**EFFECT OF THE NATURAL PIGMENT OBTAINED FROM JABUTICABA EXTRACT (*Myrciaria cauliflora*) ON MICROORGANISMS PRESENT IN FRESH SAUSAGES**

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ABSTRACT

Anthocyanins are phenolic compounds present in jabuticaba peel (*Myrciaria cauliflora*) and they are well known for their antimicrobial potential. Therefore, the aim of this study was to evaluate the microbiological stability of fresh sausages with the addition of jabuticaba extracts in different concentrations, when used as a carmine cochineal substitute. To obtain the extract of jabuticaba pulping was performed with the addition of water in 1:3 ratio (residue:water), in the absence of light and under mechanic agitation for 6 hours. The obtained fluid was filtered and the crude extract was concentrated to 1/3 of its original volume using a rotary evaporator following drying in a spray dryer using maltodextrin as a carrier. After these procedures, the dry Jabuticaba extract was applied to fresh sausage. Four treatments were performed as follows: control treatment (without pigment addition), carmine cochineal treatment and 2 treatments using jabuticaba dried extract, one being 2% and the other 4%. Fresh sausage was made using pork shoulder and pork backfat, condiment, sodium chloride, phosphate and water, being processed and packaged in permeable plastic bags and stored in an environmental chamber at 1°C. This experiment was performed three times. Microbiological analyses regarding aerobic psicrotrophic microorganisms and lactic bacteria were performed in the intervals 1, 4, 8, 11, 15 storage days and for aerobic mesophiles, coliforms at 45°C and *Staphylococcus aureus* analyses were done in the intervals 1 and 15 storage days. Regarding coliforms at 45°C analyses, count number reduction was observed for treatments with jabuticaba extract 2 and 4% as well as it was observed in *Staphylococcus aureus* analyses when 2% jabuticaba extract showed reduction and 4% showed destruction of these microorganisms. Regarding lactic bacteria analyses, all samples showed rates close to 5 log cycles. Aerobic mesophiles analyses presented lower log cycles in samples treated with jabuticaba extract 2 and 4% than the counting from samples containing no dye or carmine cochineal. Regarding psicrotrophic aerobic microorganisms analyses, sausages containing jabuticaba extract reached the final refrigerated storage days presenting 1 log cycle counting lower than counting of samples without the addition of jabuticaba extract. It was concluded that the jabuticaba dried extract lowered microorganisms counting, highlighting the effectiveness of anthocyanins present in jabuticaba extract.

**Keywords:** Phenolic compounds, *Staphylococcus aureus*, carmine cochineal