

# Working Safely

# $^{129}\text{I}$

Radiation Safety

(216) 368-2906

## Iodine 129 Quick Facts

### Principal emission:

0.152MeV beta  
0.040MeV gamma

### Half Life:

15.7 million years

### Shielding:

3mm lead

### Body and ring

### Badges:

Required for use of  
>10mCi

required if using >  
1mCi

## Safety Precautions:

- Always wear gloves and a lab coat when working with any radioisotope.
- Due to  $^{129}\text{I}$  affinity for the thyroid gland it is an internal exposure hazard. Obtain a thyroid scan before and after performing an iodination. The second scan needs to be completed within 24 hours after the iodination.
- Use a survey meter with a sodium iodide probe to detect  $^{129}\text{I}$ . Count wipes in a Liquid Scintillation Counter or in the Gamma Counter to detect removable contamination.
- Waste generated from  $^{129}\text{I}$  should be shielded with 3 mm of lead shielding.
- Waste generated from  $^{129}\text{I}$  should be stored in a covered acrylic radioactive waste container. Keep solid, liquids, and vial waste separately.



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Environmental Health and Safety