

## OP 2.7

### **Determination of methylmercury in fish from the marine and freshwater environments in Ghana using Gas Liquid Chromatography with Electron Capture Detection Technique.**

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Concentrations of methylmercury residues were determined in different marine and freshwater fishes from Ghana. Samples were treated with ethanolic potassium hydroxide in water bath at 100° C for 1 h. After neutralizing with HCl and washing with hexane, methylmercury was extracted with dithizone in toluene, cleaned up and determined by Gas Liquid Chromatography with Electron Capture Detection. The method was sensitive with good precision (std dev=1.5 -1.6), detection limit of 5 ng g<sup>-1</sup> and provided good separation for organomercury compounds. The method was applied to certified reference material and different fish samples. A total of forty four (44) samples covering twenty six (26) species of fish were analysed for methylmercury using the method. Concentration of methylmercury in the edible muscle tissue of the tested fish ranged from 7.13 to 106.77 ng g<sup>-1</sup> wet weight. Methylmercury was the dominant form of mercury in the samples with percentages between 90 and 106 % of the total mercury. The concentrations of methylmercury in the fish samples obtained do not however constitute any significant mercury exposure to the general population through fish consumption.