Cite this as: Haoxin CUI, Naymul KARIM, Feng JIANG, Haimei HU, Wei CHEN. Assessment of quality deviation of pork and salmon due to temperature fluctuations during superchilling[J]. Journal of Zhejiang University Science B, 2022, 23(7): 578-586. http://doi.org/10.1631/jzus.B2200030

Assessment of quality deviation of pork and salmon due to temperature fluctuations during superchilling

Key words: Pork; Salmon; Superchilling; Temperature fluctuations; Meat quality

JZUSB

Research Summary

- **This article highlighted the importance of knowledge on the "proper uses of superchilling temperature for storing meat products, especially pork and salmon"**

Content:



Pork



Salmon

- **Pork loins and salmon fillets were stored for several days (0, 8, 15, 23, and 30 days) under different temperature fluctuations based on -3.5℃ as the target temperature**
- **Determination of physical and chemical indicators, sensory indicators and microbial indicators**
- **The changes of cell tissue structure and protein properties under different superchillng temperature conditions**

JZUS-B

Innovation points

- **Models of temperature fluctuations during superchilling were designed**
- **±2℃ temperature fluctuations and irregular temperature changes acceleratd the spoilage of pork and salmon**
- **For the first time, the influence of the temperature fluctuation range in the refrigerator on the quality of pork and salmon under slightly freezing conditions was systematically explored**

JZUS-B