

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 Radiation 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.