

# **Effect of Frying on the Chemical Characteristics of Rice Bran Oil and Cotton Seed Oil based Blends.**

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For evaluation of frying performance, deep fat frying at home level status was taken up in rice bran and cottonseed based blends with sesame oil as control in the ratio of 20:80, and 80:20. Deep fat frying of “muruku” was conducted in each oil blend in four batches consecutively while maintaining frying temperatures at 180°C and the oil samples for each batch of frying were withdrawn, cooled and analysed for their chemical characteristics by standardized methods.

Increase in acid values was seen to range between 3.55 to 4.87 for control, 0.366 to 3.62 for sesame-rice bran blends and 0.30 to 4.61 units for sesame-cottonseed blends for four fryings consecutively. Control had an initial free fatty acid content of 1.78, which increased to 2.45. Peroxide value increased gradually and the rise was transiently seen from 5.306 to 20.51meq/kg in control. The peroxide value increase during four consecutive fryings was seen to be the lowest in sesame-cottonseed (20:80) from 5.35 to 12.493meq/kg and highest in sesame-rice bran(80:20) from 4.7 to 19.653meq/kg. Small increases in para-anisidine value occurred for all the blends, and for control it was 3.78 to 6.62. The increase in para-anisidine value was marginally higher in sesame–rice bran blend(80:20) from 5.903 to 8.51 and lowest in the sesame-cottonseed(20:80) from 3.353 to 5.236.

The thiobarbituric acid values and kries test were on the rise for all the blends studied. All the blends showed an incipient rancidity by the end of the 3 rd frying. Thus the oxidative stability of the blends can be in the order of sesame-cottonseed (20:80), followed by sesame-ricebran (20:80), sesame-cottonseed (80:20), control, and sesame-rice bran(80:20).