Rice bran is a by-product derived from rice milling process. Annually, a considerable amount of this by-product is available in Iran, which is used as animal feed. Rice bran contain a relatively high level of fat with a suitable acid balance. This study was carried out to determine the chemical composition and variability of fatty acids of rice bran during the storage time. Using of stratified sampling method, 60 rice-milling from 15 regions were selected throughout the Guilan Province in north of Iran, where the rice bran was sampled during autumn, winter and spring seasons.

Samples were analyzed chemically and fatty acids were determined according to the laboratory standard methods. Concentration of crude protein(CP), ether extract(EE), crude fiber(CF) and Ash were 8.37±2, 8.04±2.5, 27.46±6.3 and 13.63±2.8 percent respectively.

Gross energy(GE) was 4119±264 cal/g dry matter basis. The concentration of fatty acids including: Luric(Lu), Myrestic(My), Palmitic(Pi), Stearic(St), Oleic(Ol), Linoleic(Li), Linolenic(Lin) and Arachidonic(Ar) were 0.05±0.03, 0.37±0.07, 18.7±1.4, 1.36±0.45, 43.45±3.34, 33.68±2.9, 1.19±0.29 and 0.48±0.24 percent respectively.

There were no significant differences (P>0.05) among the regions or the seasons for chemical composition and GE content. Concentration of the fatty acids was not different among the regions, but it was significantly (P<0.01) different for Lu., St., Ol., Lin. and Ar. between the seasons. It is concluded that the rice bran in northern Iran with high CF and low CP could not be considered as standard rice bran. In addition, the major fatty acids could be destroyed during storage of rice bran in normal environment conditions.

Key words: Rice bran, fatty acids, seasonal storage

Poster