

Discriminant analysis of selected edible fats and oils and those in biscuit formulation using FTIR spectroscopy.

ABSTRACT

Recently, lard adulteration has highlighted the importance of checking raw materials and food products in order to assure their authenticity. Discriminant analysis (DA) using selected frequency regions (3,050–2,800, 1,800–1,600, and 1,500–650 cm^{-1}) was exploited for the classification of lard and other commercial vegetable oils and animal fats. As a result, the Cooman plot showed that all vegetable fats/oils and animal fats, including lard, are clustered in a distinct group. DA was also employed to assign real food samples, in particular biscuit, into one of two groups. In addition, DA is a very useful means for Halal screening technique in order to enhance the Halal authentication process.

Keyword: Discriminant analysis; Fats and oils; FTIR spectroscopy; Halal authentication; Lard.