ASSESSMENT OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) LEVELS IN SELECTED ROASTED AND SMOKED FOOD SAMPLES

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ABSTRACT

The study investigated the levels of polycyclic aromatic hydrocarbons (PAHs) in selected food samples which include roasted and smoked fishes, meats, corn, yam and ripe plantain using Gas Chromatography/Mass Spectrophotometer. The result revealed the presence of PAHs in the different food samples at varying concentrations of which more were observed in the smoked and roasted fish and meat samples than in the roasted yam, ripe plantain and corn. Benzo[a]pyrene were not observed in the roasted yam, ripe plantain and corn samples. Chrysene was most commonly found in the food samples that were negative for benzo(a)pyrene with higher concentration levels. Chrysene contributed most on the total PAH of the samples with a value 16.5933 mg/kg in mackerel fish while benzo[b]fluoranthene contributed in higher amount with a concentration value of 67.7566 mg/kg to total mean concentration of PAH in whole sample of catfish (Malashya type). The study revealed different concentrations of the PAHs in the food samples which have been noted to exhibit both non-cancer and cancer risks on and humans. The study therefore complements monitoring information on the levels of polycyclic aromatic hydrocarbons (PAHs) occurrence in the different food samples studied.

Keywords: Contamination, food sample, monitoring and polycyclic aromatic hydrocarbons.