

# Apple Pomace Powder as an Efficient Gluten Free Flour

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## Abstract

Apple pomace as a valuable waste from the apple juice industry is a rich source of phytate-free dietary fiber such as pectin, which has a hypocholesterolemic effect. It also contains bioactive compounds such as flavonoids, polyphenols and carotenoids with antioxidant properties which lead to produce functional products that are promised in pediatrics and other healthy people. In addition, application of Apple pomace in the production of high value added products is also economically important due to low cost of substrate. On the other hand, approximately 1-2% of worldwide humans are suffering from Celiac disease that should use gluten free products. However, replacing gluten in food product is one of the challenging issues in food industry, since it plays important role in structure and forming of different cereal products. The trace amount of protein in apple pomace powder lead to reduce the quality of the end gluten free product, and make some qualitative problems such as low volume and poor texture. Hydrocolloids are proper additives, which can modify the quality of the end-product during baking and storage by moisture retention. The purpose of this research is optimization of functional cake formulation and properties based on whole replacement of wheat flour with apple pomace powder.

*Keywords: Apple pomace; Economical; gluten free; cake*