

Abstract:

Fruit samples of 8 red-fleshed peach and 13 red-fleshed plum selections were collected from plots at the USDA-ARS Prunus collection at Byron, GA and frozen at -20C. These were assayed for total phenolics and anthocyanin content as well as antioxidant activity. The anthocyanin content of the peaches ranged from 7.64 to 50.01 mg cyanidin 3-glucoside/100 g fresh tissue and that of the plums ranged from 44.1 to 231.29 mg cyanidin 3-glucoside/100 g fresh tissue. The total phenolics content for peaches ranged from 99 to 449 mg chlorogenic acid/ 100 g fresh tissue and the phenolic content of plums ranged from 298 to 563 mg chlorogenic acid/100 g fresh tissue. The anti-oxidant activity ranged from 440 to 1784 ug equivalent Trolox/ g fresh tissue for peaches and from 1254 to 3244 ug equivalent Trolox/ g fresh tissue for the plums. Correlation analysis indicated that the anthocyanin content and phenolic content was well correlated with the anti-oxidant activity. Plum extracts showed good antimicrobial activity and some potential as a colorant.