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Physical-Chemical Characterization of Residues from Plum (*Prunus salicina*) Orchards

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Abstract

Thinning fruits are considered as a residue from plum fruit orchards. Until the crop the culture goes by several common processes in the horticulture, belonging one to them the practice of the thinning that is characterized by the retreat of the fruits still green, 45 days after the to budding totaling in 80 to 90% of the fruits of the plant, could represent 5 thousand tons of residue approximately for harvest, these are discarded in idle areas of the property without defined use. Valorization from this residue, on clean technology concept, needs a profound knowledge of its chemical composition. The aim of this work was characterize the chemical-physical property of the thinning fruits (*Prunus salicina* cv. Harry Pickstone), to study its possible application as minerals, organic acids and natural antioxidants sources. Mineral composition of this residue shown the manganese as the principal element, of the sequence: Mn > Na > K > Zn > Fe > Cu > Mg > Ca. High Performance Liquid Chromatographic assay detected: gallic, caffeic, protocatechuic, syringic, p-coumaric, vanilic and chlorogenic acids on phenolic fraction. Result suggests the use of this thinning fruits as potential raw material of antioxidant compounds.

Keywords: Orchards, waste, physical-chemical characterization.