Title The effects of cold storage and aminoethoxyvinylglycine (AVG) on bioactive compounds of plum fruit (*Prunus salicina* Lindell cv. 'Black Amber')

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Abstract

Effects of two different aminoethoxyvinylglycine (AVG) doses (100 and 200 mg L^{-1}), applied 2 weeks ahead of estimated harvest date, on fruit color (L^*, C^* and $h°$), firmness, total soluble solids content (TSSC), total phenolics (TP), total antioxidant activity (TAA) and individual phenolic compounds of 'Black Amber' plums at the time of harvest and during 4 weeks of cold storage were investigated. Color characteristics linearly decreased in all treatments during storage. Fruit firmness at the end of the storage period was significant decreased ($P < 0.05$) with AVG treatments. TSSC rates linearly increased during the storage period although the differences among treatments were not significant. Both TP and TAA increased with all treatments until the 21st day of storage and decreased by the 28th day. TP and TAA were significantly decreased ($P < 0.05$) with the 100 mg L^{-1} AVG treatment at the end of storage. While chlorogenic acid, p-coumaric acid and rutin increased during storage, epicatechin, catechin, caffeic acid, ferulic acid and kaempferol linearly decreased. AVG treatments generally had negative impacts on individual phenolic compounds.