



# The Integrated Consortium of Laboratory Networks Newsletter

Volume 3, Issue 1, August 2023

*The Integrated Consortium of Laboratory Networks (ICLN) is a system of interconnected federal laboratory networks that can quickly respond to high-consequence incidents and give decision makers timely, credible, and interpretable data.*

## NETWORK SPOTLIGHT:

### Interlaboratory Comparability/Quality Assurance Subgroup: Internetwork Laboratory Coordination Exercises

The ICLN Interlaboratory Comparability /Quality Assurance (IC/QA) Subgroup focuses on promoting confidence in laboratory results across ICLN member networks, in anticipation of joint participation of multiple lab networks in response to a large-scale incident. The IC/QA Subgroup has two major missions: 1) Identification of common elements of effective performance/proficiency testing (PT) programs against which they can align the PT programs of their own networks, implementing improvements as needed; 2) Maintenance of guidance for the conduct of ICLN Internetwork Laboratory Coordination Exercises (ILCEs) and management of the planning efforts required for these exercises.

ICLN's purpose is to enable the full power of the analytical resources to be applied to overwhelming samples loads that will result from large-scale contamination or disease incidents. In order to assess the capability of multiple networks to provide quality analyses for matrices not usually analyzed by these supporting networks, the ICLN ILCEs involve the distribution of samples among different laboratory networks that could be potentially overwhelmed by a large sample load in a large-scale incident. These exercises are not intended to be an exploration or demonstration of proficiency in a method, nor are they intended to indicate a quantitative expansion of capacity through sharing of samples across ICLN networks.

**The Subgroup recently finalized a guidance document, titled "ICLN Internetwork Laboratory Coordination Exercise (ILCE): Network Guide," which is intended to inform ICLN networks involved in planning and executing an ILCE.**

Currently, the ICLN is planning an ILCE for FY2024 involving an environmental release of an opioid agent, loosely based on a 2018 ICLN tabletop exercise where a wide area was contaminated with opioids. Stay tuned to future newsletters for more information.



*Centers for Disease Control and Prevention (CDC) scientist implementing molecular testing.*

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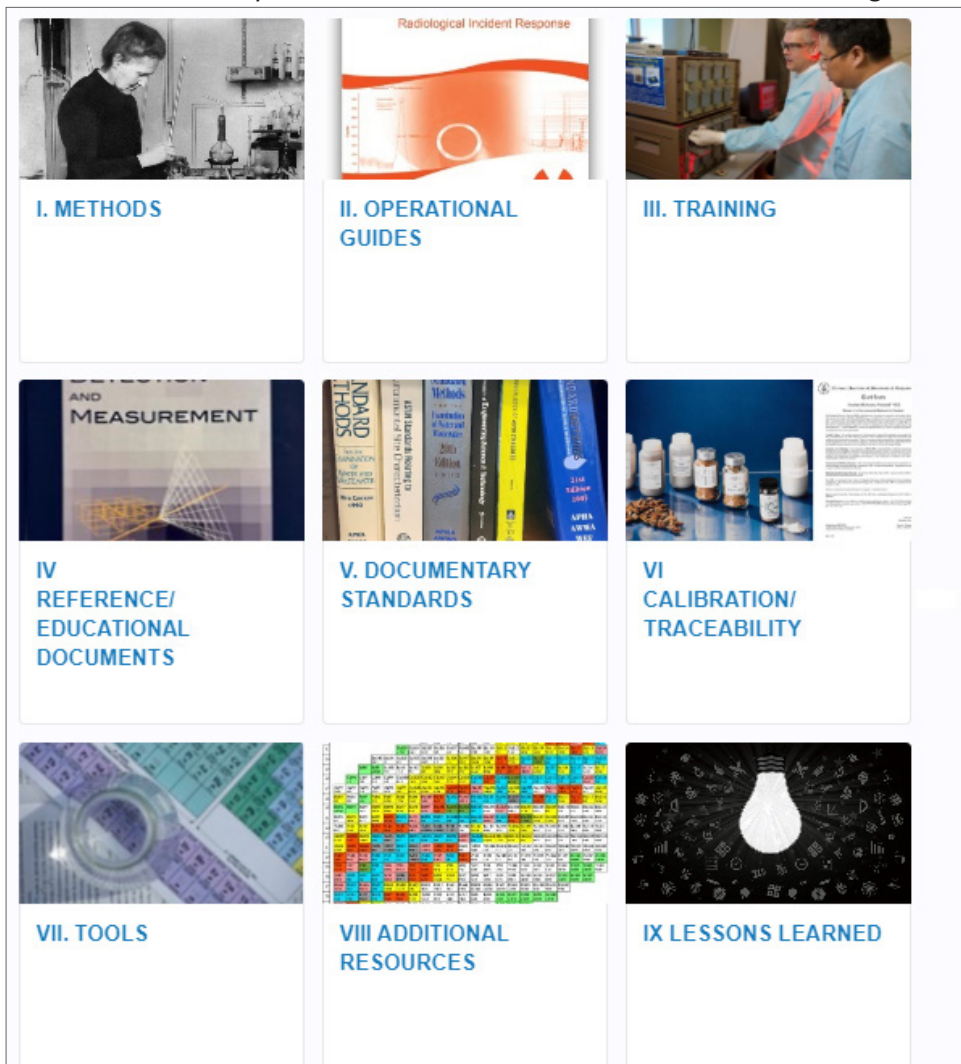
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## Rad Lab Subgroup Launches Rad Lab Hub

The ICLN Rad Lab Subgroup is in the process of launching a new website to serve the radiochemistry community as an information “hub.” The Rad Lab Hub will provide the first-of-its-kind, centralized collection of analytical methods, guides, and technical information focused specifically toward laboratorians, researchers, scientists, incident commanders and field response personnel in the radiological field. Information available on this new website covers topics related to food, clinical, and environmental samples. The Rad Lab Hub currently includes 150 different resources under the following categories:

- **Analytical methods** - rapid radioanalytical methods for selected radionuclides applicable to the intermediate and recovery phases of a nuclear or radiological incident requiring integrated laboratory response
- **Operational guides** - provide planning and technical information for laboratories to effectively
  - Convert from normal to emergency response operations
  - Establish emergency response methods (i.e., perform method validation)
  - Contamination control
  - Conduct screening techniques on sample receipt
  - Prioritize analysis of samples
  - Ship radioactive samples
  - Segregate laboratory radioactive waste
- **Training, reference, or educational documents** - self-paced training modules, and information to other available resources
- **Documentary standards**
- **Calibration, traceability, or physical standards**
- **Tools** - available automated measurement-modeling and calculation tools to provide information such as estimating the count times
- **Lessons learned** - provides observations of areas for improvement



Screenshot of the ICLN Rad Lab Subgroup's new website

The link to the Rad Lab Hub is **coming soon!** [Look on www.ICLN.org](http://www.ICLN.org) under the Resources menu.

The Rad Lab Hub is intended to be dynamic and continuously growing as new information and resources are identified. If you have information to add to the collection, please contact John Griggs ([griggs.john@epa.gov](mailto:griggs.john@epa.gov)) or Marie Socha ([mariesochoa@shrrconsulting.com](mailto:mariesochoa@shrrconsulting.com)).

## ICLN BioRad TTX and BioRad2 Live Sample Exercises Concluded

In June 2022, the ICLN conducted a tabletop exercise based on a scenario involving simultaneous wide area release of biological and radiological agents. All goals were met during this exercise with the exception of outlining the flow of samples through the laboratory system. Due to the likely presence of both agents in most samples, the planning team was challenged to project how individual laboratories would approach the processing, handling, and analysis of potentially mixed-agent samples (e.g., samples with both biological and radiological agents in them).

To address this issue, the ICLN initiated a live sample exercise which served as a conduit to solicit lab analyst expertise and feedback in addressing how such mixed agent (bio/rad) samples would be processed through their labs. Non-hazardous surrogates for the agents employed in the TTX scenario were used in samples prepared and shipped to participating labs in January 2023. The samples, which were “blind” to analysts, mimicked environmental swabs, environmental water samples, or human clinical urine samples. A total of thirteen labs across the Environmental Response Lab Network (ERLN), Food Emergency Response Network (FERN), National Animal Health Lab Network (NAHLN), and CDC participated in analysis of the samples. Laboratories submitted their results to their sponsoring networks in accordance with the target dates for sample analysis completion. The networks submitted the aggregate results from their labs to the ICLN Data Exchange Utility (DEU), which permits the merging of data from multiple networks into a searchable, common-format database.

In the aggregate of all samples, biological samples were determined with an accuracy of 100%, while analysis of radiological samples reflected a 95% accuracy based on quantitative concentration determinations compared to known prepared concentrations. The process of uploading data to the DEU initially revealed a minor coding issue in the alignment of network data formats with the ICLN Minimum Data Elements format. This misalignment was readily adjusted, permitting a smooth collection of data into the DEU. This was the first test of the DEU after a major update and reflects positively on its use going forward.

Virtually all labs provided input to the issue of safely handling potentially mixed agent (biological and radiological) samples in their labs. A flow chart outlining the common elements in the labs’ individual approaches to handling such samples has been prepared from the charts developed for the individual labs. A guidance document on the handling and analysis of mixed agent samples is being prepared as a key outcome of the exercise. Additional guidance is being formulated, at the request of participating labs, for such issues as decontamination and proper waste handling and disposal for materials not normally processed in a lab. This successful exercise serves as a prototype for addressing future issues that require direct access to laboratory analysts.

### Samples for the exercise were of four types:

- The biological samples consisted of *inactivated* SARS-COV-2 virus on swabs in Primestore transport medium or in water.
- The radiological samples for the exercise consisted of natural uranium in water at permissible drinking water concentrations.
- A set of samples consisting of brain heart infusion (BHI) broth were employed as a stand-in for surface samples acquired at an agricultural facility in post-decontamination survey.
- The Centers for Disease Control and Prevention (CDC) Radiation Analytical Toxicology Laboratory prepared a set of urine samples spiked with uranium for the CDC Elemental Analysis Lab to analyze.



CDC scientist prepares an experiment inside of a class II biological safety cabinet (BSC).