E2 245

Reduction of fat absorption in deep fried food products

Deep fried foods are becoming increasingly popular as fast foods. As a result, oil consumption has increased by many folds. This may pose a serious threat to health. Some water soluble hydrocolloids, such as starches, protein and food gums (i.e. ; Methyl Cellulose-MC and Hydroxy Propyl Methyl Cellulose-HPM C) have a film forming ability by physically and / or chemically interaction with batter systems, during thermal gelation. This is useful in reducing oil uptake in fried foods.

The objective of this study was to evaluate the effects of HPMC on reducing oil absorption and the effect on textural properties of some batter and crumb coated food products.

HPMC (METHOCEL-food gums supplied by the DOW Chemical Company) was applied to the batter system at low concentrations (~0.5%). The moisture content or fried and unfried products was determined by the oven method (AOACC-1990) and percentage oil absorption was determined by the soxhlet extraction method (AOAC-1990)> appearance and texture qualities were determined by hedonic sensory evaluation.

The moisture content shows that, experimental samples have significant water retention than standard (1%-3%) during frying. The thermal gel structure of METHOCEL gum was highly effective as an oil barrier. Products absorbed up to about 20%-25% less oil during frying. Sensory evaluation showed enhanced quality improvement (significant at 5% probability level) in the finished fried products.