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Separation by extraction of oil from palm kernel nut - *Elaeis guineensis* using two local methods in Nigeria and the characterization of the oil obtained

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Extraction of oil from palm kernel nut was carried out using two local methods practiced in the Eastern part of Nigeria in Africa – Mechanical extraction and Solvent extraction. The palm kernel nuts were cracked and the kernel – shell separation done by density – clay – bath. Using mechanical extraction, the nuts were cleaned by pre-treatment, followed by size reduction through grinding, then, flaking and steam conditioning. The resultant meals were passed through mechanical stirring agitator and then subjected to screw-press which forced the meals through the barrels in series till oil drained out through perforated bars while the solid-cake discharged through the annular orifice. In solvent extraction the kernel nuts after pre-treatment were dried, ground to paste, mixed with little water and heated to release the oil which surged out from the paste and remain on top and was scooped out. The oils obtained were characterized and the physicochemical properties were same as follows: saponification valule (SV) 322.575, iodine value 25.33mg/kg, acid value (AV) 7.4824 and free fatty acid value (FFAV) 3.76. These values proved that the palm kernel oil extracted locally as described has similar characteristics with those obtained through advanced mechanism and so, proves the two extraction methods

Biography

Margaret C Enedoh has completed her PhD from University of Abuja Nigeria. She is a lecturer in Imo State University Owerri, Nigeria. She is a member of National Science Teachers of America and America Chemical Society and back home belongs to Chemical Society of Nigeria and is currently the coordinator of Female Chemists in Imo state Nigeria. She is a staunch member of Science Teachers Association of Nigeria (STAN) and the national chairperson of the chemistry panel of STAN. She organizes and coordinates national chemistry workshops yearly. She is highly interested in scientific research works

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