

## Roles of salts in process and fermentation of a Ghanaian fish product, MOMONI

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**Summary**

To evaluate the effectiveness of the crude salt processing in preservation of the final product, the changes in composition of lipids and polyamines of 'MOMONI', a Ghanaian fermented fish product, were investigated using Japanese jack mackerel (*Trachurus japonicus*) which is similar to African jack mackerel (*Caranx hippos*). The moisture content and water activity decreased more rapidly in MOMONI prepared with pure salt after fermentation for 3 days, compared with crude salt obtained from Mexico. Salt accumulation due to the salting process with crude salt increased more slowly than with pure salt. Changes in pH were minimal although a gradual decrease was observed. Crude salt slightly accelerated formation of volatile basic nitrogens (VBN), increasing to 120 mg/100 g on a salt-free dry matter basis, after 2 months storage. It is noteworthy that cadaverine, one of polyamines, increased more rapidly to over 90 mg/100 g on a salt-free dry matter basis in the pure-salt processing, compared with the crude-salt processing. Free fatty acid and lysophosphatidylcholine increased more rapidly during processing and subsequent storage in the material processed with crude salt. The pure-salt processing resulted in slower depletion of triglycerides, phosphatidylcholine and phosphatidylethanolamine. The proportion of the extracted total lipids present as polyunsaturated fatty acids decreased rapidly and this was accompanied by fast increases in the proportions of saturated fatty acids in the case of the both processings, indicating a high degree of oxidation. The crude-salt processing caused more rapid increases in peroxide value and thiobarbituric acid value than the pure-salt processing. These results suggest that, although lipid oxidation was more extensive, using crude salt might influence on microorganisms floras which are important in MOMONI processing, resulting in preventing formation of polyamines such as cadaverine as well as spoilage.