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### **Effect of the incorporation of dried grape marc into wheat flour**

The development of wheat flour added of dried grape marc may be a major breakthrough for the farinaceous industry, whereas bakery products are an interesting alternative for incorporation of new ingredients. The objective is to evaluate the effect of addition of grape marc powder to conventional wheat flour on the flour characteristics. For this, concentrations of 0.5 and 0.7 g/g of grape flour were added to regular flour and evaluated pH, acidity, total phenolics and antioxidant activity of the compounds of formulations. The results show that the addition of dried grape residue to the wheat flour implies on reduction of pH and acidity of the formulation. The concentration of phenolics increased 93% when 0.5 g/g of grape marc was added to the formulation and 135% when concentration of 0.7 g/g was added. The incorporation of grape flour to wheat flour increased the ABTS scavenging capacity of the product by 29% in comparison to the control sample. The antioxidant activity measured by the reducing power increased 221% with the presence of 0.5 g/g of grape marc and 473% with the presence of 0.7 g/g. For the iron chelating activity, the addition of 0.5 g/g of the grape dried residue was increased 26% and 29% with the presence of 0.7 g/g of the dried residue. The wheat flour showed no DPPH scavenging capacity, while the formulation with 0.5 g/g exhibited ability to scavenge 3.9% of radicals and the formulation with 0.7 g/g, 11.8%. Thus, the addition of grape marc powder to wheat flour alters pH and acidity of the flour. However, the incorporation helps to increase the content of phenolic compounds and antioxidant activity of the new product, indicating that ready-to-use flour, combining wheat flour and grape marc powder is an interesting innovation to be launched in farinaceous market.

### **Biography**

Luis Fernando Schoretter da Silva has graduated in Food Science and Technology and presents scientific publications on utilization of food industry residue for agricultural applications.

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