

ABSTRACT

In East Java, milkfish became the biggest amount and predominate of all brackish water product. Fish contains of protein, fat, vitamin and mineral which is easy to digest. But, the smooth fish flesh structure makes easy for it to decay. Therefore, a healthy and effective method are needed to keep the fish in good condition. One of them is by icing the fish product with salt and nigari or bittern. By using nigari, the ice temperature can be reduced to -20°C .

The objective of this study is to analyze the ice temperature, protein rate and the organoleptic score of the milkfish which is storage with ice and salt; ice, salt and nigari and also ice, salt and non refined nigari based on the storage period.

This was a true experimental studies with factorial design and randomized block sampling method. There were 48 milkfish divided into three groups of storage method and measured within four separate period of time. The observation was done to get information about ice temperature and protein rate. The questionnaire was done to get information about organoleptic score.

Annova test on the treatment temperature, temperature before the ice was added, temperature after the ice was added, protein rate and organoleptic score indicated differences of each variable among those method ($p < 0,05$). The correlation test indicated that temperature before the ice was added had significant correlation to temperature after the ice was added ($r = 0.926$). The partial correlation test showed that there were significant correlation between temperature before the ice was added, protein rate and organoleptic score.

The conclusion which can be drawn here is every storage method caused the difference in temperature, protein rate and organoleptic score on milkfish product. Temperature before the ice was added had significant correlation to temperature after the ice was added. The increase of ice temperature had a correlation to the reduction rate of protein and organoleptic score on milkfish.

Keyword : bittern, storage method, protein, milkfish

ABSTRAK

Produksi ikan bandeng di Jawa Timur merupakan jumlah terbesar dan mendominasi seluruh hasil perairan tambak. Sebagai bahan pangan, ikan merupakan sumber protein, lemak, vitamin dan mineral yang baik untuk dicerna. Namun, struktur daging ikan yang halus membuat ikan cepat membusuk. Untuk itu perlu teknologi pengawetan ikan yang efektif dan aman. Penggunaan nigari dalam pengawetan ikan dengan es, mampu menurunkan suhu es hingga -20°C .

Penelitian ini dilakukan untuk mengetahui suhu es, kadar protein, dan daya terima ikan bandeng antara kelompok ikan dengan pengawetan menggunakan es dan garam; es, garam dan nigari serta es, garam dan *non refined nigari* (NNR).

Penelitian ini merupakan penelitian eksperimental murni dengan menggunakan factorial desain dan rancangan acak kelompok (RAK). Uji dilakukan terhadap 48 satuan percobaan yang terbagi dalam tiga kelompok metode pengawetan dan empat kelompok lama penyimpanan. Pengumpulan data dilakukan dengan observasi untuk mengetahui suhu dan kadar protein, serta kuesioner untuk mengetahui daya terima ikan bandeng.

Hasil uji anova terhadap rata-rata suhu saat perlakuan, suhu sebelum penambahan es, suhu setelah penambahan es, kadar protein dan skor organoleptik ikan bandeng menunjukkan adanya perbedaan pada masing-masing variable antara tiap metode pengawetan ($p < 0,05$). Uji hubungan menunjukkan bahwa suhu sebelum penambahan es berhubungan dengan suhu setelah penambahan es ($r = 0,926$). Uji korelasi parsial menunjukkan adanya hubungan antara suhu sebelum penambahan es, kadar protein dan skor organoleptik ikan bandeng.

Kesimpulan yang dapat ditarik adalah tiap metode pengawetan menyebabkan terjadinya perbedaan suhu, kadar protein dan skor organoleptik ikan bandeng. Tingginya suhu sebelum penambahan es berhubungan kuat dengan tingginya suhu setelah penambahan es. Kenaikan suhu es berhubungan dengan penurunan kadar protein dan skor organoleptik ikan bandeng.

Kata kunci : nigari, metode pengawetan, protein, ikan bandeng