

**Title**            **Calibration/Normalization of Liquid Scintillation Counters**

**Purpose**            To provide guidance on calibration/normalization of Liquid Scintillation Counters (LSC).

**References**    ANSI N323B-2003  
Iowa Department of Public Health Calibration of Radiation Survey and Monitoring Instruments Regulatory Guide  
Iowa State University Radioactive Materials Safety Manual  
Iowa State University Radiation Safety Training for Material Users

**Frequency**    At least weekly or as recommended by the instrument manufacturer.

**Equipment**    Liquid Scintillation Counter, racks, tabs  
Assigned LSC Standards, typically C-14 and H-3

**Notes**            This procedure applies to LSCs used in research laboratories.

**Hazard Control Measures** None

**Procedure**

1. Place the C-14 standard vial into the first position of the sample counting rack. Do not add any other vials to the rack.
2. For Beckman LSCs, insert the CAL tab into the rack.  
For Packard LSCs, insert the SNC tab into the rack.
3. For Beckman LSCs, place the HALT rack behind the CAL rack.  
For Packard LSCs, slide the rack tab to the left.
4. Begin the LSC count mode to complete the calibration/normalization routine.

Contact EH&S if you have questions.