Saviour U Ufot et al., J Clin Toxicol 2015 2015, 5:3
http://dx.doi.org/10.4172/2161-0495.S1.015

OMICS International
conferenceseries.com
4th Global Summit on
Toxicology
August 24-26, 2015 Philadelphia, USA

Serum and liver tissue hydrocarbons contents of male rats orally exposed to bonny light crude oil

Saviour U Ufot, Friday E Uboh, Uduak O Luke and **Eyong U Eyong**
University of Calabar, Nigeria

The types and concentration of hydrocarbons accumulated in the serum and liver tissues of male rats orally exposed to bonny light crude oil (BLCO) was assessed in this study. Twenty male albino Wistar rats (180–200 g) used in this study were distributed into two groups (control and test groups), with ten rats each. The test animals were orally exposed to 60 mg/kg bwt of BLCO, once daily for twenty eight days, while the control animals were given distilled water. Twenty-four hours after the last exposure, the animals in both groups were sacrificed under chloroform anesthesia, blood and liver tissues collected for analyses. The whole blood samples were collected by cardiac puncture, allowed to clot, and serum separated after centrifugation. The serum and digested liver tissue samples were extracted and analyzed for hydrocarbon levels using HPLC technique. The results showed that benzene, toluene, ethylmethylene, xylene, BTEX, pyrene, naphthalene and total polycyclic aromatic hydrocarbons (PAH) in the serum (0.066±0.004, 0.641±0.032, 0.470±0.030, 0.112±0.009, 0.370±0.080, 3.660±0.210, 0.009±0.001 12.540±0.720ug/dl, respectively) and liver tissues (0.063±0.003, 0.604±0.024, 0.450±0.034, 0.112±0.009, 0.365±0.080, 3.620±0.190, 0.008±0.002 and 12.680±0.630 ug/g tissue, respectively) of rats exposed to BLCO were significantly ($p<0.05$) higher, compared to respectively with the concentrations in the serum (0.020±0.001, 0.015±0.001, 0.010±0.000, 0.031±0.001, 0.010±0.000, 1.040±0.010, 0.003±0.005 and 2.270±0.120 ug/dl, respectively) and liver tissues (0.020±0.003, 0.015±0.001, 0.012±0.002, 0.031±0.001, 0.013±0.002, 1.040±0.010, 0.002±0.001 and 2.250±0.120 ug/g tissue, respectively) of control rats. The results of this study indicated that oral exposure to BLCO may results in the accumulation of different hydrocarbons in the blood and liver tissues of rats.

Biography

Saviour U Ufot completed his BSc in Biochemistry and MSc in Pharmacology from University of Calabar and Ibadan respectively. He completed his PhD in Biochemistry (Biochemical and Environmental Toxicology) from University of Calabar in 2014. He was a lecturer in the Department of Pharmacology, University of Ilorin, Nigeria from 1993 to 1998. He is presently working with Total Exploration and Production Nigeria Limited as a Health, Safety and Environment specialist. He has published over 14 papers in reputable journals and has attended many scientific seminars and conferences.

sufot2001@yahoo.com