Inhibition of lipid oxidation development in refrigerated salmon (Salmo salar) paste by addition of different stevia (Stevia rebaudiana Bert.) extracts

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ABSTRACT
The aim of this study was to evaluate the potential protective effect of crude stevia extracts on the quality and shelf-life of salmon (Salmo salar) paste. For this purpose, polyphenol extracts obtained by water extraction, ethanol/water extraction and supercritical CO₂ with ethanol extraction were evaluated throughout the refrigerated storage (5 °C for 21 days) of salmon paste. Primary, secondary and total lipid oxidation compounds were monitored during storage by means of peroxide, p-anisidine and TOTOX indices, respectively. In addition, u3/6 fatty acids ratio and polynons index and a-tocopherol content were also monitored. Microbiological analysis comprised the investigation of aerobic mesophiles and psychrophiles. Salmon paste samples treated with ethanol/water and supercritical CO₂/ethanol stevia extracts exhibited the highest (p<0.05) u3/6 ratios and a-tocopherol contents. Besides, partial inhibition of both primary and secondary lipid oxidation events and aerobes and psychrophiles growth was also observed in both kinds of samples. These results agree with the fact that ethanol/water and supercritical CO₂/ethanol extracts provided the highest DPPH and FRAP values.

REFERENCES

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