

Lipid quality deterioration of bagridae catfish (*Mystus nemurus*) during storage.

Abstract

Lipid damage indices of whole freshwater catfish (*Mystus nemurus*) stored at ambient ($28\pm 2^{\circ}\text{C}$), chilled ($10\pm 2^{\circ}\text{C}$) and iced ($2\pm 1^{\circ}\text{C}$) temperature for 24 h, 10 and 20 days, respectively, were studied. Lipid quality deterioration was evaluated by measuring free fatty acids, peroxide values, p-anisidine value, thiobarbituric acid and polyene index. The results showed that *Mystus nemurus* is a fatty fish species with 16.8-19% of fat content. The lipid hydrolysis and lipid oxidation that occurred after 12 h at ambient, 8 days at chilled and 16 days at iced storage increased significantly ($p < 0.05$) to unacceptable levels with decreased polyene. This study demonstrates evidence-based research that typical storage conditions for *Mystus nemurus* is of practical significance to producers and consumers.

Keyword: *Mystus nemurus*; Lipid damage; Free fatty acid; Peroxide value; P-anisidine value; Thiobarbituric acid; Polyene index.