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Study on the preservation effect of squid freshness by slurry ice

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To explore the ice slurry of the preservation effect to squid, the study chosen squid (*Ommastrephes bartram*) in north pacific ocean area as the research object and chosen fresh water flake ice as the comparison group. The research showed that ice slurry cooling rate was 0.83°C/min to cool the squid temperature from to 10°C to 0°C while freshwater flake ice was 0.50°C/min. Storage for 15 days in the -4°C condition, the samples treated by freshwater flake ice respectively kept the values of moisture content, salinity, TVB-N, total viable count, myofibrillar protein Ca²⁺-ATPase, the total sulphur content at 86.64±0.03%, 2.81±0.36×10⁻¹%, 41.29±0.85 mg/100 g, 6.60±0.61 lgCFU/g, 0.13±0.04 μmol Pi/mg rot/min, 2.24±0.02×10⁻⁵mol/g While slurry ice respectively kept the values at 78.35±0.54%, 0.52±0.32×10⁻¹%, 13.26±1.10 mg/100 g, 4.74±0.34 lgCFU/g, 0.20±0.04 μmol Pi/mg rot/min, 1.53±0.19×10⁻⁵mol/g. The results showed that ice slurry preservation could significantly slow down the speed of the corruption process of the squid extending the shelf life. It could provide a theoretical basis for ice slurry in the ship's fresh application that ice slurry had better preservation effect thus improving marine products ocean transport fresh quality.

Biography

Deng Shang-Gui has completed his PhD from South China University of Technology of School of Light Industry and Food Science. He is the Dean of Zhejiang Ocean University of School of Food and Medicine. He has published more than 100 papers in reputed journals.

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