



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2014_BJAST_14691
Title of the Manuscript:	Characterization of Raw, Semi-Processed and Completely Processed Palm Oils

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
1) The Nomenclature IS NOT the bibliography!!!!!! The nomenclature is the list of all acronyms used in the paper: A area [m²] V velocity [m/s] PV photovoltaic etc etc 2) Conclusions remain poor!!!!!! In the conclusions the authors have to say what motivated them in research, what are the results obtained, which benefits have made, what to expect for the future. To say that the results are good and that the rate of a compound is fine, it is not enough. 3) When a comparison is made between the experimental data and numerical data, the experiments procedure must be described in detail, as anyone should be able to reproduce the tests, if it wants to. To this point, the authors ' response is still not enough	1. All acronyms or abbreviations used in this article were written in full before the abbreviations in parenthesis or were well stated, for example “Knowledge of the acid value (AV), peroxide value (PV), iodine value (IV)....” in line one of the Abstract and “R = raw oil; SM = semi-processed oil; CP = completely processed; AV = acid value; PV = peroxide value; IV = iodine value; Fe = iron concentration; NA= Not Available” under Table 1. 2. What motivating this investigation is the rate at which locals within Bayelsa State eat raw palm oil as food. This was stated in the Introduction “because there is an increasing interest of eating raw and semi-processed oils in the Bayelsa State of Nigeria. The semi-processed oil is used to prepare a delicacy called “banga soup” in the Niger Delta region (Bayelsa State, Nigeria) in the ratio of 7:3 of the oil and other components. It is also a common practice to eat raw oil directly from the fruit.”The motivating factor has been added to the conclusion and it now reads “The acid values, peroxide values, iodine values, and concentration of iron of raw oil (R-OIL) were above recommended maximum values by Codex Standard for edible oils; therefore raw oil is not suitable for food, however, it can be used for other industrial processes, like in the production of soaps and cosmetics. This information if adequately cascaded will dissuade locals within Bayelsa State to stop the habit of eating raw palm oil. The acid values, peroxide values, iodine values, and concentration of iron for Semi-processed oil (SM-OIL), and completely processed oil (CP-OIL) were within acceptable ranges, by the same Codex Standard and therefore fit to be taken as food. The significantly higher iodine value of <i>E. guineensis</i> when compared with <i>E. oleifera</i> indicates that it will be more unsaturated and would have a shorter shelf life.” 3. The detailed method for the determination of Fe in oil as stated below has been added to the methodology: All laboratory ware including pipette tips were cleaned thoroughly with detergent and tap water, rinsed with distilled water, soaked in dilute nitric acid then rinsed thoroughly with deionized distilled water. The calibration curve was based on five standards. The Fe standard solutions used for calibration were freshly prepared by diluting stock standard solutions (1000 mg/L) in a nitric



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	acid solution (0.1% v/v) immediately before use. The calibration curve ranged from (2-10) mg/l of Fe. This was based on the expected concentrations of Fe. 5g samples were digested with 10 ml of concentrated HNO₃ (65%) and 2 ml of concentrated H₂O₂ (30%) in microwave digestion system for 30 min and finally diluted to 10 ml with 2% HNO₃. All sample solutions were clear. A blank digest was carried out in the same way. Digestion conditions for microwave system were applied as 5 min for 500 W, 5 min for 800 W, 10 min for 1000 W, 10 min for 1300 W, vent: 10 min, respectively. Blank solutions were also prepared by using the same digestion procedure. Flame atomic absorption spectrometry (F-AAS) (SpectrAA 220, Varian, Australia), equipped with deuterium background correction was used for the determination of Fe. The instrument parameters for the determination of Fe were: Wavelength: 248.3(nm); Slit width: 0.2(nm); Lamp current: 5.0(mA); Fuel gas: Acetylene; Oxidant gas: Air. The analytical characteristics for the determination of Fe oil from the method validation were: Recovery: 99%; Method detection limit: 0.04 mg/L; Method quantification limit: 0.13 mg/L; Minimal precision for 10 replicates: 2.2% R.S.D.; Intermediate precision with analyses carried out in 1-week periods for 5 weeks: 3.5%R.S.D.
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