

Title Effect of pressure on the vacuum cooling of iceberg lettuce
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Abstract

Vacuum cooling is known as a rapid evaporative cooling technique for any porous product which has free water. The aim of this paper is to apply vacuum cooling technique to the cooling of the iceberg lettuce and show the pressure effect on the cooling time and temperature decrease. The results of vacuum cooling are also compared with conventional cooling (cooling in refrigerator) for different temperatures. Vacuum cooling of iceberg lettuce at 0.7 kPa is about 13 times faster than conventional cooling of iceberg lettuce at 6 °C. It has been also found that it is not possible to decrease the iceberg lettuce temperature below 10 °C if vacuum cooling method is used and vacuum pressure is set to 1.5 kPa.