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THE LAWRENCE LIVERMORE NATIONAL LABORATORY THYROID RADIOIODINE INTERCOMPARISON PROGRAM

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Lori Johnson Collins and Sandra K. Fisher



- **TRIP is under new management.**
- **TRIP is directed, funded, and coordinated by the Hazards Control Department Quality Assurance Team at LLNL.**
- **TRIP was established by LLNL in response to requirements for participation in a suitable program of interlaboratory comparison by ANSI, ISO/IEC, DOE , and other regulatory agencies.**
- **TRIP was approved in 1998 by the Conference Radiation Control Program Directors Inc. (CRCPD) as an acceptable intercomparison program.**
- **TRIP provides an independent means of evaluating in vivo thyroid radioiodine measurements**



Twice a year, two vials containing the iodine carrier and one blank vial, and are shipped to each participating facility.



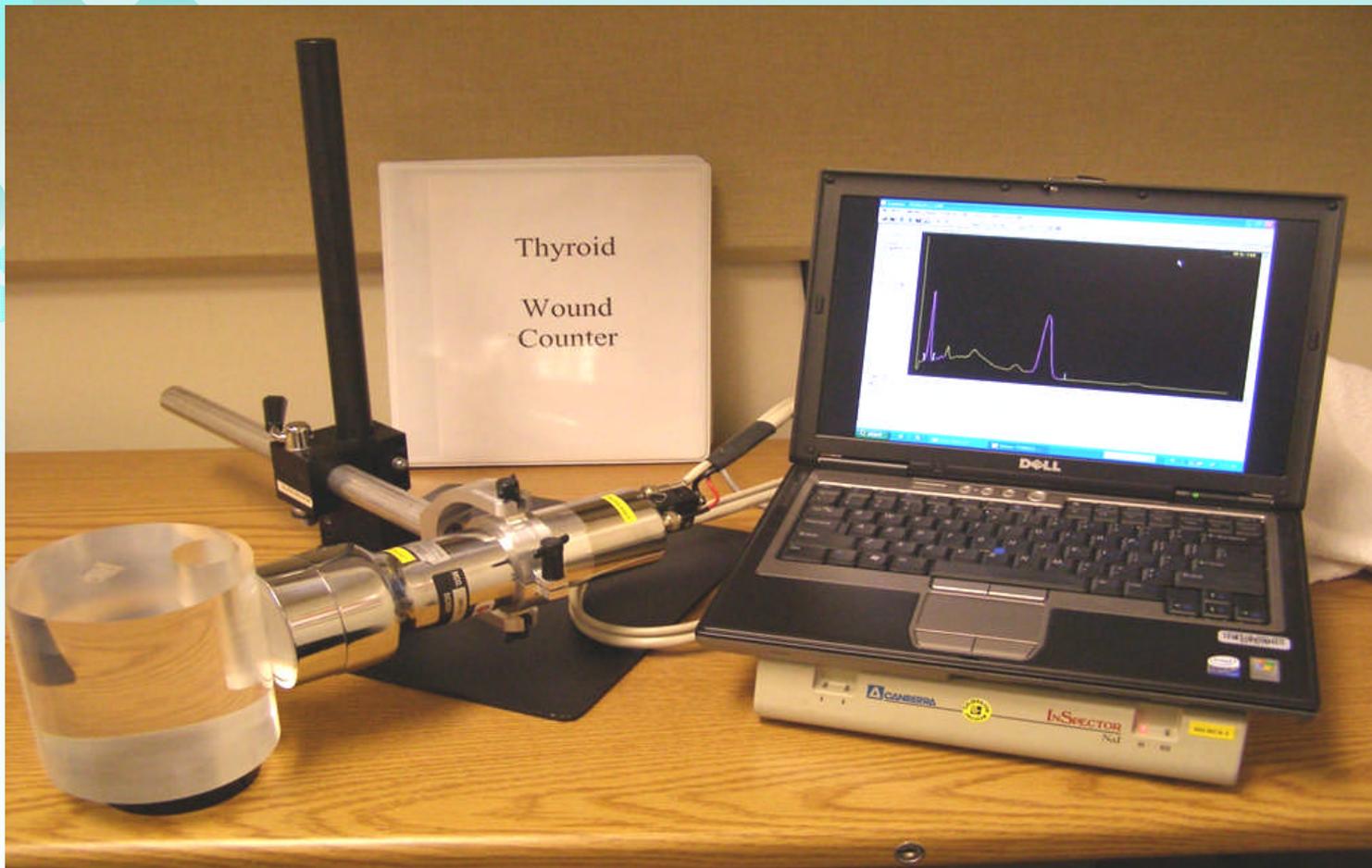
- **IAEA/ANSI phantom**
- **Widely accepted**
- **Reasonable phantom design**



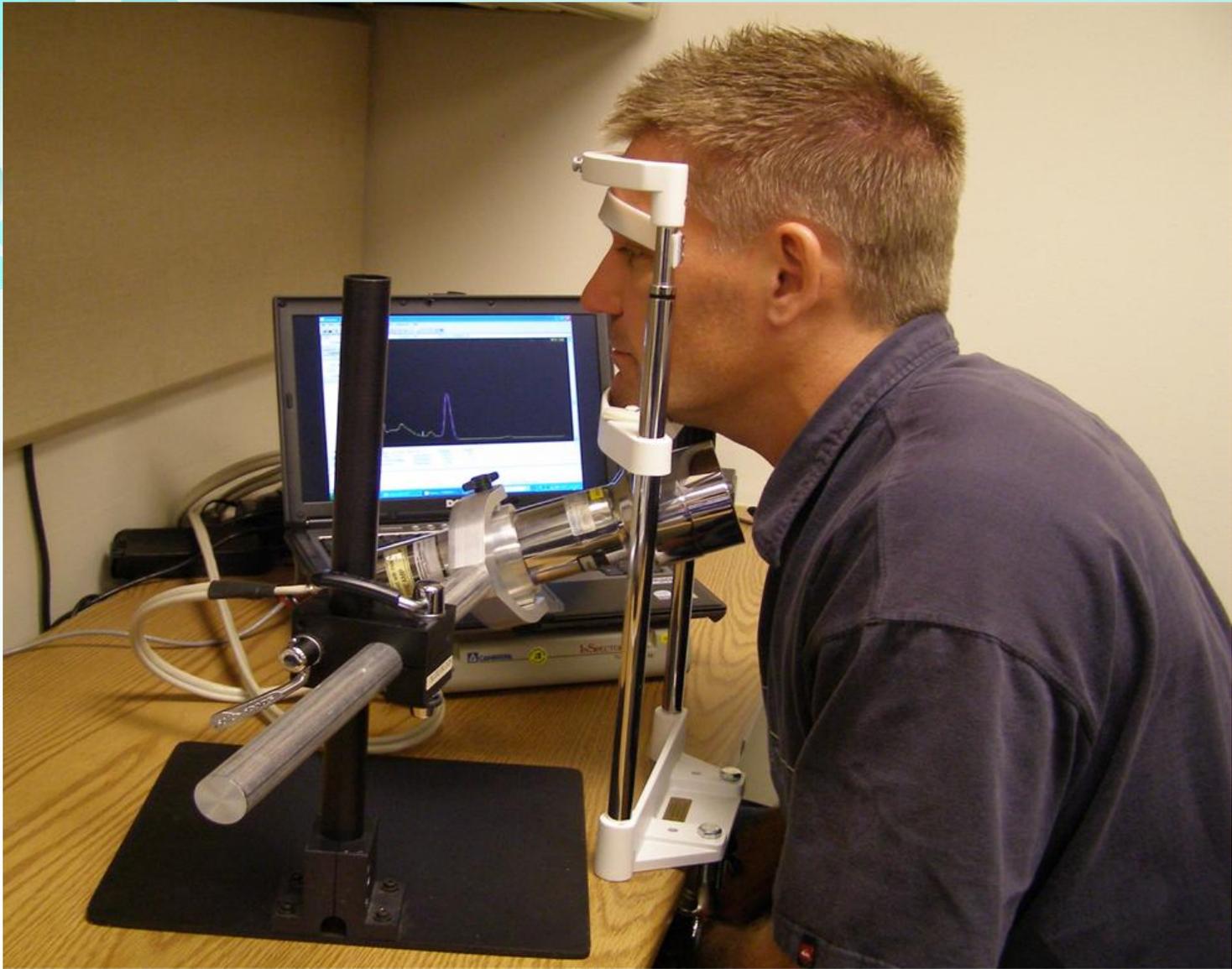
Quantitative determination of iodine in the thyroid is performed with the ACT II detector system LLNL.

The detector is placed 5 cm away from the body to reduce geometric dependence of the results.





- **Portable thyroid counter**
- **Bicorn NaI detector**
- **Connected to a Canberra NaI InSpector**
- **IBM ThinkPad, which runs Genie 2000 software**
- **Data reduction software designed and written in house**



Subject in a remote location getting a Thyroid count on the portable thyroid counter.



Samples are counted on a gamma system for QC purposes.

The detector is a broad energy response, carbon fiber faced germanium detector.

The counting system is shielded.

A jig is used to position the TRIP bottles at a fixed distance from the detector.

Samples are not distributed if QC results are not within acceptable limits.



**From uncertainty calculations and sample preparation to quality control and sample counting; the TRIP intercomparison program is a team effort!
Rich Hume, Sandi Fisher, Russ Stimmel**

For more information or to sign up to participate in TRIP please contact the TRIP Coordinator:

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OR

Go to the TRIP web site

<https://trip.llnl.gov/information.html>



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**We are actively recruiting
new participants**

Come and join us.

It's Free.

For now

What a deal!

