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## Impact of hexanal on quality and shelf life of grapes (*Vitis vinifera* L.) cv. Flame Seedless under low temperature storage

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The potential of hexanal, GRAS (generally regarded as safe) compound was investigated for maintaining the quality and enhancing shelf life of table grapes (*Vitis vinifera* L.) cv. Flame Seedless during 2016 and 2017 respectively. Grape bunches were harvested at commercial mature stage and treated with various concentrations of hexanal 0.010, 0.015 & 0.020% for 5 minutes followed by cold storage (3-4°C, 90-95% RH). Fruit was analyzed for various physico-chemical attributes after 15, 30, 45 and 60 days of storage. Hexanal @ 0.010 % effectively maintained berry firmness and cluster rachis freshness, stabilized anthocyanins and phenolic components and reduced poly methyl esterase activity. Additionally, it also retarded total soluble solids (TSS) and acidity degradation during entire storage period as compared to control. The significant physiological weight loss (PLW) reduction and maximum palatability rating was recorded in bunches treated with hexanal @ 0.010% along with no decay losses. The minimum concentration of hexanal (0.010%) exhibited superior fruit quality attributes. Based on results of this study, it can be concluded that hexanal @ 0.010% to be the most suitable postharvest treatment in maintaining physico-chemical traits i.e. storage quality and improving shelf-life of grapes cv. Flame Seedless for 60 days under cold conditions.

### Biography

Simranbir Kaur is pursuing her PhD at Punjab Agricultural University, India. Her interests include "Horticultural sciences, strategic studies in commercial fruit production and post-harvest studies". She has spent approximately five years in research studies on fruit crops in Department of Fruit Sciences. She completed her Master's degree in Fruit Sciences at Punjab Agricultural University, India from 2012-2014.

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