EFFECT OF FROZEN STORAGE AND CURCUMA LONGA L. EXTRACT ON QUALITY OF YELLOW MANDI (PIMELODUS MACULATUS) FILLETS.


Despite of being an important source of nutrients, fish is susceptible to microbiological and chemical deterioration. Curcuma longa L. (CL) is a plant with antioxidant and antimicrobial properties, being an option for deterioration prevention. Although the yellow mandi (Pimeleodus maculatus) has great acceptance by consumers, no studies are reported about its shelf life. This study aimed to evaluate quality changes of yellow mandi during frozen storage and the possible effect of CL. Fillets (n=3, 58.15±2.32g) were immersed in different solutions containing CL water extract: 0% CL (control), 0.05% CL, 0.1% CL and 0.5%CL during 2 minutes and then submitted to frozen storage at -18°C. Total volatile basic nitrogen (TVB-N), pH, and color analyses were performed before (time 0) and after 3 months of frozen storage. Frozen storage caused an increase in the levels of BVT-N (12.87±0.16 vs. 2.34±0.47mg%; p<0.05), and a decrease in pH (6.69±0.12 vs. 7.03±0.06; p<0.05) when compared to time 0. Frozen storage did not affect color parameters of fillets when compared to time 0 (p>0.05). However, fillets immersed in CL 0.5% showed increased L and b values at time zero when compared to control, respectively (49.51±0.14 vs. 43.53±0.52; 18.79±2.78 vs. 6.65±0.10; p<0.05). Moreover, b values increased in fillets immersed in CL 0.5% and frozen for 3 months when compared to their respective control (20.03±2.48 vs. 6.94±0.91; p<0.05). Frozen storage results in changes of yellow mandi fillets and CL extract did not attenuate these changes. The extension of the effect of CL on fillets color needs more investigation.