

**Emergency Preparedness Resource Guide**

**for Laboratories**

**Introduction**

Logo goes here

It is essential for laboratories to quickly ramp up when preparing for emergency response. This resource guide will cover available resources for biological, chemical, and radiological emergencies for laboratories to reference during an emergency. It can also help train new laboratory professionals hired to support emergency responses. This resource guide contains links to eLearning, instructor-led courses, job aids, publications, recorded webinars, reference guides, and virtual reality training. Updates will be reviewed annually.

An appendix lists full URL website addresses for printing purposes.

## **Disclaimer**

Add organization disclaimer here.

**Table of Contents**

**Biological Resources**

eLearning: Basic Molecular Biology Series………………………………………………………………………………….[7](#eLearning_Basic_Mol)

eLearning: Biosafety: Avoiding Laboratory Acquired Infections (LAI)………………………………….……..[7](#eLearning_LAI)

eLearning: Biosecurity for Clinical Laboratories……………………………………………………….………………...[7](#eLearning_Biosecurity)

eLearning: Fundamentals of Centrifuge Safety………………………………………………………….……………….[8](#eLearning_Centrifuge)

eLearning: Fundamentals of Personal Protective Equipment (PPE) in Clinical Laboratories……....[8](#eLearning_PPE)

eLearning: Fundamentals of Working Safely in a Biological Safety Cabinet…………….…………….……[8](#eLearning_BSC)

eLearning: Introduction to Laboratory Risk Management (LRM)………………………………………………..[9](#eLearning_LRM)

eLearning: Microbiology Series………………………………………………………………………………………………….[9](#eLearning_Micro)

eLearning: Packing and Shipping Dangerous Goods: What the Laboratory Staff Must Know……..[9](#eLearning_PackShip)

Instructor-Led: Biological Agent Identification and Counterterrorism……………………………………...[10](#Instructor_Lead_BAIT)

Instructor-Led: Field Identification of Biological Warfare Agents……………………………..……….……..[10](#Instructor_Lead_FIBWA)

Job Aid: Sensitivity and Specificity for Clinical Laboratory Testing…………………………………………….[10](#Job_Aid_SenitivitySpecificity)

Job Aid: Individualized Quality Control Plan (IQCP) ……………………………………………………………..….[11](#Job_Aid_IQCP)

Job Aid: Provider-Performed Microscopy (PPM) Procedures…………………………………….……….…….[11](#Job_Aid_PPM)

Job Aid: Ready? Set? Test! Patient Testing is Important. Get the Right Results...........................[12](#Job_Aid_Ready_Set_Test)

Job Aid: Specimen Storage and Shipping Guidance………………………………………………………………….[12](#Job_Aid_Specimen_Storage_Shipping)

Job Aid: To Test or Not to Test?....................................................................................................[13](#Job_Aid_To_Test_Or_Not)

Presentation Slides: Blood Borne Pathogen Training...................................................................[13](#Presentation_Slides_BBP)

Publication: Good Laboratory Practices for Waived Testing Sites…………………..……………….…..…..[13](#Publication_MMWR_Good_Lab_Practices)

Webinar Recording: The Laboratory Risk Assessment Cycle…………………………………………….…..….[14](#Webinar_Recording_LRAC)

Webinar Recording: Respirator Fit 101 Intro to Quantitative Fit Testing………………...…………...….[14](#Webinar_Recording_Respirator_Fit)

Virtual Reality: Biosafety Cabinet Edition………………………………………………………………………….……..[14](#VR_BSC)

Virtual Reality: Personal Protective Equipment (PPE) Edition………………………………….……………….[15](#VR_PPE)

**Chemical Resources**

eLearning: Fundamentals of Chemical Fume Hood Safety Training…………………………….….……..…[17](#eLearning_Chem_Fume_Hood)

eLearning: Introduction to Chemical Agents……………………………………………………….......................[17](#eLearning_Intro_Chem_Agents)

Job Aid: CDC Specimen-Collection Protocol for a Chemical-Exposure Incident………….…………..…[17](#Job_Aid_Specimen_Collection_Chem_Exp)

Presentation Slides: Chemical Terrorism Program - Packaging and Shipping of Blood and Urine Samples ………………………………………………………………………………………………………………………………..…[18](#Presentation_Slides_Chem_Pack_Ship)

**Radiological Resources**

eLearning: Radiation Emergency Training for Poison Center and Public Health Professionals….[20](#eLearning_Radiation_Emergency)

Job Aid: CDC Specimen Collection Protocol for a Radiological Incident………………………..……..…..[20](#Job_Aid_Specimen_Collection_Radiogical)

Publication: A Possible Approach to Large-Scale Laboratory Testing for Acute Radiation Sickness after a Nuclear Detonation……………………………………………………………..……………………………………….[21](#Publication_Approach_Lab_Radiation)

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Air……………………….………………………………………………………………….[21](#Reference_Guide_Radiological_Lab_Guide)

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Soil……………………….…………………………………………………………………[22](#Reference_Guide_Rad_Soil)

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Water……………………….…………………………………………………………….[22](#Reference_Guide_Rad_Water)

**Appendix**

Appendix: Website URL Addresses…………………………………………………………………………………………..[23](#Appendix)



**Biological Resources**

**eLearning: Basic Molecular Biology Series**

*Centers for Disease Control and Prevention (CDC)*

The Basic Molecular Biology Series provides online self-study courses for public health and clinical laboratory professionals. Topics covered include scientific background for molecular diagnosis, the principles of molecular biology laboratory practice, and common methods. The Basic Molecular Biology Series includes five courses: Basic Science, Laboratory Practice, Nucleic Acid Extraction, and PCR and Real-Time PCR.

**Registration Information**

[**Basic Molecular Biology eLearning Series | Lab Training | CDC**](https://www.cdc.gov/lab-training/php/courses/basic-molecular-biology-elearning-series.html?CDC_AAref_Val=https://www.cdc.gov/labtraining/training-courses/basic-molecular-biology/index.html)

**eLearning: Biosafety: Avoiding Laboratory Acquired Infections (LAI)**

# *Institute for Public Health Practice at the University of Iowa*

# *State Hygienic Laboratory at the University of Iowa*

This online self-study course provides an overview of laboratory acquired infections. This course is intended for laboratory professionals who handle biological and microbiological samples in clinical, reference, public health, animal, research or teaching laboratories.

**Registration Information**

[Biosafety: Avoiding Laboratory Acquired Infections (LAI) | Prepare Iowa](https://prepareiowa.training-source.org/training/courses/Biosafety%3A%20Avoiding%20Lab%20Acquired%20Infections%20%28LAI%29/detail/)

For questions, please contact: [help@training-source.org](mailto:help@training-source.org)

# eLearning: Biosecurity for Clinical Laboratories

# *Institute for Public Health Practice at the University of Iowa*

This online self-study course provides an overview of biosecurity for clinical laboratories. This course is for clinical laboratory professionals who want to improve their knowledge of biosecurity practices that protect against unauthorized access, loss, theft, misuse, diversion, or intentional release of dangerous biological materials.

**Registration Information**

[Biosecurity for Clinical Laboratories | Prepare Iowa](https://prepareiowa.training-source.org/training/courses/Biosecurity%20for%20Clinical%20Laboratories/detail)

For questions, please contact: [help@training-source.org](mailto:help@training-source.org)

**eLearning: Fundamentals of Centrifuge Safety**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides an overview of the safe use of centrifuges. Topics covered include major parts of a centrifuge, types of centrifuges, potential hazards, how to work safely with a centrifuge, and what to do if there is an emergency.

**Registration Information**

[Fundamentals of Centrifuge Safety | OneLab REACH](https://reach.cdc.gov/course/fundamentals-centrifuge-safety)

**eLearning: Fundamentals of Personal Protective Equipment (PPE) in Clinical Laboratories**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides an overview of personal protective equipment (PPE) in clinical laboratories. This course is designed to assist clinical and public health laboratory professionals with applying risk management strategies to identify hazards, assess, and select appropriate personal protective equipment (PPE) options.

**Registration Information**

[Fundamentals of Personal Protective Equipment (PPE) in Clinical Laboratories | OneLab REACH](https://reach.cdc.gov/course/fundamentals-personal-protective-equipment-ppe-clinical-laboratories)

**eLearning: Fundamentals of Working Safely in a Biological Safety Cabinet**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides an overview of best practices for working within a biological safety cabinet (BSC).  Topics covered include major parts of a BSC, how a BSC works, how to work safely inside a BSC, and what to do if there is an emergency while working in a BSC.

**Registration Information**

[Fundamentals of Working Safely in a Biological Safety Cabinet (BSC) | OneLab REACH](https://reach.cdc.gov/course/fundamentals-working-safely-biological-safety-cabinet-bsc)

**eLearning: Introduction to Laboratory Risk Management (LRM)**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides details on applying risk management principles and briefly describes related practices to emphasize the importance of risk management in laboratory settings. Topics covered include risk management goals, terminology, processes, and associated activities.

**Registration Information**

[Introduction to Laboratory Risk Management (LRM) | OneLab REACH](https://reach.cdc.gov/course/introduction-laboratory-risk-management-lrm)

**eLearning: Microbiology Series**

*Centers for Disease Control and Prevention (CDC)*

The Microbiology Series provides online self-study courses for public health laboratory professionals. Topics covered include basic microbiology laboratory skills and procedures to identify microorganisms from clinical specimens. The Microbiology Series includes five courses: Basic Microscopy, Routine Microscopy Procedures, Basic Culture Media, Biochemicals and Gram Positive Organism ID, and Biochemicals and Gram Negative Organism ID.

**Registration Information**

[*Microbiology Series | Lab Training | CDC*](https://www.cdc.gov/lab-training/php/courses/microbiology-series.html?CDC_AAref_Val=https://www.cdc.gov/labtraining/training-courses/basic-microbiology/index.html)

**eLearning: Packing and Shipping Dangerous Goods: What the Laboratory Staff Must Know**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides training on packing and shipping Division 6.2 infectious substances and dry ice. It does not provide certification for transport of dangerous goods. Individuals can only be certified by their employer.

**Registration Information**

[Packing and Shipping Dangerous Goods: What the Laboratory Staff Must Know | OneLab REACH](https://reach.cdc.gov/course/packing-and-shipping-dangerous-goods-what-laboratory-staff-must-know)

**Instructor-Led: Biological Agent Identification and Counterterrorism Training**

# *United States Army Medical Research Institute of Infectious Diseases (USAMRIID)*

The Biological Agent Identification and Counterterrorism Training (BAIT) at Fort Detrick provides realistic training scenarios, facilities, and subject matter experts to increase the preparedness of biological threat event responders. Travel may be required for this training.

**More Information**

For questions, please contact: 301-619-4673

**Instructor-Led: Field Identification of Biological Warfare Agents**  
*United States Army Medical Research Institute of Infectious Diseases (USAMRIID)*

The Field Identification of Biological Warfare Agents (FIBWA) programs at Fort Detrick provide training to support biological warfare detection and bio-surveillance missions. Travel may be required for this training.

**More Information**

[[USAMRIID: Field Identification of Biological Warfare Agents (FIBWA)](Field%20Identification%20of%20Biological%20Warfare%20Agents%20(FIBWA))](https://usamriid.health.mil/index.cfm/training/fibwa)

For questions, please contact: 301-619-4738 ext. 8656

# Job Aid: Diagnostic Sensitivity and Specificity for Clinical Laboratory Testing

*Centers for Disease Control and Prevention (CDC)*

# This job aid reviews basic information about diagnostic sensitivity and specificity for clinical laboratory testing. Clinicians and those performing point-of-care tests need to understand the basics of how clinical performance characteristics of laboratory tests help healthcare providers select appropriate tests for clinical needs and interpret test results.

**More Information**

# [Diagnostic Sensitivity and Specificity for Clinical Laboratory Testing | OneLab REACH](https://reach.cdc.gov/jobaid/diagnostic-sensitivity-and-specificity-clinical-laboratory-testing)

# 

# Job Aid: Individualized Quality Control Plan (IQCP)

*Centers for Disease Control and Prevention (CDC)*

This step-by-step instructional guide walks readers through the process of developing an Individualized Quality Control Plan (IQCP) for one or more test systems.

**More Information**

[individualized-quality-control-plan-guide-iqcp.pdf](https://www.cdc.gov/lab-quality/docs/developing-iqcp.pdf)

Additional Resources:

[Individualized Quality Control Plan | Laboratory Quality | CDC](https://www.cdc.gov/lab-quality/php/iqcp/)

For questions, please contact: [LabExcellence@cms.hhs.gov](mailto:LabExcellence@cms.hhs.gov)

# Job Aid: Provider-Performed Microscopy (PPM) Procedures

*Centers for Disease Control and Prevention (CDC)*

This booklet describes recommended practices for physicians, mid-level practitioners, and dentists who perform patient testing under a Clinical Laboratory Improvement Amendments (CLIA) Certificate for Provider Performed Microscopy (PPM) procedures.

**More Information**

[Provider-Performed Microscopy Procedures: A Focus on Quality Practices](https://www.cdc.gov/lab-quality/docs/PMP_Booklet_7252019.pdf)

eLearning:

[Clinical Laboratory Improvement Amendments (CLIA) and Provider Performed Microscopy (PPM) Procedures: An Introduction. | OneLab REACH](https://reach.cdc.gov/course/clinical-laboratory-improvement-amendments-clia-and-provider-performed-microscopy-ppm)

For questions, please contact: [PPMP@cdc.gov](mailto:PPMP@cdc.gov)

# Job Aid: Ready? Set? Test! Patient Testing is Important. Get the Right Results.

*Centers for Disease Control and Prevention (CDC)*

This booklet describes recommended practices for physicians, nurses, medical assistants, pharmacists, and others who perform patient testing under a Clinical Laboratory Improvement Amendments (CLIA) Certificate of Waiver.

**More Information**

[Ready? Set? Test!](https://www.cdc.gov/lab-quality/docs/waived-tests/readysettest_2024_final.pdf)

eLearning:

[Ready? Set? Test! Patient Testing Is Important. Get the Right Results. | OneLab REACH](https://reach.cdc.gov/course/ready-set-test-patient-testing-important-get-right-results)

Additional Resources:

[Waived Tests | Laboratory Quality | CDC](https://www.cdc.gov/lab-quality/php/waived-tests/)

For questions, please contact: [WaivedTesting@cdc.gov](mailto:WaivedTesting@cdc.gov)

**Job Aid: Specimen Storage and Shipping Guidance**

*Centers for Disease Control and Prevention (CDC)*

This job aid defines the criteria to properly ship biological specimens to the Centers for Disease Control and Prevention (CDC). Failure to satisfy these criteria will result in the rejection of submitted specimens by CDC.

**More Information**

# [Specimen Storage and Shipping Guidance | CDC](https://www.cdc.gov/laboratory/specimen-submission/pdf/Specimen-Packing-and-Shipping-Guidance-Infectious-Diseases-Laboratories.pdf)

# Job Aid: To Test or Not to Test?

*Centers for Disease Control and Prevention (CDC)*

This booklet describes considerations and preparations needed prior to performing waived testing and may assist those who want to implement and oversee waived testing or offer a new test under a Clinical Laboratory Improvement Amendments (CLIA) Certificate of Waiver.

**More Information**

[To test or not to test? Considerations for waived testing](https://www.cdc.gov/lab-quality/docs/TTorNTT_2024.pdf)

Additional Resources: [Waived Tests | Laboratory Quality | CDC](https://www.cdc.gov/lab-quality/php/waived-tests/)

For questions, please contact: [WaivedTesting@cdc.gov](mailto:WaivedTesting@cdc.gov)

**Presentation Slides: Bloodborne Pathogen Training**

*Eau Claire City-County Health Department*

This online self-study presentation is an annual compliance training module for all health department staff at risk of coming in contact with bloodborne pathogens.

**Registration Information**

[Bloodborne Pathogens Training | CDC TRAIN](https://www.train.org/cdctrain/course/1047781/)

**Publication: Good Laboratory Practices for Waived Testing Sites**

*Centers for Disease Control and Prevention (CDC)*

*Journal: Morbidity and Mortality Weekly Report (MMWR)*

This report contains survey findings from testing sites holding a Certificate of Waiver under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) and recommendations for promoting quality testing.

**More Information**

[Good Laboratory Practices for Waived Testing Sites | CDC](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5413a1.htm)

**Webinar Recording: The Laboratory Risk Assessment Cycle**

*Association of Public Health Laboratories (APHL)*

This webinar provides attendees with a basic understanding of the risk assessment process to minimize laboratory risks. This webinar recording is available until Friday, December 9, 2022EST.

**Registration Information**

[The Laboratory Risk Assessment Cycle | APHL](https://web.aphl.org/events/Risk-Assessments-in-Our-Everyday-Life-588-636-21--4260/details)

**Webinar Recording: Respirator Fit 101 Intro to Quantitative Fit Testing**

*TSI Incorporated*

This webinar provides a basic understanding of quantitative fit testing principles and techniques. This course answers basic questions like, What do fit tests test? Why is fit testing important? Who needs to be tested? How should it be done?

**Registration Information**

[Respirator Fit 101 Intro to Quantitative Fit Testing | CDC TRAIN](https://www.train.org/cdctrain/course/1091016/)

# Virtual Reality: Biosafety Cabinet Edition

*Centers for Disease Control and Prevention (CDC)*

This course enables learners to apply knowledge and practice setting up a BSC in a virtual laboratory.

**Registration Information**

[LabTrainingVR: Biological Safety Cabinet Edition | OneLab REACH](https://reach.cdc.gov/course/labtrainingvr-biological-safety-cabinet-edition)

**Virtual Reality: Personal Protective Equipment (PPE) Edition**

*Centers for Disease Control and Prevention (CDC)*

This basic-level course is designed to enhance laboratory scientists’ ability to identify how personal protective equipment (PPE) can help reduce the risk of exposure to hazardous materials, prevent transmission of infectious agents, and demonstrate how to don and doff PPE in the correct order to minimize contamination and potential exposures.

**Registration Information**

[LabTrainingVR: Personal Protective Equipment (PPE) Edition | OneLab REACH](https://reach.cdc.gov/course/labtrainingvr-personal-protective-equipment-ppe-edition)



**Chemical Resources**

**eLearning: Fundamentals of Chemical Fume Hood Safety Training**

*Centers for Disease Control and Prevention (CDC)*

This online self-study course provides an essential understanding of the major components of a chemical fume hood and proper practices for its safe and effective operation. Topics include the major components and types of fume hoods and their monitors, maintaining proper airflow, daily use protocols and good fume hood work practices, and what to do if there is an emergency.

**Registration Information**

[Fundamentals of Chemical Fume Hood Safety | OneLab REACH](https://reach.cdc.gov/course/fundamentals-chemical-fume-hood-safety)

**eLearning: Introduction to Chemical Agents**

*Institute for Public Health*

The online self-study course provides a brief overview of the history of chemical agent use, chemical agent characteristics, routes of exposure, routes of dissemination, and chemical agent categories. Chemical agent exposure identification and decontamination for healthcare professionals is also discussed.

**Registration Information**

[Introduction to Chemical Agents | CDC TRAIN](https://www.train.org/cdctrain/course/1009766/)

# Job Aid: CDC Specimen-Collection Protocol for a Chemical-Exposure Incident

*Centers for Disease Control and Prevention (CDC)*

This job aid provides step-by-step instructions for collecting a specimen from a person after a chemical exposure incident.

**More Information**

[Collecting and Labeling Specimens from People with Possible Exposure to Chemical Agents | The Laboratory Response Network Partners in Preparedness | CDC](https://www.cdc.gov/laboratory-response-network/php/chemical/specimen-collection.html)

Additional Resources: [Laboratory Information for Chemical Emergencies | CDC](https://emergency.cdc.gov/chemical/lab.asp)

# 

# Presentation Slides: Chemical Terrorism Program - Packaging and Shipping of Blood and Urine Samples *State Hygienic Laboratory at the University of Iowa*

This presentation provides information about the packaging and shipping of blood and urine samples after an act of chemical terrorism.

**More Information**

[Chemical Terrorism PowerPoint Presentation](https://services.shl.uiowa.edu/edtrain/sentlabtrain/Presentation%20-%20Chemical%20Terrorism_Packaging%20Shipping.pdf)

****

**Radiological Resources**

# 

# eLearning: Radiation Emergency Training for Poison Center and Public Health Professionals

# *Centers for Disease Control and Prevention (CDC)*

# This online self-study course is designed to prepare poison control staff to react appropriately and share vital information in the unlikely event of a radiation emergency. This training will consist of five modules including: Types of Radiation, Protective Measures, Exposure and Contamination, Decontamination and Medical Countermeasures, and Risk Communication.

# More Information

# [Radiation Emergency Training for Poison Center and Public Health Professionals I CDC](https://www.cdc.gov/radiationtraining/rad-toolkit/index.html)

# Additional Resources:

# [Clinical Guidance and Resources for Professionals | Radiation Emergencies | CDC](https://www.cdc.gov/radiation-emergencies/hcp/clinical-guidance/)

# Job Aid: CDC Specimen Collection Protocol for a Radiological Incident

# *Centers for Disease Control and Prevention (CDC)*

This job aid provides step-by-step instructions for collecting a specimen from a person after a radiological exposure incident.

# More Information

# [specimen-collection-protocol-for-radiologic-incident-CDC](https://www.cdc.gov/radiation-emergencies/media/pdfs/2024/04/urinecollectionflowchart.pdf)

# Additional Resources:

# [Clinical Guidance and Resources for Professionals | Radiation Emergencies | CDC](https://www.cdc.gov/radiation-emergencies/hcp/clinical-guidance/index.html)

# For questions, please contact: [NCEHsamplelogistics@cdc.gov](mailto:NCEHsamplelogistics@cdc.gov), 770-488-7227

# Publication: A Possible Approach to Large-Scale Laboratory Testing for Acute Radiation Sickness After a Nuclear Detonation

# *John Hopkins Center for Health Security*

*Journal: Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*

This document describes possible approaches to identify patients at risk for acute radiation sickness after a nuclear detonation**.**

**More Information**

# [A possible approach to large-scale laboratory testing for acute radiation sickness after a nuclear detonation - PubMed](https://pubmed.ncbi.nlm.nih.gov/21988186/)

# Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Air

*Environmental Protection Agency (EPA)*

The document describes the likely analytical decision paths that would be made by personnel at a radioanalytical laboratory following a radiological or nuclear incident, such as that caused by a terrorist attack. This document presents three radioanalytical scenarios, responding to two different public health questions, that address the immediate need to determine the concentration of known or unknown radionuclides in air particulate samples.

**More Information**

[Radiological Laboratory Sample Analysis Guide for Incidents of National Significance - Radionuclides in Air | EPA](https://www.epa.gov/sites/default/files/2015-05/documents/402-r-09-007-air-guide.pdf)

**Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Soil**

*Environmental Protection Agency (EPA)*

The document describes the likely analytical decision paths that would be required by personnel at a radioanalytical laboratory following a radiological or nuclear incident, such as that caused by a terrorist attack. Three radioanalytical scenarios, responding to two different public health questions, address the immediate need to determine the concentration of known or unknown radionuclides in water.

**More Information**

[Radiological Laboratory Sample Analysis Guide for Incidents of National Significance - Radionuclides in Soil | EPA](https://www.epa.gov/sites/default/files/2015-05/documents/402-r-12-006_soil_guide_sept_2012.pdf)

**Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Water**

*Environmental Protection Agency (EPA)*

The document describes the likely analytical decision paths that would be required by personnel at a radioanalytical laboratory following a radiological or nuclear incident, such as that caused by a terrorist attack. Three radioanalytical scenarios, responding to two different public health questions, address the immediate need to determine the concentration of known or unknown radionuclides in water.

**More Information**

[Radiological Laboratory Sample Analysis Guide for Incidents of National Significance - Radionuclides in Water | EPA](https://www.epa.gov/sites/default/files/2015-05/documents/402-r-07-007_water_guide.pdf)

**Appendix: Website URL Addresses**

eLearning: Basic Molecular Biology Series………………………………………………………………………………….[7](#eLearning_Basic_Mol) [https://www.cdc.gov/-basic-molecular-biology-elearning-series-lab-training.html](https://www.cdc.gov/lab-training/php/courses/basic-molecular-biology-elearning-series.html)

eLearning: Biosafety: Avoiding Laboratory Acquired Infections (LAI)………………………………….……..[7](#eLearning_LAI)

[https://Biosafety-Avoiding-Lab-Acquired-Infections-LAI/](https://prepareiowa.training-source.org/training/courses/Biosafety%3A%20Avoiding%20Lab%20Acquired%20Infections%20%28LAI%29/detail/)

eLearning: Biosecurity for Clinical Laboratories……………………………………………………….………………...[7](#eLearning_Biosecurity)

[https://Biosecurity-for-Clinical-Laboratories/](https://prepareiowa.training-source.org/training/courses/Biosecurity%20for%20Clinical%20Laboratories/detail)

eLearning: Fundamentals of Centrifuge Safety………………………………………………………….……………….[8](#eLearning_Centrifuge)

<https://reach.cdc.gov/course/fundamentals-centrifuge-safety>

eLearning: Fundamentals of Personal Protective Equipment (PPE) in Clinical Laboratories……....[8](#eLearning_PPE)

<https://reach.cdc.gov/course/fundamentals-personal-protective-equipment-ppe-clinical-laboratories>

eLearning: Fundamentals of Working Safely in a Biological Safety Cabinet…………………………..……[8](#eLearning_BSC)

<https://reach.cdc.gov/course/fundamentals-working-safely-biological-safety-cabinet-bsc>

eLearning: Introduction to Laboratory Risk Management (LRM)………………………………………………..[9](#eLearning_LRM)

<https://reach.cdc.gov/course/introduction-laboratory-risk-management-lrm>

eLearning: Microbiology Series………………………………………………………………………………………………….[9](#eLearning_Micro)

<https://www.cdc.gov/lab-training/php/courses/microbiology-series.html>

eLearning: Packing and Shipping Dangerous Goods: What the Laboratory Staff Must Know……..[9](#eLearning_PackShip)

<https://reach.cdc.gov/course/packing-and-shipping-dangerous-goods-what-laboratory-staff-must-know>

Instructor Lead: Field Identification of Biological Warfare Agents……………………………..…………....[10](#Instructor_Lead_FIBWA)

[https://field-indentification-of-biological-warfare-agents/training/](https://usamriid.health.mil/index.cfm/training/fibwa)

Job Aid: Sensitivity and Specificity for Clinical Laboratory Testing…………………………………………….[10](#Job_Aid_SenitivitySpecificity)

<https://reach.cdc.gov/jobaid/diagnostic-sensitivity-and-specificity-clinical-laboratory-testing>

Job Aid: Individualized Quality Control Plan (IQCP) …………………………………………………………………[11](#Job_Aid_IQCP)

[https://www.cdc.gov/about-laboratory-quality.html](https://www.cdc.gov/lab-quality/php/about/index.html)

[developing-individual-quality-control-plan.pdf](https://www.cdc.gov/lab-quality/docs/developing-iqcp.pdf)

Job Aid: Provider-Performed Microscopy (PPM) Procedures…………………………………….…………….[11](#Job_Aid_PPM)

<https://www.cdc.gov/lab-quality/php/ppmp/index.html>

[https://reach.cdc.gov/course/clinical-laboratory-improvement-amendments-clia-and-provider-performed-microscopy-procedures](https://reach.cdc.gov/course/clinical-laboratory-improvement-amendments-clia-and-provider-performed-microscopy-ppm)

Job Aid: Ready? Set? Test! Patient Testing is Important. Get the Right Results……………………….[12](#Job_Aid_Ready_Set_Test)

[Ready? Set? Test!](https://www.cdc.gov/lab-quality/docs/waived-tests/ReadySetTest_2024_Final.pdf)

<https://reach.cdc.gov/course/ready-set-test-patient-testing-important-get-right-results>

[https://www.cdc.gov/waived-tests-laboratory-quality/](https://www.cdc.gov/lab-quality/php/waived-tests/)

Job Aid: Specimen Storage and Shipping Guidance………………………………………………………………….[12](#Job_Aid_Specimen_Storage_Shipping)

<https://reach.cdc.gov/jobaid/specimen-packing-and-shipping-guidance>

Job Aid: To Test or Not to Test?....................................................................................................[13](#Job_Aid_To_Test_Or_Not)

[https://to-test-or-not-to-test-considerations-for-waived-testing](https://stacks.cdc.gov/view/cdc/21262)

[https://www.cdc.gov/waived-tests-laboratory-quality/](https://www.cdc.gov/lab-quality/php/waived-tests/)

Presentation Slides: Blood Borne Pathogen Training...................................................................[13](#Presentation_Slides_BBP)

[https://www.blood-borne-pathogen-training](https://www.train.org/cdctrain/course/1047781/)

Publication: Good Laboratory Practice for Waived Testing Sites……………………………..…………..…..[13](#Publication_MMWR_Good_Lab_Practices)

[https://www.good-laboratory-practice-for-waived-testing-sites.htm](https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5413a1.htm)

Webinar Recording: The Laboratory Risk Assessment Cycle…………………………………………….…..….[14](#Webinar_Recording_LRAC)

[https://The-laboratory-risk-assessments-cycle](https://web.aphl.org/events/Risk-Assessments-in-Our-Everyday-Life-588-636-21--4260/details)

Webinar Recording: Respirator Fit 101 Intro to Quantitative Fit Testing………………...…………...….[14](#Webinar_Recording_Respirator_Fit)

<https://www.osha.gov/video/respiratory-protection/fit-testing>

Virtual Reality: Biosafety Cabinet Edition………………………………………………………………………….……..[14](#VR_BSC)

<https://reach.cdc.gov/course/labtrainingvr-biological-safety-cabinet-edition>

Virtual Reality: Personal Protective Equipment (PPE) Edition………………………………….……………….[15](#VR_PPE) <https://reach.cdc.gov/course/labtrainingvr-personal-protective-equipment-ppe-edition>

eLearning: Fundamentals of Chemical Fume Hood Safety Training…………………………….….……..…[17](#eLearning_Chem_Fume_Hood)

<https://reach.cdc.gov/course/fundamentals-chemical-fume-hood-safety>

eLearning: Introduction to Chemical Agents……………………………………………………….......................[17](#eLearning_Intro_Chem_Agents)

[https://www.train.org/cdctrain/course/intro-to-chemical-agents/](https://www.train.org/cdctrain/course/1009766/)

Job Aid: CDC Specimen-Collection Protocol for a Chemical-Exposure Incident………….…………..…[17](#Job_Aid_Specimen_Collection_Chem_Exp)

<https://www.cdc.gov/laboratory-response-network/php/chemical/specimen-collection.html>

[https://cdc.gov/about-chemical-emergencies-asp](https://emergency.cdc.gov/chemical/lab.asp)

Presentation Slides: Chemical Terrorism Program - Packaging and Shipping of Blood and Urine Samples ………………………………………………………………………………………………………………………………..…[18](#Presentation_Slides_Chem_Pack_Ship)

[https://chemical-terrorism-program-packaging-shipping-of-blood-and-urine-samples.pdf](https://services.shl.uiowa.edu/edtrain/sentlabtrain/Presentation%20-%20Chemical%20Terrorism_Packaging%20Shipping.pdf)

eLearning: Radiation Emergency Training for Poison Center and Public Health Professionals….[20](#eLearning_Radiation_Emergency)

[https://www.cdc.gov/radiation-emergency-training-for poison-center.html](https://www.cdc.gov/radiationtraining/rad-toolkit/index.html)

[https://www.cdc.gov/radiation-emergencies-public-health-professionals-training/](https://www.cdc.gov/radiation-emergencies/php/training/)

Job Aid: CDC Specimen Collection Protocol for a Radiological Incident………………………..……..…..[20](#Job_Aid_Specimen_Collection_Radiogical)

<https://www.cdc.gov/radiation-emergencies/index.html>

[https://radiation-emergencies-clinical-guidance-and-resources for-professionals/](https://www.cdc.gov/radiation-emergencies/hcp/clinical-guidance/)

Publication: A Possible Approach to Large-Scale Laboratory Testing for Acute Radiation Sickness after a Nuclear Detonation……………………………………………………………..……………………………………….[21](#Publication_Approach_Lab_Radiation)

[https://a-possible-approach-to-large-scale-lab-testing-for-acute-radiation-sickness/](https://pubmed.ncbi.nlm.nih.gov/21988186/)

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Air……………………….………………………………………………………………….[21](#Reference_Guide_Radiological_Lab_Guide)

[https://www.radiological-lab-sample-analysis-guide-for-incidents-of-national-significance-radionuclides-in-air.pdf](https://www.epa.gov/sites/default/files/2015-05/documents/402-r-09-007-air-guide.pdf)

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Soil……………………….…………………………………………………………………[22](#Reference_Guide_Rad_Soil)

<https://www.epa.gov/sites/default/files/2015-05/documents/402-r-12-006_soil_guide_sept_2012.pdf>

Reference Guide: Radiological Laboratory Sample Analysis Guide for Incidents of National Significance – Radionuclides in Water……………………….…………………………………………………………….[22](#Reference_Guide_Rad_Water)

[https://www.radiological-lab-sample-analysis-guide-for-incidents-of-national-significance-radionuclides-in-water-guide.pdf](https://www.epa.gov/sites/default/files/2015-05/documents/402-r-07-007_water_guide.pdf)