

Pemanfaatan air terozonasi untuk menjaga kualitas ikan tuna: pengaruh waktu kontak, suhu kontak dan dosis ozon = The application of ozonated water to maintain the quality of tuna: the effect of contact time contact temperature and ozone dosage

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Abstrak

ABSTRACT

Penelitian ini memanfaatkan air terozonasi untuk mempertahankan kualitas ikan tuna dengan melihat pengaruh waktu kontak, suhu kontak serta dosis ozon. Kualitas ikan tuna ditinjau dari Total Bakteri Mesofil Aerobik, nilai pH, kadar air dan kadar protein selama penyimpanan 7 hari. Ikan tuna dikontakkan dengan air terozonasi selama 40, 80, 120 menit. Variasi suhu kontak yakni pada suhu kulkas 8oC, suhu ruang 25oC dan suhu inkubator 37oC. Variasi dosis ozon yang digunakan yaitu 0,30 mg/L dan 0,24 mg/L. Hasil menunjukkan bahwa sesaat setelah perendaman, waktu kontak 120 menit mampu mendesinfeksi TBMA hingga 66,7, menurunkan pH sebesar 0,36, menurunkan kadar air 0,26 dan menekan penurunan kadar protein selama penyimpanan menjadi 0,67. Suhu kontak kulkas sesaat setelah perendaman, mampu mendesinfeksi TBMA hingga 91,2, menurunkan pH sebesar 0,46, menurunkan kadar air 0,47 dan menekan penurunan kadar protein selama penyimpanan menjadi 0,22. Dosis ozon 0,30 mg/L sesaat setelah perendaman mampu mendesinfeksi TBMA hingga 66,7, setelah penyimpanan 7 hari mampu menekan penambahan kadar air menjadi 1,2, peningkatan pH sebesar 0,50 dan menekan penurunan kadar protein selama penyimpanan menjadi 0,67.

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ABSTRACT

This research transmitted about the effect ozonated water in controlling quality of tuna by observing the effect of contact time, contact temperature and ozone dosage. The quality standard of tuna is detected from the decrease in the number of aerobic mesophyll bacteria, pH value, water content and the amount of protein tuna. Tuna was contacted to ozonated water for 40, 80, 120 minutes. Contact temperature variation used 37oC incubator temperature, 8oC chiller temperature and room temperature. Meanwhile, ozone dosage variation used 0,3 mg L and 0,24 mg L. The results show that at 120 minutes contact time can eliminate bacteria up to 66,7, pH value decreases to 0,36, water content decreases to 0,26 shortly after tuna was contacted to ozonated water and protein decreases to 0,67 after seven days. At chiller temperature can eliminate bacteria up to 91,2, pH value decreases to 0,46, water content decreases to 0,47 shortly after tuna was contacted to ozonated water and protein decreases to 0,22 after seven days. Meanwhile highest ozone dosage 0.3 mg L can eliminate bacteria up to 66,7. After 7 days pH value increases to 0,50, water content increases to 1,2 and protein decreases to 0.67.