

# Ramon Rivera-Varona

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Funded by: Louis Stokes Alliance for Minority Participation

## Shipping Box Radiation Level Detector

Ramon Rivera, Wale Oladiran and William Miller

Shippers at the University of Missouri Research Reactor (MURR) are currently being exposed to radiation while manually testing the radiation level of outgoing shipping boxes. The boxes contain radioactive isotopes used in the development of radio-pharmaceuticals for cancer treatment. In order to ship the boxes, MURR must determine the exact radioactive levels of each container. Radiation levels, by the Department of Transportation (DOT), on the external surfaces of all packages and at a distance of one meter from all external surfaces will not exceed the limits set in 49 CFR 173.441 or IATA 10.5.6 (1997). The main goal is to reduce the radiation exposure that workers encounter while manually testing the radioactivity of the shipping container so as to automate the process for better approach toward the box and to improve the time that takes to read all the sides of the box readings.

