

Activity and concentration of polyphenolic antioxidants in apple juice. 2. Effect of novel production methods.

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There is a great interest in food components that possess possible health-protecting properties, as is the case with flavonoids. Previous research showed that conventional apple juice processing resulted in juices poor in flavonoids and with a low antioxidant activity. This paper shows that it is possible to improve flavonoid content in juice and its antioxidant activity by applying an alcoholic extraction either on the pulp or on the pomace. The levels of flavonoids and chlorogenic acid in enriched juice were between 1.4 (chlorogenic acid) and 9 (quercetin glycosides) times higher than in conventional apple juice. In enriched juice the antioxidant activity was 5 times higher than in conventional apple juice, with 52% of the antioxidant activity of the originating fruits present. The novel processing method had similar effects for three apple cultivars tested (Elstar, Golden Delicious, and Jonagold). The taste and color of enriched juice were different from those of conventional juice.