



Analysis. Answers. Action.

www.aphl.org

Cooperative Agreement Updates

Work to Support Human & Animal Food Testing
Laboratories

Robyn Randolph

Sr. Specialist, Food Laboratory Accreditation

Association of Public Health Laboratories (APHL)

AAFCO 2019 Midyear Meeting – Savannah, GA



Bridging the Gap

APHL is continuing the work started under the Associations CoAg through a two-year Bridge agreement with FDA.

ISO/IEC 17025
Accreditation
Resources

Accreditation
Consultant

GenomeTrakr
Trainings &
Meetings

*GOOD Test
Portions*
Laboratory
Trainings

eLEXNET and
Data Exchange





Continue providing resources for laboratories seeking to enhance their ISO/IEC 17025 accreditation scope

- Success stories





MINNESOTA'S COLLABORATION SOLVES RAW PET FOOD OUTBREAK



Various diet plans are all the rage these days, including Keto, vegan, Paleo, and more. People want to feed themselves and their families the very best, and that includes their four-legged friends. Raw pet food sales have been on the rise, driven in part by the assumption that it is healthier and more natural for animals to eat like they would in the wild. But pet owners may be overlooking the fact that many wild animals die of



ISO/IEC 17025 Accreditation Resources

- Success stories
- Gap analyses between 2005 & 2017 versions of ISO/IEC 17025
- Proficiency Testing Providers list (EPTIS database)
- Up-to-date accreditation resources available on APHL's website
(https://www.aphl.org/programs/food_safety/laboratory-accreditation/Pages/Accreditation-Resources.aspx)



ISO/IEC 17025 Accreditation Resources

- Success stories
- Gap analyses between 2005 & 2017 versions of ISO/IEC 17025
- Proficiency Testing Providers list (EPTIS database)
- Up-to-date accreditation resources available on APHL's website
- Newly revised Data Acceptance White Paper (January 2019)



Best Practices for Submission of Actionable Human and Animal Food Testing Data Generated in State and Local Laboratories



JANUARY 2019



Analysis. Answers. Action.

www.aphl.org

ISO/IEC 17025 Accreditation Resources

- Success stories
- Gap analyses between 2005 & 2017 versions of ISO/IEC 17025
- Proficiency Testing Providers list (EPTIS database)
- Adding resources to document repository
- Newly revised Data Acceptance White Paper (January 2019)
- PFP Laboratory Best Practices Manual and Compliance Checklist





Analysis. Answers. Action.

www.aphl.org



ISO/IEC 17025 Accreditation Resources

- Success stories
- Gap analyses between 2005 & 2017 versions of ISO/IEC 17025
- Proficiency Testing Providers list (EPTIS database)
- Adding resources to document repository
- Released third revision of Data Acceptance White Paper (January 2019)
- PFP Laboratory Best Practices Manual and Compliance Checklist





ISO/IEC 17025 Accreditation Resources

- Success stories
- Gap analyses between 2005 & 2017 versions of ISO/IEC 17025
- Proficiency Testing Providers list (EPTIS database)
- Adding resources to document repository
- Released third revision of Data Acceptance White Paper (January 2019)
- PFP Laboratory Best Practices Manual/ Compliance Checklist
- Lessons learned from first labs transitioning to ISO/IEC 17025:2017





Accreditation Consultant

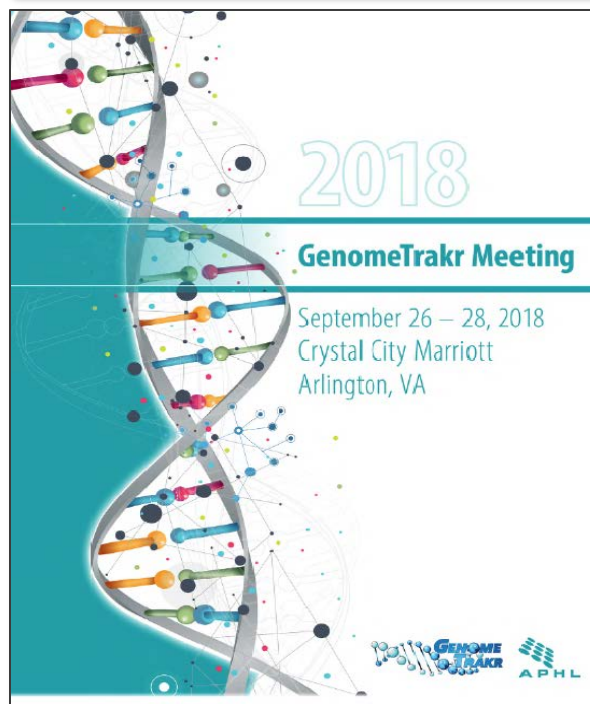
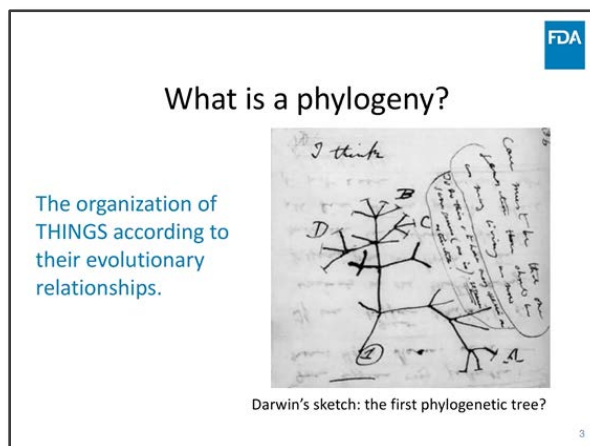
Working with ten laboratories:

- Hawaii Department of Health (Accredited!)
- Michigan Department of Health (Accredited!)
- New Hampshire Division of Public Health Services
- New Mexico Department of Health
- New Mexico State University
- Oklahoma Department of Agriculture
- Pennsylvania Department of Health
- South Dakota State University
- Tennessee Department of Health
- Washington Department of Health



GenomeTrakr Trainings & Meetings

- Assist FDA's GenomeTrakr with the development and delivery of bioinformatics training.
- Provide logistical support and assist with planning for annual in-person GenomeTrakr meetings





eLEXNET & Data Exchange

- Future of eLEXNET
- Laboratory concerns and challenges
- How to most effectively utilize the platform

- National Food Safety Data Exchange (NFSDX)








Supporting additional GOOD Test Portions laboratory trainings

- Supported development of a laboratory training course based on *GOOD Test Portions*
- Working with AAFCO to provide support for up to three additional *GOOD Test Portions* trainings
- If your laboratory is interested in hosting a training, contact Nancy Thiex (nancy.thiex@gmail.com)



Laboratory Framework

ifpti		Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018														FDA U.S. FOOD & DRUG ADMINISTRATION			
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis			
Supervisor / Manager	Conflict Resolution and Mediation		Incident Command System (ICS)		Negotiation		Risk Communication Introduction												
Expert (Program Specific)	Certificates & Certifications																		
	Animal Food		Human Food			Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food	Shellfish				
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Chemistry		Microbiology		Validation Methods				
Mid (Program Specific)	Certificates & Certifications																		
	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish			
	Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods						
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity	Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings		Method Evaluation and Selection		Root Cause Analysis	
	M1		M2		M3		M4		M5		M6		M7		M8		M9		M10
Entry (Program Specific)	Certificates & Certifications																		
	Animal Food		Environmental		Animal Health		Biosafety Level 3		Dairy Regulatory Programs		Select Agents		Shellfish		Environmental Conditions				
	EP8		EP9		EP10		EP11		EP12		EP13		EP14		EP15				
	Basic Chromatography		Basic Separation / Extraction Techniques		Basic Spectrometry		Basic Spectroscopy		Aseptic Techniques		Basic Foodborne Pathogens		Microbial Testing						
	EP1		EP2		EP3		EP4		EP5		EP6		EP7						
Entry	Accreditation / Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management	
	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	
© 2017 Last updated December 17, 2018		The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL														  			



Laboratory Framework

ifpti		Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018														FDA U.S. FOOD & DRUG ADMINISTRATION			
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis			
Supervisor / Manager	Conflict Resolution and Mediation		Incident Command System (ICS)		Negotiation		Risk Communication Introduction												
Expert (Program Specific)	Certificates & Certifications																		
	Animal Food		Human Food			Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food	Shellfish			Instructor Development	Project Management
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Chemistry		Microbiology		Validation Methods				
Mid (Program Specific)	Certificates & Certifications																		
	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish			
	Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods						
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity	Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings	Method Evaluation and Selection	Root Cause Analysis			
	M1		M2		M3		M4		M5	M6		M7		M8	M9	M10			
Entry (Program Specific)	Certificates & Certifications																		
	Animal Food		Environmental		Animal Health		Biosafety Level 3		Dairy Regulatory Programs		Select Agents		Shellfish		Environmental Conditions				
	EP8		EP9		EP10		EP11		EP12		EP13		EP14		EP15				
	Basic Chromatography		Basic Separation / Extraction Techniques			Basic Spectrometry		Basic Spectroscopy		Aseptic Techniques		Basic Foodborne Pathogens		Microbial Testing					
	CP1		CP2			CP3		CP4		CP5		CP6		CP7					
Entry	Accreditation/ Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management	
	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	

© 2017 Last updated December 17, 2018




The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL



Analysis. Answers. Action.

www.aphl.org

Laboratory Framework

ifpti		Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018														FDA U.S. FOOD & DRUG ADMINISTRATION				
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management	
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Conflict Resolution and Mediation	Incident Command System (ICS)	Negotiation	Risk Communication Introduction	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations			Risk Analysis (Management & Communication)
Supervisor / Manager	Conflict Resolution and Mediation		Incident Command System (ICS)		Negotiation		Risk Communication Introduction													
Expert (Program Specific)	Certificates & Certifications																			
Expert	Animal Food		Human Food		Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food	Shellfish	Chemistry	Microbiology	Validation Methods			
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Validation Methods									
Mid (Program Specific)	Certificates & Certifications																			
Mid (Program Specific)	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish	National Laboratory Networks Methods			
Mid (Program Specific)	Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods							
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity		Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings		Method Evaluation and Selection		Root Cause Analysis	
Mid	M1		M2		M3		M4		M5		M6		M7		M8		M9		M10	
Entry (Program Specific)	Certificates & Certifications																			
Entry (Program Specific)	Animal Food		Environmental		Animal Health		Biosafety Level 3		Dairy Regulatory Programs		Select Agents		Shellfish		Environmental Conditions					
Entry (Program Specific)	EP8		EP9		EP10		EP11		EP12		EP13		EP14		EP15					
Entry (Program Specific)	Basic Chromatography		Basic Separation / Extraction Techniques		Basic Spectrometry		Basic Spectroscopy		Aseptic Techniques		Basic Foodborne Pathogens		Microbial Testing							
Entry (Program Specific)	EP1		EP2		EP3		EP4		EP5		EP6		EP7							
Entry	Accreditation / Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management		
Entry	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18		
© 2017 Last updated December 17, 2018		The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL														  				



Laboratory Framework

ifpti		Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018														FDA U.S. FOOD & DRUG ADMINISTRATION				
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management	
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Conflict Resolution and Mediation	Incident Command System (ICS)	Negotiation	Risk Communication Introduction	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations			Risk Analysis (Management & Communication)
Supervisor / Manager	Advanced Chemistry		Advanced Microbiology		Conflict Resolution and Mediation	Incident Command System (ICS)	Negotiation	Risk Communication Introduction										Leadership / Executive Program	Organizational Culture	
Expert (Program Specific)	Animal Food		Human Food						Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food			Shellfish
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Chemistry		Microbiology		Instructor Development	Project Management				
Mid (Program Specific)	Certificates & Certifications																			
	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish	Instructor Development	Project Management		
Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods								
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity		Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings		Method Evaluation and Selection		Root Cause Analysis	
Entry (Program Specific)	Certificates & Certifications																			
	Animal Food		Environmental		Animal Health		Biosafety Level 3		Dairy Regulatory Programs		Select Agents		Shellfish		Environmental Conditions		Instructor Development	Project Management		
Basic Chromatography		Basic Separation / Extraction Techniques		Basic Spectrometry		Basic Spectroscopy		Aseptic Techniques		Basic Foodborne Pathogens		Microbial Testing								
Entry	Accreditation/ Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management		
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18			

© 2017 Last updated December 17, 2018




The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL



Analysis. Answers. Action.

www.aphl.org

Laboratory Framework




ifpti	Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018															FDA U.S. FOOD & DRUG ADMINISTRATION			
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis			
Supervisor / Manager	Conflict Resolution and Mediation		Incident Command System (ICS)		Negotiation		Risk Communication Introduction												
Expert (Program Specific)	Certificates & Certifications																		
Expert	Animal Food		Human Food			Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food	Shellfish	Chemistry	Microbiology		
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Validation Methods								
Mid (Program Specific)	Certificates & Certifications																		
Mid (Program Specific)	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish			
Mid (Program Specific)	Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods						
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking		Evidentiary Integrity	Human and Animal Food Incident Response		Laboratory Networks and Partnerships		Legal Proceedings	Method Evaluation and Selection	Root Cause Analysis			
Mid	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10									
Entry (Program Specific)	Certificates & Certifications																		
Entry (Program Specific)	Animal Food		Environmental		Animal Health		Biosafety Level 3		Dairy Regulatory Programs		Select Agents		Shellfish		Environmental Conditions				
Entry (Program Specific)	EP8		EP9		EP10		EP11		EP12		EP13		EP14		EP15				
Entry	Basic Chromatography		Basic Separation / Extraction Techniques			Basic Spectrometry		Basic Spectroscopy		Aseptic Techniques		Basic Foodborne Pathogens		Microbial Testing					
Entry	EP1		EP2			EP3		EP4		EP5		EP6		EP7					
Entry	Accreditation / Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management	
Entry	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	
© 2017 Last updated December 17, 2018	The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL															  			



Analysis. Answers. Action.

www.aphl.org

Laboratory Framework

ifpti		Human and Animal Food Laboratory Professionals Curriculum Framework - Dec 2018														FDA U.S. FOOD & DRUG ADMINISTRATION				
Senior Administration	Accreditation / Certification	Advocacy	Budget	Change Management	Continuity of Operations	Facility Management	Human Resource Management	ISO (Section 4)	Legislative Affairs	Leadership / Executive Program	Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management	
Supervisor / Manager Program Specific	Advanced Chemistry				Advanced Microbiology				Leadership / Executive Program		Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management	
Supervisor / Manager	Conflict Resolution and Mediation		Incident Command System (ICS)		Negotiation		Risk Communication Introduction		Leadership / Executive Program		Organizational Culture	Policy Making	Program / Grant Management	Public Relations	Risk Analysis (Management & Communication)	Stakeholder Support	Systems Analysis	Instructor Development	Project Management	
Expert (Program Specific)	Certificates & Certifications																			
Expert	Animal Food		Human Food		Shellfish		Instrument Repair	Laboratory Evaluation Officer	Coaching	Nano-technology	Animal Health	Animal Food	Human Food	Shellfish	Chemistry		Microbiology		Instructor Development	Project Management
Expert	Acidified Foods	Advanced Leadership	Allergens	Evidence-Based Decision Making	Grant Writing	Internal Audit	Labeling	Measurement Uncertainty	Method Modification / Development	Risk Analysis	Validation Methods		Chemistry		Microbiology		Instructor Development	Project Management		
Mid (Program Specific)	Certificates & Certifications																			
Mid (Program Specific)	Animal Food	Animal Health	Dairy	Environmental	Human Food	Shellfish	Audit	Hazardous Material Shipping	Infectious Agent Shipping	Waste Management	Animal Food Safety	Animal Health	Food Safety	Environmental Conditions	Milk and Dairy Product Safety	Shellfish	Validation Methods		Instructor Development	Project Management
Mid (Program Specific)	Gas Chromatography - Mass Spectrometry (GCMS)		Inductively Coupled Plasma Mass Spectrometry (ICPMS)		Liquid Chromatography - Mass Spectrometry (LCMS)		National Laboratory Networks Methods		Radiological		Advanced Technologies		National Laboratory Networks Methods		Validation Methods		Instructor Development	Project Management		
Mid	Advanced Communication Skills		Advanced Quality Techniques		Basic Leadership Skills		Critical Thinking	Evidentiary Integrity	Human and Animal Food Incident Response	Laboratory Networks and Partnerships	Legal Proceedings	Method Evaluation and Selection	Root Cause Analysis	Validation Methods		Instructor Development	Project Management			
Mid	M1		M2		M3		M4	M5	M6	M7	M8	M9	M10	Validation Methods		Instructor Development	Project Management			
Entry (Program Specific)	Certificates & Certifications																			
Entry (Program Specific)	Animal Food		Environmental		Animal Health		Biosafety Level 3	Dairy Regulatory Programs	Select Agents	Shellfish	Environmental Conditions		Validation Methods		Instructor Development	Project Management				
Entry (Program Specific)	EP8		EP9		EP10		EP11	EP12	EP13	EP14	EP15		Validation Methods		Instructor Development	Project Management				
Entry (Program Specific)	Basic Chromatography		Basic Separation / Extraction Techniques		Basic Spectrometry		Basic Spectroscopy	Aseptic Techniques	Basic Foodborne Pathogens		Microbial Testing		Validation Methods		Instructor Development	Project Management				
Entry (Program Specific)	EP16		EP17		EP18		EP19	EP20	EP21	EP22	EP23	EP24	EP25	EP26	EP27	EP28	EP29	EP30	EP31	EP32
Entry	Accreditation / Certification	Basic Communication Skills	Basic Laboratory Math	Basic Laboratory Statistics	Basic Laboratory Techniques	Chain of Custody	Ethics	Incident Command System (ICS)	Integrated Food Safety System (IFSS)	Laboratory Information Management System (LIMS)	Method Resources	Public Health Principles	Quality Management Systems	Regulatory Programs	Regulatory Sampling	Safety	Sample Handling	Waste Management		
Entry	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E20
© 2017 Last updated December 17, 2018	The Laboratory Framework is being built out through a Cooperative Agreement with FDA, AFDO, AAFCO, and APHL														  					



Resources

- [APHL Accreditation Resources](#)
- [List of Proficiency Testing Providers](#)
- [State Human & Animal Food Laboratory Professionals Curriculum Framework](#)
- [Data Acceptance White Paper](#) (January 2019)
- [APHL Quality Management Training Series](#)
- [APHL Accreditation Resource Repository](#) (restricted access)
- [GenomeTrakr Network](#)
- [GOODSamples](#)
- [GOOD Test Portions](#)



Thank you



Robyn Randolph

robyn.randolph@aphl.org

240.485.2732