

 Open access • Journal Article • DOI:10.1556/AALIM.2014.0003

Chemical composition and microbial dynamics of budu fermentation, a traditional Malaysian fish sauce — [Source link](#)

K.Y Sim, Fook Yee Chye, A. Anton

Published on: 20 Apr 2015 - Acta Alimentaria (Akadémiai Kiadó)

Topics: Fermentation and Staphylococcus arlettae

Related papers:

- [Differences in the bacterial profiles and physicochemical between natural and inoculated fermentation of vegetables from Shanxi Province](#)
- [A comparative study on the effect of traditional and improved methods of fermentation in the production of ogi food.](#)
- [Molecular-based techniques for quantification of starter cultures and monitoring of microbial profiles and their roles in fish sauce fermentation](#)
- [Shifts in Bacterial Diversity During the Spontaneous Fermentation of Maize Meal as Revealed by Targeted Amplicon Sequencing](#)
- [Presence and persistence of Pseudomonas sp. during Caspian Sea-style spontaneous milk fermentation highlights the importance of safety and regulatory concerns for traditional and ethnic foods](#)

Share this paper:    

View more about this paper here: <https://typeset.io/papers/chemical-composition-and-microbial-dynamics-of-budu-5f0f5xkxjv>

Chemical composition and microbial dynamics of budu fermentation, a traditional Malaysian fish sauce

Abstract

The chemical and microbiological changes during spontaneous *budu* fermentation were elucidated on monthly basis (1–12 months). A significant increase ($P < 0.05$) in pH, acidity, soluble protein, total protein, and moisture content was observed during *budu* fermentation, except for the fat content. The total microbial load decreased gradually from the initial of 6.13 ± 0.01 to 3.45 ± 0.13 log CFU g⁻¹ after 12 months of fermentation. Overall, 150 isolates were identified, with a majority of bacteria (77%), followed by yeasts (12%) and 11% of unconfirmed species. *Micrococcus luteus* was the predominant strain that initiated the fermentation before it was replaced by *Staphylococcus arlettae* that exists throughout the fermentation. This study confirmed that lactic acid bacteria and yeasts often coexist with other microorganisms, even though a microbiological succession usually takes place both between and within species, which shaped the chemical and sensory characteristics of the final product. In addition, some of the isolates could be potentially valuable as starter cultures for further improved and controllable *budu* fermentation.