

Effect of Drying Methods and Pre- Treatments on Shelf Life and Microbial Quality of Fish (*Oreochromis Niloticus*, *Pylodictis Olivaris* and *Cyprinus Carpio*) Species Commonly used in Gambella Region.

Dagne Tarle

Solomon Abera & Getahun Asebe Gambella University, Ethiopia



Abstract

A study was conducted to assess the effect of drying methods and pre-treatments on shelf-life and microbial quality of dried fish. The experiment was conducted in factorial arrangement of 2×3×2 with two drying methods (sun and oven drying,) three fish species (tilapia, cat fish and carp) and two preservatives treatment (garlic and ginger juice) laid out in Completely Randomized Design (CRD). Fresh fillets were analyzed for their microbiological quality. Drying reduced the moisture contents making it safe for long term storage. The dried fillets were stored at ambient condition and the samples were analyzed for microbial status every twenty days starting from the end of drying operation. Fresh fillet and untreated dry fillet were used as control. In the fresh fillets, a high load of aerobic bacteria of 5.11 log₁₀ cfu/g was observed on carp, and E.coli was detected in all three species whereas no Salmonella spp.

Keywords: microbial quality, fish handling, fish preservation, fish slicing, drying methods, dried fish shelf life, gambella region, ethiopia.



Biography:

Graduate of: the college of Agriculture/ University of Arbaminch, Ethiopia/on 2010. - Bachelor study specialization: BSc in Agriculture/Animal Science/with the graduation rate (73 %). - Master study specialization: MSc in Food Science and Technology (Specialization in Animal Products Processing Technology) in Institute of Technology/University of Haramaya, Ethiopia/on 2015/ with the graduation rate (81.75%).

Speaker Publications:

1. Dagne Tarle, Mitiku Eshetu, Solomon Abera and Getahun Asebe, 2015. Global Journal of Medical Research; Double Blind Peer Reviewed International Research Journal. Effect of Drying Methods and Pre-Treatments on Shelf Life and Microbial Quality of Fish (*Oreochromis Niloticus*, *Pylodictis Olivaris* and *Cyprinus Carpio*) Species Commonly used in Gambella, Region: Vol, 15, 2015.
2. Dagne Tarle, Mitiku Eshetu, Solomon Abera & Getachew Bekele, 2016. Effect of Drying Methods and Pre Treatments on Nutritional Value and Sensory Quality of Fish (*Oreochromis niloticus*, *Pylodictis olivaris* and *Cyprinus carpio*) Species Commonly Used in Gambella Region. Article. Full-text available Jan 2016.
3. Dagne Tarle, Aregay Berhe & Endale Tesfaye, 2018. EFFECTS OF SPICE AND SPICES BLEND RATIO ON MICRO NUTRIENTS, HEAVY METALS, SHELF LIFE AND SENSORY QUALITY OF SMALL FISH (*Oreochromis niloticus*, *Pylodictis olivaris* and *Cyprinus carpio*) PRESERVATION, GAMBELLA REGION, ETHIOPIA. ACADEMIC YEAR 2019 VIEWS DEC-2017 9 DOWNLOADS 99 LIKES. Impact Factor 1.265

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