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Pollution with Polycyclic Aromatics Hydrocarbons (PAHs) in *Lutjanus synagris* and *Centropomus undecimalis* Coming from the Gulf of Morrosquillo, North of Colombia

Jaime Rafael Méndez Chávez, Adolfo Consuegra Solórzano*

¹Environmental Science Master's, University of Sucre, Cra. 28 #5-267, Puerta Roja, Sincelejo, Colombia

Abstract : Samples of fish species *Lutjanus synagris* (lane snapper, pargo bíaiaiba or pargo rayado) and *Centropomus undecimalis* (Common snook, sergeant fish or robolo) from municipality of Covenas and corregimiento of Berruga in the Gulf of the Morrosquillo (Department of Sucre, northern Colombia), were collected to evaluate their pollution degree with polinuclear aromatic Hydrocarbons (PAHs), also called Polycyclic Aromatic Hydrocarbons. Analysis to detect residual concentrations of sixteen possible PAHs in fish muscles were carried out with gas chromatography coupled by masses (GC/MS). Results showed 11,230 $\mu\text{g.kg}^{-1}$ of PAH average total concentrations for *Lutjanus Synagris* (ranging from 0,004 to 145,596 $\mu\text{g.kg}^{-1}$) and 8,596 $\mu\text{g.kg}^{-1}$ for *Centropomus undecimalis* (ranging from 0,002 to 85,915 $\mu\text{g.kg}^{-1}$) where PAHs classified as carcinogenic (benzo[a] pyrene, dibenzo [a, h] anthracene), showed a low frequency in the detection. This condition allows to consider that PAHs average values do not represent an immediate risk for human health, but it would be a potential one because of the bio-accumulation property of these pollutants. Thus, a continuous monitoring of this problema is recommended since it could become a risk for the environment and public health.

Keywords : Gulf of Morrosquillo, Aromatic hydrocarbon, Pollution, Fish, Bioaccumulation.

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