EFFECT OF DIFFERENT TYPES OF FLOUR ON THE OIL ABSORPTION AND CRISPNESS OF FRIED BATTER

By

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ABSTRACT

EFFECT OF DIFFERENT TYPES OF FLOUR ON THE OIL ABSORPTION AND CRISPNESS OF FRIED BATTER

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Fried batter is primary thought as enhancing a food product's appearance and taste characteristics. Fried batter adds value to a product by improving the texture, flavor, color and reducing water loss during frying which in turn, lowers oil absorption. Crispness and oil absorption of fried batter were studied by increasing the substitution with rice flour, high protein flour and corn flour for wheat flour. The weight of flour in control and samples was 300g respectively. It was found that, crispness of fried batters increased with increasing the substitution with rice flour and corn flour for wheat flour to a level of 150g. Above this level, the crispness of the fried batter begins to decrease. When high protein flour was used to substitute wheat flour at level of 50-300g, it was found that increasing content of high protein flour increased the crispness of fried batter. Oil absorption of fried batter decreased with increasing substitution with rice flour and corn flour while oil absorption was increased as the substitution with high protein flour increased. The best formulation for optimal crispness and oil absorption of fried batter consisted of 1 part of wheat flour and 2 parts of corn flour.

CHAPTER 1

INTRODUCTION

Battered food products have long been popular consumer items. Coating seafood, poultry, red meat and vegetable products with a batter before cooking is a common practice. Batter can be thick or thin, aerated or not, with or without flavors, sometimes with crumbs, often applied as a powder and used on a multitude of different substrates in one form or another. Fried batter is defined as a flour- water mixture, which is deep-fried in oil.

Fried batter primarily thought of as enhancing a food product's appearance and taste characteristics. This may include a more crispy texture or more desirable color or flavor. They may also improve the nutritional value of a food product and contribute to the pleasure of substantial eating. The batter coating apparently functions to reduce water loss during frying which, in turn, lessens oil absorption. Water loss and oil uptake decrease with increasing gel strength of the fried batter. Water loss and oil uptake decrease with increasing gel strength of the fried batter, and ingredients such as methylcellulose are found to be more effective than cellulose in reducing oil uptake (Suhaila et al., 1998).