

Radiation dose to consumers of commonly exported shellfish due to ^{210}Po

Jeben Benjamin¹, M. Feroz Khan² and S. Godwin Wesley³

¹Scott Christian College (Autonomous), India

²Sadakathullah Appa College (Autonomous), India

Polonium-210 is an alpha-emitting radionuclide which delivers a high internal radiation dose. This radionuclide has an affinity to bind to proteins and hence protein-rich foods such as shellfishes would have higher activity concentrations of this radionuclide. Certain commonly exported shellfishes such as prawns, lobsters, crabs and cuttlefishes were quantified for their ^{210}Po activity concentrations to find out the internal dose through consumption of these seafoods. The data revealed no significant health hazard due to consumption of these seafoods and they are considered to be radiologically safe.

Biography

Jeben Benjamin was born in the district of Kanniyakumari in Tamil Nadu, India. He did his graduation in Zoology in a college affiliated to Manonmaniam Sundaranar University, Tirunelveli. He passed his masters in Medical Entomology with distinction from the Vector Control Research Centre, Pondicherry, affiliated to Pondicherry University. He has another Postgraduate degree in Zoology from Annamalai University, Chidambaram. He is pursuing his doctorate, assessing the radiation dose to terrestrial non-human biota due to naturally occurring radionuclides. His other interests include watching films of auteurs and growing horticulture crops.

jeben_b@yahoo.com

Assessment of certain marine fishes for radiological safety

R. P. Praveen Pole¹, S. Godwin Wesley and M. Feroz Khan²

¹Scott Christian College (Autonomous), India

²Sadakathullah Appa College (Autonomous), India

The possible transfer of radionuclides to human beings through marine foods and the assessment of safety limit are of paramount importance in recent years. Baseline assessment of natural radionuclides near nuclear installations receives more attention as far as its pre-operational study is concerned. The assessment of radionuclide ^{210}Po , a member of ^{238}U decay-series is considered crucial for its toxicological significance and its special accumulation behavior in the environment. Comparatively, ^{210}Po accumulates more in marine fishes and delivers a higher dose to humans through intake of seafood. In this study, we collected several species of economically important fishes around a nuclear installation and analysed ^{210}Po . The committed effective doses to humans were estimated.

Biography

Praveen Pole, R. P graduated in India, who had his Master Degree in Zoology and Master of Philosophy in Zoology specialized in Coastal Aquaculture from Scott Christian College (Autonomous), Nagercoil and Centre For Marine Science and Technology, Marina Campus, Rajakkamangalam, Manonmaniam Sundaranar University, Tirunelveli. Now he is pursuing his Ph.D at Scott Christian College (Autonomous), Nagercoil affiliated to Manonmaniam Sundaranar University, Tirunelveli. Perspective of his Research work is to assess the natural radiation dose to marine biota around Kudankulam coastal waters, Gulf of Mannar, India. He was born in 1983 in Kanyakumari.

praveen.pole@yahoo.com