

## **Experience working with radioisotopes**

**Fang Liu, Oct. 18, 2003**

**Sealed Radioisotopes:** Ge-68, Na-22, Cs-137, Co-57, Co-60, Sr-90

**Time:** 1999-2003

**Place:** Department of Physics & Department of Radiology, University of Pennsylvania, Philadelphia, PA 19104

**Experience:** These sources were used when I was involved in the brain-PET detector design and the positron-sensitive surgical probe design. Basically these sources were placed on top of the scintillation detector during the experiments, and they were stored in the radioisotope storage room when they were not being used. I wore lab coat, gloves, and lead apron to protect myself. Lead shielding was also used to minimize my exposure. Also, I wore finger ring and whole body badge to monitor my radiation exposure during the experiment.

**Liquid sources:** F-18-FDG, Tc-99m

**Time:** 2001-2003

**Place:** Department of Physics, Department of Radiology, PET center physics lab, Cyclotron center, University of Pennsylvania, Philadelphia, PA 19104

**Experience:** These two types of sources were used when I was involved in the brain-PET detector design and the positron-sensitive surgical probe design. I filled the liquid source in small plastic tubes, and then sealed them to make sealed liquid sources. These procedures were done either in the Cyclotron center or in the PET center physics lab at the University of Pennsylvania. Those sealed liquid sources were taken to the physics labs of the department of Physics or department of Radiology for the experiment. The sealed liquid sources were placed on top of the scintillation detector during the experiments. After the experiment, they were taken back to the PET center physics lab, and disposed when they decayed to the required level. During the whole procedure of handling the sources, I wore lab coat, gloves, and lead apron to protect myself. Lead shielding was also used to minimize my exposure. Also, I wore finger ring and whole body badge to monitor my radiation exposure during the experiment.

**Radiation safety training**

- Attended the radiation safety training lecture each year (1999-2003) at the Department of Radiology, University of Pennsylvania
- Passed the radiation safety test online each year (1999-2003) at the Department of Physics and Department of Radiology, University of Pennsylvania

If you need any further information, you can contact the following radiation safety officers:

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