Abstract:

Consumers demand for high quality products, preferably fresh or minimally processed, have obligated the food industry to search for new technologies that will maintain the food sensorial attributes and nutritional value through processing and during shelf life. High hydrostatic pressure processing (HPP) is a non-thermal technology that could allow the food industry to satisfy consumers' demands, especially for fruit and vegetable commodities. However, relatively little is known about the effects of high pressure on plant tissues. A better understanding of the tissue's responses to applied pressure and the mechanisms underlying these responses may permit further optimisation of processing conditions and product quality. Therefore the objective of this study was to investigate the effect of varying pressure/time combinations on carrot tissue structure compared to raw, steam blanched (2 min) and frozen (-18°C, 24 h) samples.