Effect of modified atmospheric packaging on shelf-life of Cham-cham

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SUMMARY:
The present study was carried out to evaluate the shelf-life of Cham-Cham using modified atmospheric packaging (MAP). Cham-Cham stored under refrigeration temperature (7±2°C) in modified atmospheric condition showed significantly higher shelf-life than the Cham-Cham stored at same temperature in normal packaging condition. The compositional attributes such as fat, protein, total carbohydrate and ash of Cham-Cham increased significantly where as moisture was significantly decreased up on storage at 7±2°C. The acidity and soluble nitrogen content where non-significantly increased. However, pH of Cham-Cham decreased significantly on storage at 7±2°C. FFA and HMF content of Cham-Cham increased significantly when Cham-Cham stored at 7±2°C. The packages were found to have a significant increased in the hardness, chewiness and cohesiveness. However, significant decreased in the adhesiveness and springiness values of Cham-Cham were found at 7±2°C storage temperature. However stiffness of Cham-Cham increased non-significantly at 7±2°C. The flavour, body and texture, colour and appearance and overall acceptability scores of Cham-Cham declined significantly as storage period progressed. Hence, the shelf-life of Cham-Cham extended up to 28 days in MAP as compare to normal packaging shows up to 14 days. It also shows that the use of CO₂ was superior to N₂ in MAP.

KEY WORDS: Modified atmospheric packaging, Cham-Cham, Shelf-life, FFA, HMF