



## Changes in fat components and fatty acid compositions of autoxidized groundnut oils

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Groundnut oils, autoxidized by various modes *viz.* i) aeration at 98 °C for 10 h ii) heated in oven at 200 °C for 40 h iii) heated by flame for 10 h and iv) oil stored with moisture (5%) for 24 weeks at 37 °C were fractionated for fat components and fatty acid compositions by thin layer and gas chromatographies. In the aerated groundnut oil, the  $R_f$  values of diacylglycerol (DAG) and free fatty acids (FFA) were slightly different from those of raw oil (control), which showed six detectable components. The heated oil, flame-heated oil and oil stored with moisture produced only three clearly detectable components and the monoacylglycerols, free sterol and DAG got mixed up together preventing clear separation of the components due to polymerization of oil/fatty acids. In autoxidized oil samples, the predominant fatty acid, linoleic acid decreased from 43% to 24% in comparison to raw oil, which shows destruction of this essential fatty acid. The oleic acid in autoxidized oil samples has increased from 33% to 44%. Similarly, palmitic acid was also found to increase from 9% to 19% in oven-heated oil. All other fatty acids remained unchanged.