotolerant coliforms varied from <3.0 to 4.6×10^2 MPa / g, with 33.3% of contaminated samples, according to the amount recommended in Administrative Rule 451/1997 of the Health Surveillance Code of the Ministry of Health, which is $<10^2$ NMP / g. The counts of aerobic mesophilic microorganisms ranged from 8.66×10^2 to 9.51×10^4 UFC / g. The results for molds and yeasts ranged from 0 to 2.60×10^3 CFU / g, with 50% of the samples being outside the limit acceptable by DIPOA ($<2.5 \times 10^2$ CFU / g). Finally, *Staphylococcus aureus* results ranged from 0 to 1.63×10^3 CFU / g and 91.6% of the samples presented data compatible with the current legislation of ANVISA RDC No. 12/2001 (up to 103 CFU / g). In general, the samples presented satisfactory physical-chemical and microbiological quality, but the presence of some indicator contamination of microorganisms points to the need for improvements in the Good Handling Practices (GMP) of the product.

Keywords: Microbiological; Chemical physical analysis;.

Development Agency: IFPA