INTISARI

Muhammad Fi Achsani Taqwim. 2017. Pengaruh Penambahan Bekatul Terhadap Penurunan Bilangan Peroksida dan Asam Lemak Bebas Pada Minyak Goreng Curah Penggorengan Berulang. Program Studi D-IV Analis Kesehatan, Fakultas Ilmu Kesehatan, Universitas Setia Budi Surakarta.

Minyak goreng mengalami kerusakan akan menghasilkan peroksida dan asam lemak bebas. Sumber antioksidan seperti bekatul dapat menghambat oksidasi. Tujuan penelitian ini adalah untuk mengetahui pengaruh penambahan bekatul terhadap penurunan bilangan peroksida dan asam lemak bebas minyak goreng curah.

Penelitian ini dilakukan dengan 3 perlakuan terhadap minyak (penggorengan pertama, kedua, dan ketiga). Pada penelitian ini menggunakan 2 variabel utama yaitu variasi penambahan bekatul 5%, 10%, dan 15% dan variasi lama waktu pengadukan 30, 60, dan 90 menit, sedangkan variabel terikat dari penelitian ini kadar bilangan peroksida dan asam lemak bebas. Penentuan kadar bilangan peroksida dengan titrasi Iodometri dan asam lemak bebas dengan alkalimetri

Kadar bilangan peroksida dan asam lemak bebas dari minyak goreng yaitu 0,72% dan 14,01 mek O_2/kg. Hasil penelitian penurunan bilangan peroksida dan asam lemak bebas dengan variasi konsentrasi bekatul 5%, 10%, 15% dengan lama waktu pengadukan 30 menit berturut-turut yaitu 11,52 mek O_2/kg; 9,43 mek O_2/kg; 8,38 mek O_2/kg dan 0,62%; 0,50%; 0,38%, dengan lama waktu pengadukan 60 menit berturut-turut yaitu 10,88 mekO_2/kg; 8,99 mek O_2/kg; 7,35 mek O_2/kg dan 0,61%; 0,49%; 0,36%, dengan pengadukan 90 menit yaitu 10,11 mek O_2/kg; 8,21 mek O_2/kg; 6,76 mek O_2/kg dan 0,59%; 0,47%; 0,34%. Hasil menunjukan penurunan bilangan peroksida dan asam lemak bebas paling maksimal pada variasi penambahan bekatul 15% dengan lama waktu waktu pengadukan selama 90 menit berturut - turut yaitu 6,76 mek O_2/kg dan 0,34%.

Kata Kunci: *Bilangan Peroksida, Asam Lemak Bebas, Bekatul, Minyak Goreng*

ABSTRACT

Taqwim M.F.A. 2017. The Effect of Bran Addition on the Reduction of Peroxide Numbers and Free Fat Acid in Cooking Oil with repeatedly processing cook. Study Program D-IV Health Analyst, Faculty of Health Sciences, Setia Budi University Surakarta.

The demage of the cooking oil because of heating repeatedly produces peroxides and free fat acid. The addition of antioxidant sources such as bran can inhibit oxidation in cooking oil. The purpose of this study was to determine the effect of the addition of bran to the decrease of peroxide number and fatty acid free of recycled bulk cooking oil.

This research was conducted experiment method with 3 treatment to oil (first, second, and third frying). In this research, 2 main variables were variation of 5%, 10%, and 15% bran grain addition and 30, 60, and 90 minute stirring time variation, while the dependent variable of this study were peroxide and free fat acid. Determination of levels of peroxide numbers with Iodometri titration and free fa acid with alkalimetry

The levels of peroxide and fatty acid free from cooking oil are 0, 72% and 14.01 m2 O_2/kg. The result of the research was decrease of peroxide number and free fat acid with variation of bran concentration 5%, 10%, 15% with duration of stirring 30 minutes in a row consecutive is 11,52 mek O_2/kg; 9.43 mek O_2/kg; 8.38 mek O_2/kg and 0.62%; 0.50%; 0.38%, with 60 minutes continuous stirring time of 10.88 mek O_2/kg; 8,99 mek O_2/kg; 7.35 mek O_2/kg and 0.61%; 0.49%; 0.36%, with stirring 90 minutes consecutive is 10.11 mek O_2/kg; 8,21 mek O_2/kg; 6.76 mek O_2/kg and 0.59%; 0.47%; 0.34%. The results showed the maximum decrease of peroxide and fat free acids in variation of bran 15% addition with duration of stirring time for 90 minutes, consecutive is 6.76 mek O_2/kg and 0.34%

Keyword:*Peroxide numbers, free fatty acids, bran, cooking oil*