

## Appendix D: Collection and Submission of Clinical Samples

- 1) Collection and Packaging of Enteric and Norovirus Specimens**
- 2) Lab Form 219**
- 3) Lab Form 275**
- 4) Request for Laboratory Kits and Supplies**
- 5) Reference List of Tests**
- 6) Bacteriology Flow Charts**
- 7) WGS Flow Chart**

## Collection and Packaging of Enterics and Norovirus



Kentucky Public Health  
Prevent. Promote. Protect.

Information on each test can be found in the Reference List of Tests  
<https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>



Kit Components: Kit can be used to test one/both test codes. Please indicate on label which laboratory should receive sample.

Multishipper with Cold Pack/Inmark Ambient  
95kPa Bag with absorbent  
Two vial pack - Empty vial and Cary Blair Vial  
Zip Bag with absorbent  
Outreach Form  
Lab Form 275 - Norovirus  
Lab Form 219 - Enterics

### Collection of Specimen

1. Check expiration date of specimen vials.
2. Make sure two identifiers or lab label is on specimen vial.
3. Fill out lab or Outreach form completely.

Store specimen vials at room temperature.

\*Stool Specimens \*Remel package insert

1. Collect stool specimen into clean container.  
DO NOT mix urine or water with sample.
2. Open vials carefully.
  - Using the collection spoon attached to the cap, add enough specimen until the liquid reaches the arrow on the label.
  - Fill empty vial, to one-half full with stool specimen.

Fill only one vial at a time and replace the cap onto the same vial. DO NOT mix caps.

Important: Sample areas of the specimen which appear bloody, slimy, or watery. If the stool is hard, sample from each end and the middle of the specimen.

If larger specimen collection containers are used for Norovirus, contact KY DLS for additional instructions.

### Packaging and Shipping

Norovirus must be sent on cold pack.

1. Place sample vial/vials into zip bag with Zorb sheet.
2. Place sample into 95kPa bag.
3. Place sample bag on top of frozen cold pack and replace styrofoam lid.
4. Place Outreach/Lab Form on top of styrofoam lid.
5. Close box and place label on top of box.



Enterics only - Ambient Inmark box can be used.

1. Place sample vial into zippered bag with Zorb sheet.
2. Place zippered bag into 95kPa bag and seal.
3. Place air pillows inside box and place lab form on top.
4. Close box and place label on top of box.

Instructions for closure are on the flap of box.



Ship samples for overnight delivery to the KY Division of Laboratory Services

Refer to 49CFR 173.199 for current regulations on packaging and shipping of Category B infectious substances  
KY Division of Laboratory Services (502)564-4446

08/2022

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> - Collection and Packaging of Enteric and Norovirus Specimens

## Lab Form 219


Form 219 Revised 9/2018		"This form, when filled in, contains patient information that must be protected in accordance with the Health Insurance Portability & Accountability Act."	
KY Division of Laboratory Services 100 Sower Blvd. Suite 204 Frankfort, Kentucky 40601 Phone: 502/564-4446 Fax: 502/564-7019		 <b>Special Microbiology</b>	
<i>Please complete a separate form for each specimen.</i>			
<b>PATIENT INFORMATION:</b>			
Name (Last, First, MI) _____			
Social Security # _____	Sex _____	Race _____	Age _____
Home Address _____			
City _____	State _____	Zip Code _____	County _____
<b>Send Report To:</b>			
Submitter _____			
Street Address (PO BOX) _____			
City _____	State _____	Zip Code _____	
<b>Specimen Information:</b>			
Purpose of Exam _____		<input type="checkbox"/> Clinical Specimen	
Specimen Source _____		<input type="checkbox"/> Referred Culture	
Date of Collection _____		Bloody Diarrhea <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Examination Requested:</b> <i>(Please mark one)</i>			
<input type="checkbox"/> Enteric Pathogens		<div style="border: 1px solid black; padding: 5px; min-height: 100px;">         Organism Suspected:       </div>	
<input type="checkbox"/> *Miscellaneous Bacterial Culture			
<input type="checkbox"/> Other _____			
Other pertinent Medical Data: <i>*Please complete this section when submitting Miscellaneous Bacterial Cultures</i>			
<b>FOR LABORATORY USE ONLY:</b>			
<div style="border: 1px solid black; width: 100%; height: 100%;"></div>		<div style="border: 1px solid black; width: 100%; height: 100%;"></div>	
<b>Date Received:</b>		<b>Laboratory Number:</b>	

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> Lab Form 219

## Lab Form 275

"This form, when filled in, contains patient information that must be protected in accordance with the Health Insurance Portability Accountability Act."

Lab 275 (Rev 4/2021)


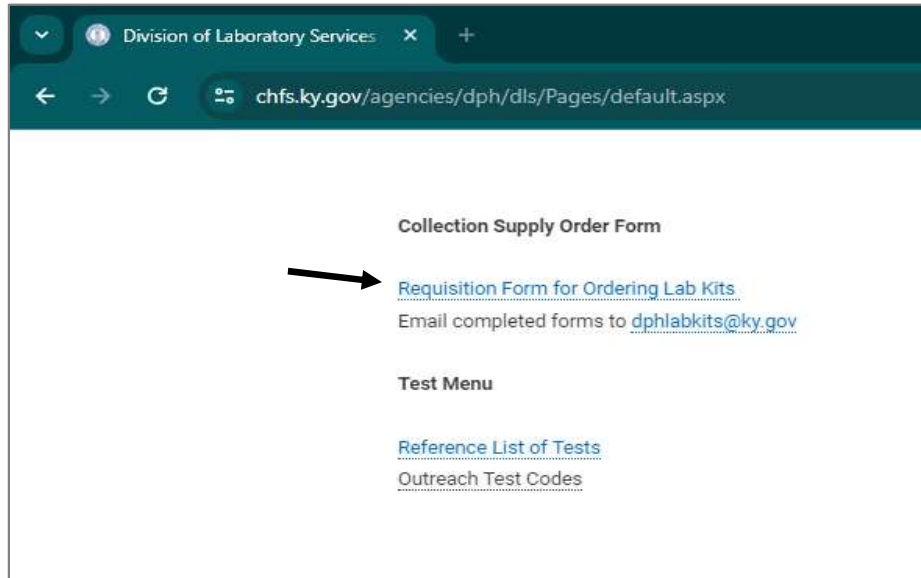
 <p><b>Kentucky Public Health</b> Prevent. Promote. Protect.</p> <p><b>Viral Isolation</b> and <b>Immunology</b></p> <p>KY Division of Laboratory Services 100 Sower Blvd Suite 204 Frankfort KY 40601 (502) 564-4446 FAX (502) 564-7019</p>	<p align="center"><b>Tests Requested</b></p> <table border="1"> <tr> <td>COVID-19</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Influenza</td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="2">Was patient prescreened for flu?</td> </tr> <tr> <td colspan="2">Result of prescreening:</td> </tr> <tr> <td>Respiratory Panel</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Herpes/VZV</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Measles</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Mumps</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Norovirus</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other</td> <td><input type="checkbox"/></td> </tr> </table>	COVID-19	<input type="checkbox"/>	Influenza	<input type="checkbox"/>	Was patient prescreened for flu?		Result of prescreening:		Respiratory Panel	<input type="checkbox"/>	Herpes/VZV	<input type="checkbox"/>	Measles	<input type="checkbox"/>	Mumps	<input type="checkbox"/>	Norovirus	<input type="checkbox"/>	Other	<input type="checkbox"/>	<p align="center"><b>CLINICAL DATA</b></p> <p>Purpose of request:</p> <p><input type="checkbox"/> diagnostic (give onset)</p> <p><input type="checkbox"/> immune status</p> <p><input type="checkbox"/> antibody status</p> <p><input type="checkbox"/> Deceased</p> <p>Other _____</p>							
COVID-19	<input type="checkbox"/>																												
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Norovirus	<input type="checkbox"/>																												
Other	<input type="checkbox"/>																												
<p align="center"><b>Patient Information:</b></p> <p align="center">(Use label or fill in completely)</p>	<p align="center"><b>Specimen Source / Date Collected</b></p> <table border="1"> <tr> <td>Throat Swab</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>NP Swab</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>OP Swab</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Nasal Swab</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Genital Swab</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>CSF</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Stool</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Serum</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Other</td> <td><input type="checkbox"/></td> <td></td> </tr> </table>	Throat Swab	<input type="checkbox"/>		NP Swab	<input type="checkbox"/>		OP Swab	<input type="checkbox"/>		Nasal Swab	<input type="checkbox"/>		Genital Swab	<input type="checkbox"/>		CSF	<input type="checkbox"/>		Stool	<input type="checkbox"/>		Serum	<input type="checkbox"/>		Other	<input type="checkbox"/>		<p align="center"><b>Date of Onset:</b></p> <p>Symptoms: YES NO</p> <p>Fever <input type="checkbox"/> <input type="checkbox"/></p> <p>Neurological <input type="checkbox"/> <input type="checkbox"/></p> <p>Headache <input type="checkbox"/> <input type="checkbox"/></p> <p>Respiratory <input type="checkbox"/> <input type="checkbox"/></p> <p>Gastrointestinal <input type="checkbox"/> <input type="checkbox"/></p> <p>Fatigue <input type="checkbox"/> <input type="checkbox"/></p> <p>Rash <input type="checkbox"/> <input type="checkbox"/></p> <p>Lesions <input type="checkbox"/> <input type="checkbox"/></p> <p>Other _____</p>
Throat Swab	<input type="checkbox"/>																												
NP Swab	<input type="checkbox"/>																												
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CSF	<input type="checkbox"/>																												
Stool	<input type="checkbox"/>																												
Serum	<input type="checkbox"/>																												
Other	<input type="checkbox"/>																												
<p>Name ( Last, First, MI )</p> <p>Social Security # Sex EO Birthdate (yyyy-mm-dd)</p> <p>Home Address</p> <p>City</p> <p>State ZIP County</p>	<p>Hospitalization Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Pregnant _____ weeks</p> <p>Testing approved?</p> <p>COVID Sequencing</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p align="center"><b>Immunizations / Date</b></p> <p>None <input type="checkbox"/></p> <p>MMR _____</p> <p>Influenza _____</p> <p>Varicella _____</p> <p>COVID _____</p>																											
<p>Send Reports to:</p> <p>Submitter</p> <p>Street Address / P O Box</p> <p>City</p> <p>State ZIP</p> <p>Phone Fax</p> <p>Physician (if other than Submitter)</p>	<p align="center"><b>Contacts / Recent Travel</b></p> <p>Tick bite _____</p> <p>Mosquito bite _____</p> <p>Community _____</p> <p>Other _____</p> <p>Travel _____</p>																												
<p align="center">*****DLS Laboratory Findings*****</p>																													
	<p>Date Received Laboratory #</p>	<p>Tech Date Reported</p>																											

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> Lab Form 275

## Request for Laboratory Kits and Supplies

1. Using web browser, navigate to [chfs.ky.gov/agencies/dph/dls/Pages/default.aspx](https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx) and scroll down to find “Requisition Form for Ordering Lab Kits.”



2. Download the form (web browser should begin downloading automatically after clicking the hyperlink “Requisition Form for Ordering Lab Kits.”)
3. Fill out the information in the form (requisition form shown on the next page).
4. Send completed form as an email attachment to [DPHlabKits@ky.gov](mailto:DPHlabKits@ky.gov).
5. Save document as a different file name if you want to retain the information for future use.

**If you have problems connecting to the website ([chfs.ky.gov/agencies/dph/dls/Pages/default.aspx](https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx)) or downloading the forms, please contact Leigh Ann Bates at (502) 782-7703.**

**REQUISITION FOR LABORATORY SUPPLIES**Email to: [DPHLabKits@ky.gov](mailto:DPHLabKits@ky.gov) or Fax to: (502) 564-7019Date: Facility: Delivery Address: Attention To: Phone Number: 

Clinical Testing Supplies			Shipping Supplies	
Gonorrhea/Chlamydia Kits (Genprobe kits) Number of kits requested	SWAB	URINE	Multi-Shippers (Ship CT/GC, Syphilis, HIV, etc.)	<input type="text"/>
	<input type="text"/>	<input type="text"/>	Multi-Shippers with Cold Pack (Ship Flu, Herpes, Hep C)	<input type="text"/>
Enteric Pathogen/Norovirus Kit (Cary Blair)	<input type="text"/>		Category B Ambient Box	<input type="text"/>
TB Sputum Kit	<input type="text"/>		Tube Shuttles	<input type="text"/>
Viral Isolation Swab Kit (Includes shipper)	<input type="text"/>		95kPa Bags	<input type="text"/>
Viral Transport Media (Swab/ Media; used for Virus & Flu)	<input type="text"/>		Labels- Purple PO Box Only	<input type="text"/>
Red Stopper Blood Tubes	<input type="text"/>			
PPT Blood Tubes (HCV Testing)	<input type="text"/>			

Environmental Testing Supplies		Courier Shipping Supplies **Only for facilities on current courier route**	
Rabies Collection Kit	<input type="text"/>	Gray Courier Bags	<input type="text"/>
Water Bacteriology Kit	<input type="text"/>	Specimen Bags	<input type="text"/>
Food Collection Kit	<input type="text"/>		

**Other**

KY Division of Laboratory Services (502)564-4446

7/2023

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx> Requisition For Laboratory Supplies



[Reference List of Tests](#)

**Virology (Norovirus):** pages 5 and 6 of DLS Reference List of Tests

### VIRAL PCR

#### Tests for the following are performed under Viral PCR:

Chickenpox  
SARS-CoV-2  
Herpes  
Influenza  
Measles  
Mumps  
Norovirus ←  
Respiratory Panel

#### Methodology: Polymerase Chain Reaction (PCR)

#### Specimen:

- Chickenpox – Swab of lesion in Viral Transport Media
- SARS-CoV-2– Nasopharyngeal swab, Nasal swab, Throat swab in Viral Transport Media; Throat swab or nasal swab in Aptima Multitest Swab Collection Kit
- Herpes – Swab of lesion in Viral Transport Media
- Influenza – Nasopharyngeal swab, Nasal, Tissue, Bronchial wash, Throat swab, Nasal wash all in Viral Transport Media. If sending lung tissue, send in a sterile container. No Formalin or Fixative.
- Measles – Throat swab, NP swab, or NP aspirate in Viral Transport Media
- Mumps – Buccal or throat swab in Viral Transport Media
- Norovirus – Stool, Emesis in sterile empty collection vial ←
- Respiratory Panel – Nasopharyngeal swab in Viral Transport Media

#### Kit components ordered as needed:

- Electronic OUTREACH form or Lab Form #275 printed from Internet
- Address label
- Multi-shipper with cold pack- outside box, with Styrofoam inside container/or comparable refrigerated cooler
- 1 freezer pack
- 1 95kPa bag/Absorbent Sheet
- 1 Viral Transport Media/swab
- Sterile empty collection vial (Norovirus)
- Red Stoppered Tube

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

**Collection and Packaging Instructions:**

Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack. Send Viral Transport Media specimen on cold pack. Ship Viral Transport Media frozen if delayed shipping.

<https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

Multi-shipper with Cold Pack and Multi-shipper with Cold Pack Virus

	Outreach Test Code	CPT Code	Reference Range
Respiratory Panel	RESP	87633	Not Detected
Chickenpox	HSVP	87798	Varicella Zoster Virus DNA Not Detected
SARS-CoV-2	NCOV	CDC Panther GeneXpert - 87635-QW <sup>2</sup>	COVID-19 Not Detected SARS-COV-2 Not Detected SARS-COV-2 Negative
Herpes	HSVP	87529 x2	Herpes Virus Type 1 DNA Not Detected Herpes Virus Type 2 DNA Not Detected
Influenza	FPCR	87501	Negative Influenza A/B by PCR
Measles	MEPCR	87798	Not Detected
Mumps	MUPCR	87798	Not Detected
Norovirus	NORX	87798 x2	Negative for Norovirus by PCR

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>



**Hepatitis A:** pages 14 and 16 of DLS Reference List of Tests**Hepatitis - Collection and Packaging Instructions:**

Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack

<https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

Multi-shipper, Multi-shipper with cold pack Hepatitis C, Multi-shipper with cold pack Hepatitis A, Multi-shipper with cold pack Blood

	Outreach Test Code	CPT Code	Reference Range
Hepatitis A	HAV	86709	Non-reactive
Hepatitis B surface antigen	HBSG	87340, 87341	Non-reactive
Hepatitis B surface antibody	HBSB	86706	Non-reactive
Hepatitis B core antibody	HBCB	86704	Non-reactive
Hepatitis C	HEPC	Antibody – 86803 Quantification - 87522	Non-reactive

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

**HEPATITIS A****Tests for the following are performed under Hepatitis A:**

- IgM

**Methodology: EIA****Specimen:**

- 2 ml Serum or 6ml whole blood in red-stoppered tube

**Kit components ordered as needed:**

- Red-stoppered tube
- Electronic OUTREACH form or Lab Form #213 printed from Internet
- Mailing label
- Multi-shipper container with medium canister, bubble wrap, tube shuttle absorbent material
- Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack - Multi-shipper with cold pack- outside box, with Styrofoam inside container, 95kPa bag, freezer pack

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

**MICROBIOLOGY****BACTERIOLOGY****Tests for the following are performed under Bacteriology:**

Bacillus cereus  
 Campylobacter  
 Carbapenems Resistant Organisms (CRO)  
 E. coli (Shigatoxin or O157 suspect)  
 Salmonella  
 Shigella  
 Miscellaneous Bacteria Identification (i.e. Bacillus cereus, Listeria)  
 Vibrio  
 Biothreat agents – Bacillus anthracis, Yersinia pestis, Brucella spp. Francisella tularensis, Burkholderia, Orthopox virus  
 Botulism

**Specimen:**

- Stool specimen in placed in Cary Blair w/Indicator within 2 hours of collection.
- Pure culture isolate. Agar slant: Heart infusion, trypticase soy, blood or chocolate
- Botulism – Serum (at least 10ml), Feces (10 to 50g), Enema (20ml)
- Orthopox virus – Dry swab, vesicle fluid, skin, or crust

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

**Methodology: Isolation, Identification, Antigenic typing****Collection Kit (Enteric pathogens) Furnished by State Lab Contains:**

- Cary Blair w/Indicator preservative
- Electronic OUTREACH form or Lab Form #219 printed from Internet – Bacteriology
- Inmark Category B complete shipper

**Notes:**

- Stool-Mail immediately after collection; to be received within 24 hours.
- Provide fresh grown on slants and mail immediately at room temperature.
- CRO- Organism identification and AST results must be supplied with isolate.
- Botulism by request and approval of Epidemiology.
- Orthopox assay does not differentiate vaccinia virus or monkeypox virus from other Orthopox viruses detected by this assay. Does not detect Variola virus.
- Refer to Sentinel Guidelines at <https://asm.org/Articles/Policy/Laboratory-Response-Network-LRN-Sentinel-Level-C>

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

**Collection and Packaging Instructions:**

Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack

<https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

Enteric Collection and Packaging Guidelines, Food Kit

	Outreach Test Code	CPT Code	Reference Range
Salmonella	SGT	Stool – 87045 ID and Typing - 87147	NA
Shigella	SHGR	Stool – 87045 ID and Typing - 87147	NA
Campylobacter	CAMP	Stool – 87046	NA
E. coli	ECO	Stool – 87045 ID and Typing - 87147	NA
Carbapenem Resistant	CRO	81750	No carbapenemase production detected
Miscellaneous Bacteria	MC		NA
Botulism	MEP	87158, 87076	Mouse Bioassay: No C. botulinum toxin detected by mouse bioassay Culture: No C. botulinum isolated

Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

## Bacteriology Flow Charts

Please note that the following flow charts do not reflect the entire work process for testing of laboratory specimens. Rather, they have been simplified to provide a basic description of specimen flow through the lab and the testing process. These flow charts are intended to provide a general idea of the steps and time required for testing.

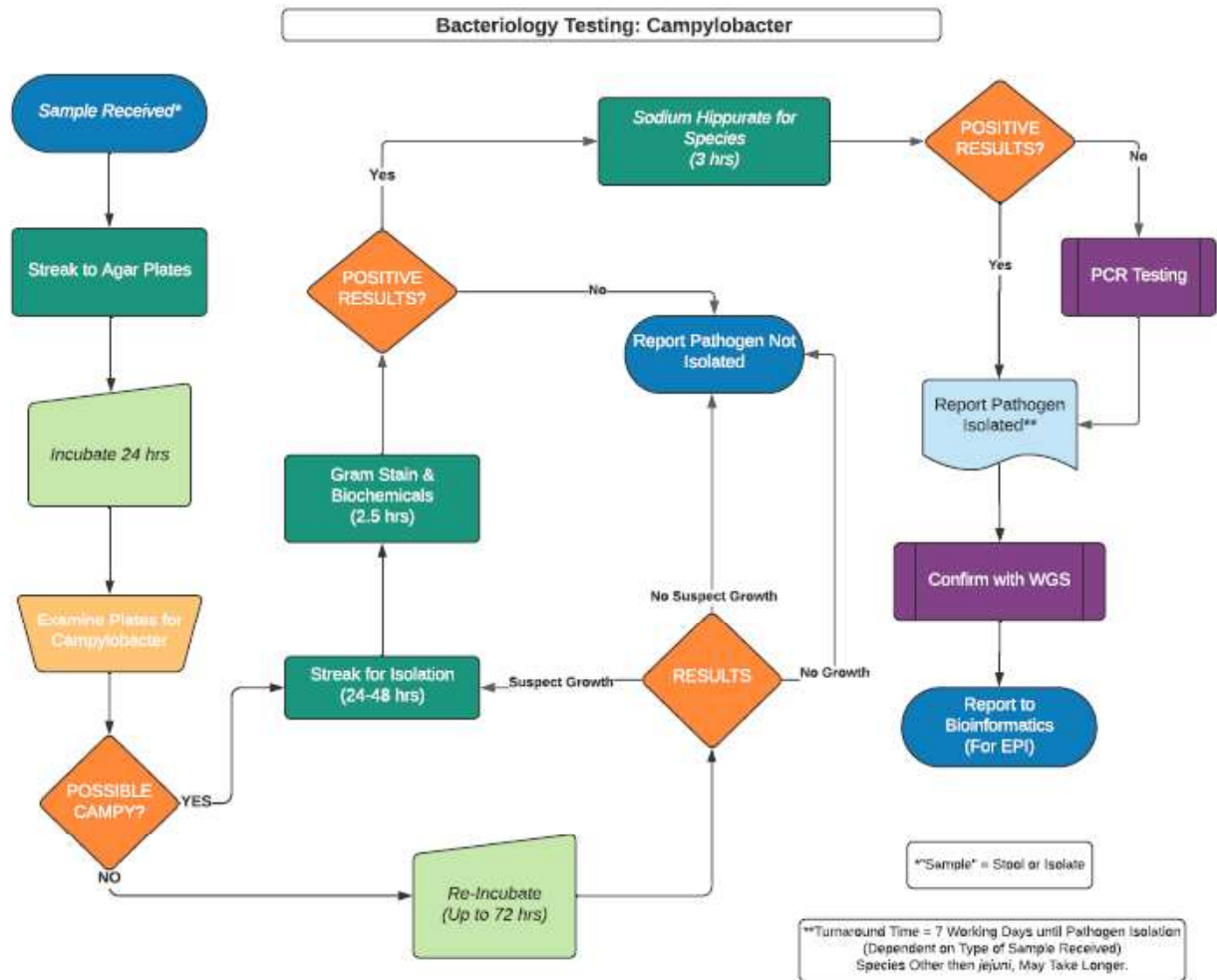


Image Source: <https://www.chfs.ky.gov/agencies/dph/dls/Pages/default.aspx>

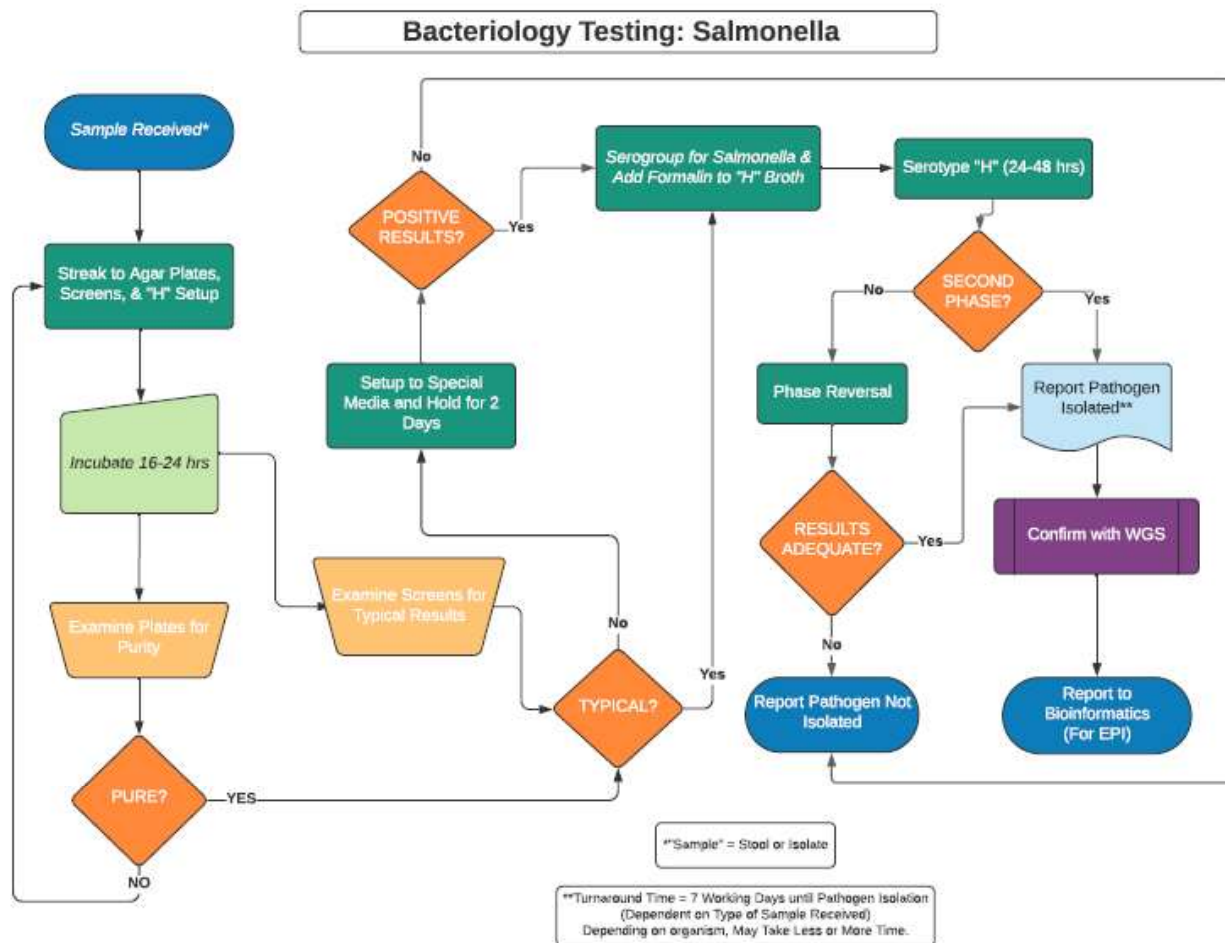


Image Source: Kentucky Department for Public Health Division of Laboratory Services

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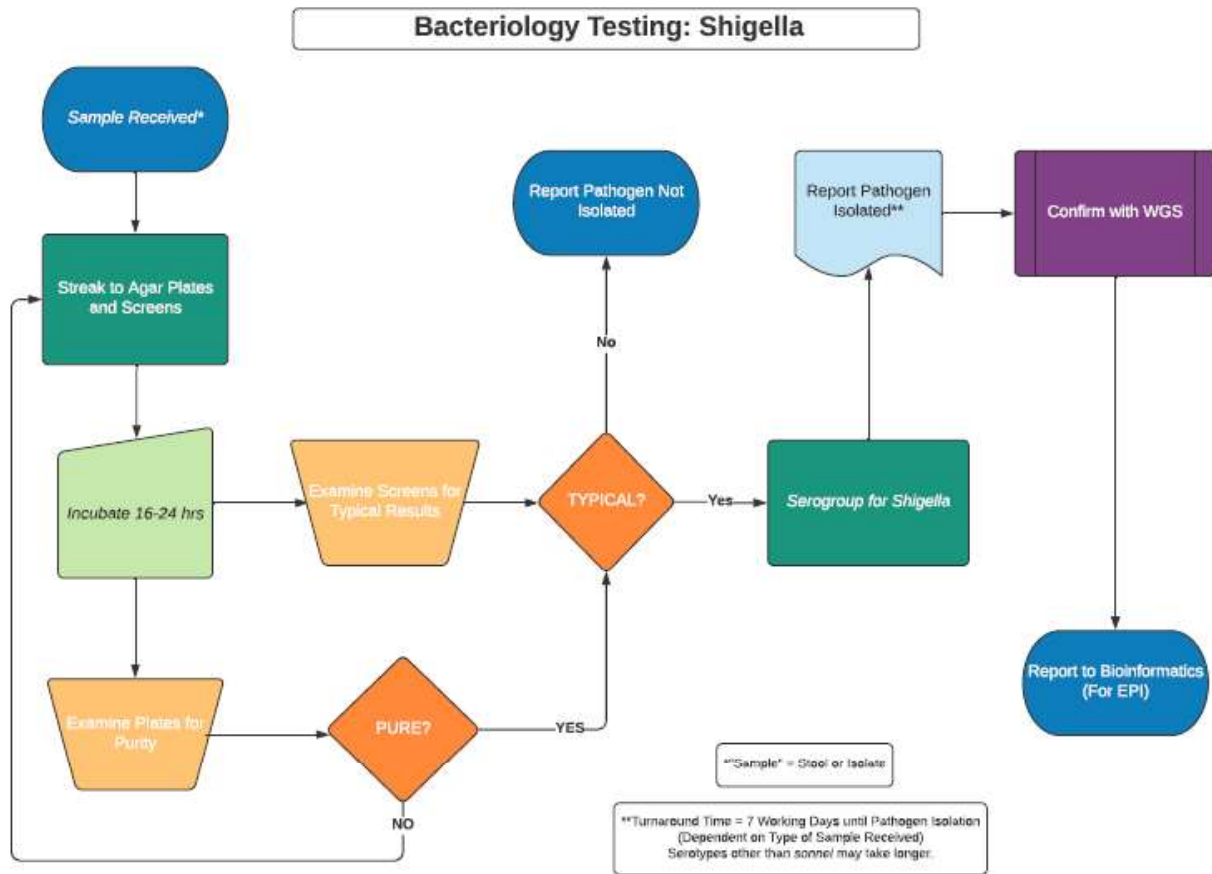


Image Source: Kentucky Department for Public Health Division of Laboratory Services

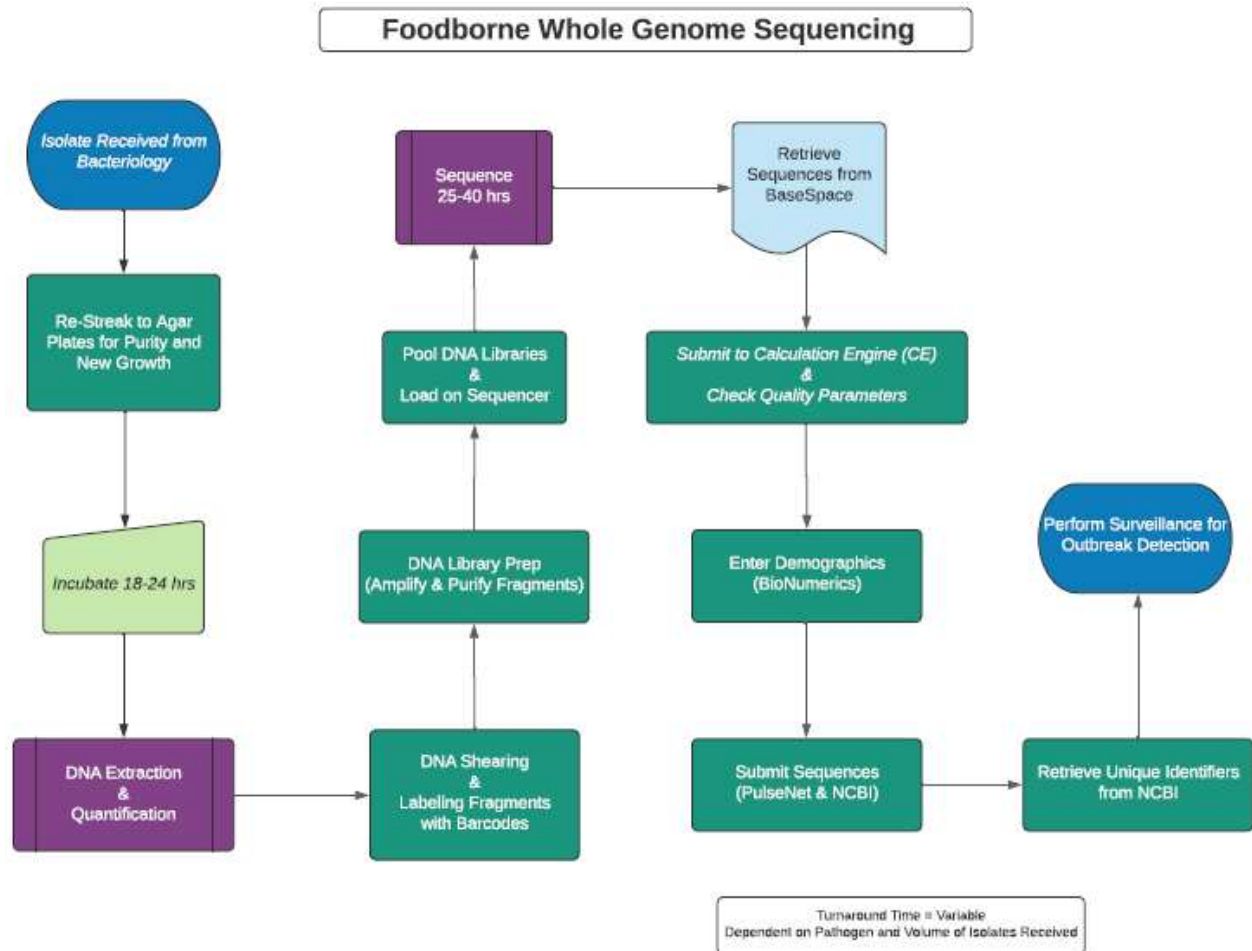


Image Source: Kentucky Department for Public Health Division of Laboratory Services - **WGS Flow Chart**