

Environmental Radioactivity in Machu Picchu Scientific Station

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ABSTRACT. Studies on environmental radioactivity in the Peruvian Scientific Station were carried out in the last two austral summer periods. To establish an Environmental Radiological Monitoring Program for evaluating environmental components in order to achieve a baseline study about artificial and natural radioactivity levels is the main objective of this project. At the beginning recognition tasks were done in the surroundings of the station, starting the sampling in Punta Crepin then to continue in Playa Inca and Playa Naylamp. Seaweeds, mosses, lichens, soil, sea water, ice, marine sediment, underground water samples were collected and pre-conditioned in Machu Picchu Station and then were sent to the Environmental Radioactivity Laboratory of "RACSO" Peruvian Nuclear Center to be analyzed, gamma and beta analysis were done. The obtained results show Cs-137 in geological components (soil and sediment) and biological components (lichens and mosses) nevertheless those levels are not dangerous to the ecosystem of Antarctic Region. In the same way, high concentration of Be-7 have been detected in seaweed and lichens. Ra-226, Bi-214 and K-40 have been identified as natural radionuclide

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