

Reference List of Laboratory Tests

I. Purpose

To provide an alphabetical list of agents or conditions for which testing is available for county health departments and other clinical partners. Applicable ordering, specimen information, testing, mailing containers and resulting required for each condition is listed.

II. Procedural instructions

Good laboratory practices include the following:

1. Follow the manufacturer’s instructions for specimen collection and handling.
 - Are specimens stored at the proper temperature?
 - Are the appropriate collection containers used?
2. Be sure to properly identify the patient.
 - Does the name on the test requisition match the patient’s name?
 - Does the name on the patient’s chart match the name on the patient’s identification?
 - If more than one patient is present with the same first and last name, how do you determine which one is the test patient? (Look for possible gender differences, social security number, patient identification number, birthdates, different middle name, and relevance of the test to the patient’s history).
3. Be sure to label the patient’s specimen for testing with two unique identifiers to each patient.
4. Inform the patient of any test preparation such as fasting, clean catch urines, etc.

Local Health Departments and other clinical partners are to refer to the following listing for specimen source, Outreach code for submission, and container supplied by the Division of Laboratory Services.

All submitters are required to follow federal and state regulations for packaging and shipping of specimens. Refer to 49CFR 171-180 for current regulations on packaging and shipping of infectious substances.

CPT codes listed in the DLS Reference List of Test is for reference only. It is the responsibility of each laboratory to determine correct CPT codes for billing.

For tests not listed, call the Division of Laboratory Services at 502-564-4446 for additional information.

Contents

ANTHRAX - See Bacillus anthracis 4

BACILLUS ANTHRACIS 5

BACILLUS CEREUS..... 6

BORDETELLA PERTUSSIS 7

BOTULISM 8

BRUCELLOSIS..... 9

BURKHOLDERIA..... 10

CAMPYLOBACTER..... 11

CHICKENPOX - See Varicella Zoster..... 12

CHLAMYDIA TRACHOMATIS..... 13

CLOSTRIDIUM BOTULINUM - See Botulism 14

ESCHERICHIA COLI..... 15

FLUORIDE 16

FOOD CHEMISTRY 17

FRANCISELLA TULARENSIS - See Tularemia 18

GASTROINTESTINAL PANEL..... 19

GLANDERS DISEASE - See Burkholderia mallei 20

HAEMOPHILUS 21

HEPATITIS A..... 22

HEPATITIS B..... 23

HEPATITIS C..... 24

HERPES SIMPLEX 25

HIV..... 26

INFLUENZA 27

LEAD- ENVIRONMENTAL..... 28

LISTERIA MONOCYTOGENES 29

MEASLES - See Rubeola..... 30

MISCELLANEOUS BACTERIOLOGY 31

MUMPS 32

MYCOBACTERIA - See Tuberculosis 33

NEISSERIA CULTURE 34

NEISSERIA GONORRHOEA.....	35
NEWBORN SCREENING	36
NEWBORN SCREENING INDIVIDUAL TESTS.....	37
NOROVIRUS.....	38
ORTHOPOX VIRUS	39
OSHA	40
PERTUSSIS - See Bordetella Pertussis.....	41
PRENATAL PROFILE	42
RABIES IN ANIMALS.....	43
RICIN.....	44
RUBELLA - German Measles.....	45
RUBEOLA - Measles.....	46
SALMONELLA	47
SHIGELLA	48
STAPHYLOCCUS AUREUS.....	49
STREPTOCOCCAL INFECTION- See Miscellaneous Culture.....	50
SYPHILIS.....	51
TUBERCULOSIS	52
TUBERCULOSIS CONTINUED	53
TULAREMIA	54
VARICELLA ZOSTER (CHICKENPOX)	55
VIBRIO CHOLERAЕ	56
WATER BACTERIOLOGICAL ANALYSIS	57
WATER BACTERIOLOGICAL ANALYSIS	58
WEST NILE VIRUS	59
YERSINIA (PLAGUE)	60
ZIKA	61

ANTHRAX - See Bacillus anthracis

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Includes:	
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Ranges:	
CPT Code:	
Additional Comments:	
Additional Tests Performed:	

BACILLUS ANTHRACIS

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	Culture/PCR
Availability:	M-F
Turn-around-Time:	24-72 hours for Culture/ 24-48 hours for PCR
Specimen Requirements:	Culture- Clinical Specimen or isolated culture on tubed media PCR- Pure isolated culture on tubed media
Collection Kit/Container:	Submitter packaging
Collection and Packaging Instructions:	Call the Division of Laboratory Services for specific instructions before sending any specimens.
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Ranges:	No B. anthracis DNA detected by real-time PCR Identification of organism submitted
CPT Code:	Identification 87081 PCR 87153
Additional Comments:	Refer to the Sentinel Guidelines on asm.org for more information.

BACILLUS CEREUS

DLS Department:	Bacteriology Environmental Microbiology
OUTREACH Test Code:	MEP
Methodology:	Culture/ Isolation/ PCR
Availability:	M-F
Turn-around-Time:	Clinical 4-7 days/ Food 4-15 days
Specimen Requirements:	Clinical- Feces Isolate- Pure culture isolate on agar slant: Heart Infusion, trypticase soy, blood or chocolate agar slant Food- By request of Epidemiology or Food Safety Branch/ ONLY for investigation of foodborne disease outbreaks
Collection Kit/Container:	Clinical – Cary Blair Transport Media
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Enteric Collection and Packaging Guidelines Food- Food Kit
Specimen Handling and Transport:	Clinical- Mail immediately after collection Isolation- Provide fresh growth slant; mail immediately Food - Specimen must be shipped overnight in cooler with cold packs. Call laboratory before sending.
Unacceptable Conditions:	≥ 7 days from collection
Reference Range:	Clinical – No B. cereus isolated Food - <100 cfu/g
CPT Code:	Stool 87046; Vomitus 87070 PCR 87153
Additional Comments:	Collect during acute stage (Days 1-3) of diarrheal disease and before initiation of anti-microbial or drug therapy.

BORDETELLA PERTUSSIS

DLS Department:	Virology
OUTREACH Test Code:	RESP
Methodology:	Multiplex PCR
Availability:	M-F
Turn-around-Time:	PCR 24-48 hours
Specimen Requirements:	Nasopharyngeal swab placed immediately in viral transport media (M4RT)
Collection Kit/Container:	Collection swabs must be polyester or Dacron with a plastic or aluminum shaft.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-Shipper with Cold Pack Virus
Specimen Handling and Transport:	Specimens in M4RT can be held at room temperature for 4 hours, 2-8°C for up to 3 days, or freezer temperature (<-15°C) for up to 30 days.
Unacceptable Conditions:	Throat swab is not acceptable.
Reference Range:	Specific for detection of B. pertussis only
CPT Code:	87633
Additional Comments:	Swabs made of cotton and/or wood are not acceptable.

BOTULISM

DLS Department:	Preparedness
OUTREACH Test Code:	MEP
Includes:	Clostridium Botulinum Identification and Confirmation
Methodology:	ELISA, Mouse Bioassay, Culture
Availability:	
Turn-around-Time:	Food: 24-96 hours toxin test, 5-12 days culture Stool: 24-96 hours toxin test, 5-12 days culture Serum: 24-96 hours
Specimen Requirements:	Patient's physician must consult the Division of Epidemiology for approval and to verify the need to perform appropriate tests
Collection Kit/Container:	Consult with DLS for specific information of collecting and submitting specimens
Collection and Packaging Instructions:	Serum: 10ml Stool: 10-50g Enema Wash: 20ml Infants- Stool or Enema Wash
Specimen Handling and Transport:	
Reference Range:	ELISA: "No botulinum toxin A, B, E or F detected. Assay does not detect botulinum toxins C, D and G". Mouse Bioassay: No C. botulinum toxin detected by mouse bioassay Culture: No C. botulinum isolated
CPT Code:	87003; 87158; 87076
Additional Comments:	Refer to the Sentinel Guidelines on asm.org for more information

BRUCELLOSIS

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	Culture Identification PCR
Availability:	M-F
Turn-around-Time:	Culture Identification 7 days PCR 24-48 hours
Specimen Requirements:	Pure culture isolate
Collection Kit/Container:	
Collection and Packaging Instructions:	Call the Division of Epidemiology (888-9-REPORT) or the Division of Laboratory Services for specific instructions before sending any specimens.
Specimen Handling and Transport:	Mailing container furnished by submitter
Unacceptable Conditions:	
Reference Range:	PCR-No Brucella spp. DNA detected by real-time PCR." Identification of organism submitted
CPT Code:	Culture Identification 87040 PCR Identification 87153
Additional Comments:	Refer to the Sentinel Guidelines on asm.org for more information

**BURKHOLDERIA MALLEI
 BURKHOLDERIA PSEUDOMALLEI**

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	PCR, Culture
Availability:	M-F
Turn-around-Time:	PCR: 24-48 hours Culture: 9 days
Specimen Requirements:	Pure culture isolate
Collection Kit/Container:	
Collection and Packaging Instructions:	Call the Division of Laboratory Services for specific instructions before sending any specimens.
Specimen Handling and Transport:	Mailing container furnished by submitter
Unacceptable Conditions:	
Reference Range:	PCR- No Burkholderia mallei or Burkholderia pseudomallei DNA detected Identification of organism submitted
CPT Code:	Identification 87081 PCR 87153
Additional Comments:	Refer to the Sentinel Guidelines on asm.org for more information.

CAMPYLOBACTER	
DLS Department:	Bacteriology (clinical) Environmental Microbiology (Food)
OUTREACH Test Code:	CAMP
Methodology:	Culture
Availability:	M-F
Turn-around-Time:	Clinical specimen- 4-7 days Pure culture isolate- 3-5 days Food- 5-15 days
Specimen Requirements:	Clinical- Feces Isolate- swab from culture in Cary Blair, Campy thio or Campy blood plate in bag with Campy gas or in semi-solid motility type media. Chocolate slant is also acceptable.
Collection Kit/Container:	Clinical: Cary Blair Transport Media Isolate: Submitter packaging
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Food-Food Kit
Specimen Handling and Transport:	Feces- mail immediately after collection on cold pack. Isolate-Provide fresh growth slant; mail immediately; avoid extreme temperatures Food- Call laboratory; ship overnight in cooler with cold packs
Unacceptable Conditions:	Stool 7 days or older
Reference Range:	NA
CPT Code:	87040; stool 87046
Additional Comments:	Food- By request of Epidemiology or Food Safety Branch ONLY for investigation of foodborne disease outbreaks

CHICKENPOX - See Varicella Zoster

DLS Department:	Virology
OUTREACH Test Code:	Antibody-VZE Molecular- HSVP
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

CHLAMYDIA TRACHOMATIS

DLS Department:	Virus
OUTREACH Test Code:	CTGC
Methodology:	Amplified Nucleic Acid Probe
Availability:	M-F
Turn-around-Time:	24-48 hours
Specimen Requirements:	Endocervical, Male Urethral, Rectal and Pharyngeal Swabs use Aptima Unisex Kit. Vaginal use Aptima Vaginal Swab Kit Urine use Aptima Urine Kit
Patient Preparation:	Urine and Male Urethral Specimens – Patient should not have urinated for at least 1 hour prior to specimen collection.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper Instructions
Specimen Handling and Transport:	
Unacceptable Conditions:	Swabs collected > 60 days; Urine > 30 days
Reference Range:	Negative
CPT Code:	87491
Additional Comments:	

CLOSTRIDIUM BOTULINUM - See Botulism

DLS Department:	Preparedness
OUTREACH Test Code:	MEP
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

ESCHERICHIA COLI

DLS Department:	Bacteriology Environmental Microbiology
OUTREACH Test Code:	ECO
Methodology:	Isolation/Identification and Antigenic typing/ Food Culture
Availability:	M-F
Turn-around-Time:	Clinical 4-5 days/ Food 48 hrs-15 days
Specimen Requirements:	Clinical- Feces Identification and Antigenic typing- Agar slant: Heart infusion, trypticase soy, blood or chocolate Food- By request of Epidemiology or Food Safety Branch ONLY for investigation of foodborne disease outbreaks
Collection Kit/Container:	Clinical- Enteric pathogens kit with Cary Blair or Amies transport media Isolate – Pure fresh growth on agar slant Food- Food Kit
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Enterics Collection and Packaging
Specimen Handling and Transport:	Clinical- Mail immediately after collection to be rec'd in 24 hrs Isolation- Provide fresh growth slant; mail immediately Food - Food specimens - Ship overnight in cooler with cold packs. Call laboratory before sending specimens.
Unacceptable Conditions:	Stools 7 days or older
Reference Range:	NA
CPT Code:	Stool 87046, 87147 PCR 87150
Additional Comments:	Collect during acute stage (Days 1-3) of diarrheal disease and before initiation of anti-microbial or drug therapy.

FLUORIDE

DLS Department:	Environmental Chemistry
OUTREACH Test Code:	FL – Fluoride (Health Dept.) FLP - Fluoride (Public Water System) FLS - Fluoride (Supplement Program)
Methodology:	FIA by Lachet Quickchem
Availability:	M-F
Turn-around-Time:	5 days
Specimen Requirements:	10ml of drinking water
Collection Kit/Container:	Call Julie McKee at 502-564-3246 x 4421
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	Water >28 days from date of collection
Reference Range:	0.8-1.4 PPM Kentucky’s optimal fluoride concentration is: 0.90PPM.
CPT Code:	
Additional Comments:	Drinking water for dental program.

FOOD CHEMISTRY

DLS Department:	Environmental Chemistry
OUTREACH Test Code:	
Methodology:	Pesticides- GC-MS MS, GC-MS Mercury- Mercury Analyzer TOX-1 – Raw Milk
Availability:	M-F
Turn-around-Time:	15 days
Specimen Testing:	Pesticides- Fruits and Vegetables screening and quantitation Mercury- Fish Toxin, Drugs, Pesticides- Meat Screening Organochlorine – Raw Milk Screening
Collection Kit/Container:	Contact the Division of Laboratory Services
Collection and Packaging Instructions:	
Specimen Handling and Transport:	Call laboratory; Ship immediately after collection. Perishable foods shipped with cold packs.
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

FRANCISELLA TULARENSIS - See Tularemia

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

GASTROINTESTINAL PANEL

DLS Department:	Virology
OUTREACH Test Code:	GIP
Methodology:	Multiplex PCR
Availability:	M-F
Turn-around-Time:	24-48 hrs
Specimen Requirements:	Stool specimen put into Cary Blair transport media within 2 hours of collection
Collection Kit/Container:	Cary Blair
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with cold pack
Specimen Handling and Transport:	Can be stored at room temperature or refrigerated at 2° to 8°C for up to four days.
Unacceptable Conditions:	
Reference Range:	
CPT Code:	87507
Additional Comments:	<p>By request of Epidemiology only. Includes:</p> <p>Bacteria:</p> <ul style="list-style-type: none"> • Campylobacter (jejuni, coli, and upsaliensis) • Clostridium difficile (toxin A/B) • Plesiomonas shigelloides • Salmonella • Yersinia enterocolitica • Vibrio (parahaemolyticus, vulnificus, and cholerae) • Vibrio cholerae <p>DIARRHEAGENIC E. COLI/SHIGELLA:</p> <ul style="list-style-type: none"> • Enteropathogenic E. coli (EPEC) • Enterotoxigenic E. coli (ETEC) lt/st • Shiga-like toxin-producing E. coli (STEC) stx1/stx2 • E. coli O157 • Shigella/Enteroinvasive E. coli (EIEC) <p>PARASITES:</p> <ul style="list-style-type: none"> • Cryptosporidium • Cyclospora cayetanensis • Entamoeba histolytica • Giardia lamblia <p>VIRUSES:</p> <ul style="list-style-type: none"> • Adenovirus F40/41 • Astrovirus • Norovirus GI/GII • Rotavirus A • Sapovirus (I, II, IV, and V)

GLANDERS DISEASE - See Burkholderia mallei

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

HAEMOPHILUS

DLS Department:	Bacteriology
OUTREACH Test Code:	MC
Methodology:	Identification
Availability:	M-F
Turn-around-Time:	Send Out
Specimen Requirements:	Pure fresh isolate on chocolate agar slant or other tubed solid media which organism grows best.
Collection Kit/Container:	Submitter packaging
Collection and Packaging Instructions:	Provide fresh growth slant; immediately mail at room temperature to be received within 24 hours. Avoid extreme temperatures.
Specimen Handling and Transport:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx
Unacceptable Conditions:	
Reference Range:	NA
CPT Code:	87077
Additional Comments:	Only for invasive Haemophilus and Special Requests from Sterile sites. Specimen sent to CDC or Reference lab for serotyping

HEPATITIS A

DLS Department:	Virology
OUTREACH Test Code:	HAV
Methodology:	EIA (IgM only)
Availability:	M-F
Turn-around-Time:	48 hours
Specimen Requirements:	Serum or whole blood in 7 ml red stoppered tube
Collection Kit/Container:	
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with Cold Pack Hepatitis A
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack.
Unacceptable Conditions:	
Reference Range:	Non-reactive
CPT Code:	86709
Additional Comments:	

HEPATITIS B

DLS Department:	Virology
OUTREACH Test Code:	Hepatitis B surface antigen- HBSG Hepatitis B surface antibody-HBSB Hepatitis B core antibody- HBCB
Methodology:	EIA
Availability:	M-F
Turn-around-Time:	48 hours- 7 days
Specimen Requirements:	Serum or whole blood in 7 ml red stoppered tube
Collection Kit/Container:	
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with Cold Pack Hepatitis B
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack.
Unacceptable Conditions:	
Reference Range:	Non-reactive
CPT Code:	HbsAG 87340, 87341 Anti-HBs 86706 Anti- HBc 86704
Additional Comments:	

HEPATITIS C

DLS Department:	Virology
OUTREACH Test Code:	HEPC
Methodology:	Hepatitis C EIA, Aptima HCV Quantitative Assay
Availability:	M-F
Turn-around-Time:	5 days
Specimen Requirements:	Plasma collected in Plasma Preparation Tube (PPT). Centrifuge specimen within 6 hours of collection.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with Cold Pack Hepatitis C
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP on cold pack.
Unacceptable Conditions:	Patient will have to be contacted and specimen recollected into PPT tube for any confirmation testing if sample not originally sent in PPT tube.
Reference Range:	Non-reactive
CPT Code:	86803 – Antibody 87522 - Quantification
Additional Comments:	Specimens collected in PPT tube can be refrigerated for 3 days before testing or can be frozen up to 6 weeks
Additional Tests Performed:	Hep C confirmation testing sent to reference lab.

HERPES SIMPLEX

DLS Department:	Virology
OUTREACH Test Code:	HSVP
Methodology:	Isothermal Amplification Technology
Availability:	M-F
Turn-around-Time:	24 hours- 4 days
Specimen Requirements:	Lesion swab collected in viral transport media (M4RT).
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with Cold Pack Virus
Specimen Handling and Transport:	Ship on cold pack; Freeze specimen if not shipped within 48hrs.
Unacceptable Conditions:	Expired M4RT
Reference Range:	Herpes Virus Type 1 DNA Not Detected Herpes Virus Type 2 DNA Not Detected Varicella-Zoster Virus DNA Not Detected
CPT Code:	87529 x2, 87798
Additional Comments:	

HIV	
DLS Department:	Virology
OUTREACH Test Code:	HIV
Methodology:	EIA
Availability:	M-F
Turn-around-Time:	24 hours- 5 days
Specimen Requirements:	Serum, plasma (potassium EDTA, sodium and lithium heparin, sodium citrate) or whole blood in 7 ml red stoppered tube
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper
Specimen Handling and Transport:	Specimens may be stored at 2-8° C for 7 days, or for no longer than 2 days at room temperature.
Unacceptable Conditions:	
Reference Range:	Negative HIV1/HIV2; Not detected
CPT Code:	HIV Combo- 87389 Geenius - 86701 & 86702
Additional Comments:	If HIV Ag/Ab assay is repeatedly reactive, HIV1/2 Ab differentiation (Geenius) is performed.

INFLUENZA

DLS Department:	Virology
OUTREACH Test Code:	FPCR
Methodology:	PCR
Availability:	M-F
Turn-around-Time:	24-48 hours
Specimen Requirements:	Nasopharyngeal swab, nasal aspirate or wash or a combined nasopharyngeal swab with oropharyngeal swab collected in M4RT (viral transport media). If these specimens cannot be collected, a nasal swab or oropharyngeal swab is acceptable. Post-mortem tissue must be frozen if shipped.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multishipper with Cold Pack Virus
Specimen Handling and Transport:	Ship ASAP on cold packs. Freeze specimen if testing is delayed. If sending lung tissue, send in a sterile container. NO FORMALIN or FIXATIVE.
Unacceptable Conditions:	Expired M4RT media. Formalin or fixative used on tissue samples.
Reference Range:	Negative Influenza A/B by PCR
CPT Code:	87501
Additional Comments:	For patients who are intubated, an endotracheal aspirate should also be collected. Bronchoalveolar lavage (BAL) and sputum specimens are also acceptable.

LEAD- ENVIRONMENTAL

DLS Department:	Environmental Chemistry
OUTREACH Test Code:	
Methodology:	ICP
Availability:	M-F
Turn-around-Time:	15 days
Specimen Requirements:	Dust wipes, soil, paint chips
Collection Kit/Container:	Call the Division of Laboratory Services.
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

LISTERIA MONOCYTOGENES

DLS Department:	Bacteriology (clinical) Environmental Microbiology (Food)
OUTREACH Test Code:	MC (clinical)
Methodology:	Identification/Culture/Molecular
Availability:	M-F
Turn-around-Time:	4-6 days
Specimen Requirements:	Clinical- Pure culture TSA or blood agar slant Environmental- Food
Collection Kit/Container:	
Collection and Packaging Instructions:	Submitter packaging for clinical isolates Food: https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Food Kit
Specimen Handling and Transport:	Clinical- Provide fresh growth on slant. Mail immediately to be received within 24 hours. Avoid extreme temperatures Food specimens - Ship overnight in cooler with cold packs. Call laboratory before sending specimens.
Reference Range:	NA
CPT Code:	Clinical- 87077, 87153
Additional Comments:	Clinical – Call the laboratory if Listeria is suspected and when specimen is shipped. Food- By request of Epidemiology or Food Safety Branch ONLY for investigation of foodborne disease outbreaks.

MEASLES - See Rubeola

DLS Department:	Virology
OUTREACH Test Code:	MEAE - Measles IgG (EIA)
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

MISCELLANEOUS BACTERIOLOGY

DLS Department:	Bacteriology
OUTREACH Test Code:	MC
Methodology:	Identification Culture PCR and Biochemicals
Availability:	M-F
Turn-around-Time:	48 hours- 10 days
Specimen Requirements:	Pure isolate of culture on tubed solid media on which the organism grows best
Collection Kit/Container:	Submitter packaging
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx
Specimen Handling and Transport:	Provide fresh growth slant; immediately mail at room temperature to be received within 24 hours. Avoid extreme temperatures
Unacceptable Conditions:	
Reference Range:	NA
CPT Code:	87046, 87153
Additional Comments:	Confirmation or Identification of clinically significant or pathogenic organisms

MUMPS

DLS Department:	Virology
OUTREACH Test Code:	Serology(IgG)- MUEG PCR – VIS
Methodology:	EIA/PCR
Availability:	M-F
Turn-around-Time:	2-4 days, PCR Send Out
Specimen Requirements:	Serology- Serum or whole blood in 7 ml red stoppered tube PCR – Buccal swab or Throat Swab collected in viral transport media (M4RT)
Collection Kit/Container:	
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-shipper with cold pack
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack. Ship M4RT frozen if delayed shipping.
Unacceptable Conditions:	Expired M4RT media
Reference Range:	Mumps IgG antibody detected. Indicative of current or past infection, or consistent with immunity. Reference range ≥ 1.1 Index. IgM - Detected/Not Detected, PCR – Not Detected
CPT Code:	Serology - 86735 PCR - 87798
Additional Comments:	

MYCOBACTERIA - See Tuberculosis

DLS Department:	Mycobacteriology
OUTREACH Test Code:	
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

NEISSERIA CULTURE

DLS Department:	Bacteriology
OUTREACH Test Code:	MC
Includes:	N. gonorrhoea and other Neisseria species including N. meningitidis
Methodology:	Identification and serotyping(on sterile sites only)
Availability:	M-F
Turn-around-Time:	48 hours- 10 days
Specimen Requirements:	Pure culture isolate- Martin Lewis or chocolate slant. Specimen must be received within 72 hrs of initial culturing or subculturing. Incubate subcultures 24 hours before shipping.
Collection Kit/Container:	Submitter packaging
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx
Specimen Handling and Transport:	Provide fresh growth slant; immediately mail at room temperature to be received within 24 hours. Avoid extreme temperatures
Unacceptable Conditions:	
Reference Range:	
CPT Code:	87077, 87153
Additional Comments:	Please notify the DLS bacteriology lab when sending cultures.

NEISSERIA GONORRHOEA

DLS Department:	Virology
OUTREACH Test Code:	CTGC
Methodology:	Amplified Nucleic Acid Probe
Availability:	M-F
Turn-around-Time:	24-48 hours
Specimen Requirements:	Endocervical swab, Vaginal swab, Male Urethral swab, Rectal swab, Pharyngeal Swab and Urine
Collection Kit/Container:	Endocervical, Male Urethral, Rectal and Pharyngeal Swabs use Aptima Unisex Kit. Vaginal use Aptima Vaginal Swab Kit Urine use Aptima Urine Kit
Patient Preparation:	Urine and Male Urethral Specimens – Patient should not have urinated for at least 1 hour prior to specimen collection.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-Shipper
Specimen Handling and Transport:	
Unacceptable Conditions:	Swabs collected > 60 days; Urine > 30 days
Reference Range:	Negative
CPT Code:	87591
Additional Comments:	

NEWBORN SCREENING

DLS Department:	Newborn Screening
OUTREACH Test Code:	Order through KY Child
Includes:	See following page for listing of disorders
Methodology:	See individual disorders
Availability:	M-Sat
Turn-around-Time:	48-72 hours For Newborn Screens to be run outside of usual operating hours, contact KY Division of Laboratory Services.
Specimen Requirements:	Heel-stick blood applied to filter paper (Ensure no preservatives or Heparin contamination)
Collection Kit/Container:	Filter paper collection cards obtained through State Lab 502-564-4446
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Newborn Screening
Specimen Handling and Transport:	Mail in envelope. Do not fold. Do not place in plastic bag. For additional instructions, see back of filter paper card.
Unacceptable Conditions:	Specimens with layered blood spots, clotted, separated, or inadequate blood
Reference Range:	See individual disorder
CPT Code:	HCPCS Code: S3620
Additional Comments:	Testing is for infants < 6 months of age Sub-optimal if received >14 days from collection

NEWBORN SCREENING INDIVIDUAL TESTS

DISORDER	METHODOLOGY	REFERENCE RANGE	INDIVIDUAL CPT CODE
ACYLCARNITINES Includes:	MSMS	Within Profile Range	82016
	<p>FATTY ACID DISORDERS: Carnitine uptake defect, Long-chain -3hydroxyacyl-CoA dehydrogenase deficiency (LCHAD), Medium-chain acyl-CoA dehydrogenase deficiency (MCAD), Short-chain acyl-CoA dehydrogenase deficiency (SCAD), Trifunctional protein deficiency, Very long-chain acyl-CoA dehydrogenase deficiency (VLCAD), Carnitine acylcarnitine translocase deficiency, Carnitine palmitoyl transferase deficiency, Glutaric academia type II</p> <p>ORGANIC ACID DISORDERS: 3-methylcrotonyl CoA-Carboxylase Deficiency, Beta-ketothiolase, Glutaric academia type I, Isovaleric acidemia, 3-hydroxy 3-methylglutaric aciduria, Methylmalonic acidemia, Methylmalonic acidemia mutase deficiency, Propionic Acidemia, Multiple carboxylase deficiency, 2-Methyl-3-Hydroxybutyric aciduria, 3-Methylglutaconic aciduria, Isobutryl-CoA dehydrogenase deficiency, Malonic academia, Ethylmalonic encephalopathy, 2-Methylbutyryl-CoA dehydrogenase deficiency</p>		
AMINO ACID DISORDERS Includes:	MS/MS	Within Profile Range	82139
	Argininosuccinate Acidemia, Citrullinemia, Homocystinuria, Maple Syrup Urine Disease, Phenylketonuria, Tyrosinemia, Argininemia, Hyperphenylalaninemia, Hypermethioninemia, Nonketotic Hyperglycinemia		
BIOTINIDASE DEFICIENCY	FIA	>45U/dL	82261
CONGENITAL ADRENAL HYPERPLASIA (CAH)	FIA	Weight Based	83498
CONGENITAL HYPOTHYROIDISM	FIA	TSH: <20 µU/mL T4: Age based	84437, 84443
CYSTIC FIBROSIS	FIA	<58.0 ng/mL	83516
GALACTOSEMIA	Beutler-Baluda (adaptation)	>2.5U/dL	82776
HEMOGLOBINOPATHIES	HPLC	F + A	83021
PEROXISOMAL STORAGE DISORDERS Includes:	FIA, MS/MS	Within Normal Limits	NA
	X-Linked adrenoleukodystrophy disorders (X-ALD))		
SEVERE COMBINED IMMUNODIFICIENCY (SCID)	PCR	Within Normal Limits	81479
SPINAL MUSCULAR ATROPHY (SMA)	PCR	Within Normal Limits	81400
VARIOUS LYSOSOMAL DISORDERS (POMPE, MPS-1, KRABBE)	MS/MS	Full Enzyme Activity	82542,83789

NOROVIRUS

DLS Department:	Virology
OUTREACH Test Code:	NORX
Methodology:	PCR
Availability:	M-F
Turn-around-Time:	24-48 hours
Specimen Requirements:	Raw stool, Emesis
Collection Kit/Container:	Sterile container without preservative. Ship with cold pack.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-shipper with cold pack.
Specimen Handling and Transport:	Specimen should be collected in sterile screw top container within 72 hours of onset of symptoms and refrigerated prior to shipping. DO NOT FREEZE. Ship with cold pack ASAP
Unacceptable Conditions:	
Reference Range:	Negative
CPT Code:	87798
Additional Comments:	Call Epidemiology prior to sending specimens.

ORTHOPOX VIRUS	
DLS Department:	Preparedness
OUTREACH Test Code:	MVPCR
Includes:	Non-variola Orthopoxvirus DNA, including vaccinia, cowpox, monkeypox and ectromelia viruses. Does not detect variola virus.
Methodology:	PCR
Availability:	M-F
Turn-around-Time:	
Specimen Requirements:	Call KY State Lab for submission guidelines
Collection Kit/Container:	Collection swabs must be polyester or Dacron with a plastic or aluminum shaft
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	No Orthopoxvirus DNA detected by real time PCR
CPT Code:	87153
Additional Comments:	Call the Division of Epidemiology (888-9-REPORT) or KY State Lab for specific instructions. Refer to the Sentinel Guidelines on asm.org for more information. This assay does not differentiate vaccinia virus or monkeypox virus from other Orthopoxviruses detected by this assay

OSHA

DLS Department:	Environmental Chemistry
OUTREACH Test Code:	
Methodology:	Chemical & physical analysis; GC-FID and Electrobalance
Availability:	M-F
Turn-around-Time:	15 days
Specimen Requirements:	OSHA air samples
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

PERTUSSIS - See Bordetella Pertussis

DLS Department:	Virology
OUTREACH Test Code:	RESP
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Patient Preparation:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

PRENATAL PROFILE

DLS Department:	Virology
OUTREACH Test Code:	PNP
Includes:	Syphilis IgG, Hepatitis B antigen, Rubella IgG
Methodology:	EIA
Availability:	M-F
Turn-around-Time:	48 hours- 8 days
Specimen Requirements:	Two 7 ml red stoppered tubes
Collection Kit/Container:	
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-Shipper
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack.
Unacceptable Conditions:	
Reference Range:	See individual tests
CPT Code:	Syphilis IgG 86780 HbsAg 87340 Rubella IgG 86762
Additional Comments:	Available through prenatal clinics or local health departments

RABIES IN ANIMALS

DLS Department:	Virology
OUTREACH Test Code:	RABP
Methodology:	Microscopic exam
Availability:	M-F
Turn-around-Time:	48 hours
Specimen Requirements:	Animal head or brain tissue
Collection Kit/Container:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Rabies Packaging
Collection and Packaging Instructions:	
Specimen Handling and Transport:	Heads must be sent ASAP and packaged on cold packs. If shipping will be delayed, specimens should be frozen.
Unacceptable Conditions:	
Reference Range:	No evidence of Rabies seen
CPT Code:	
Additional Comments:	

RICIN

DLS Department:	Preparedness
OUTREACH Test Code:	BTCTR
Methodology:	Time Resolved Fluorescence
Availability:	M-F
Turn-around-Time:	24-48 hours
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	Call the Division of Epidemiology (888-9-REPORT) or the KY State Lab for specific instructions before sending any samples.
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	No ricin toxin detected by Time Resolved Fluorescence
CPT Code:	
Additional Comments:	Must be field screened, collected, packaged and submitted by the proper authorities.

RUBELLA - German Measles

DLS Department:	Virology
OUTREACH Test Code:	Immune Status RUBG
Methodology:	EIA
Availability:	M-F
Turn-around-Time:	48-72 hours
Specimen Requirements:	Serum or whole blood collected in red top tube
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack.
Unacceptable Conditions:	
Reference Range:	Consistent with Immunity, Immunity Reference Range- ≥ 1.1 Index
CPT Code:	86762
Additional Comments:	Immune status- send single specimen. Diagnostic status requires acute and convalescent specimens. Diagnostic specimens need prior of approval from the Division of Epidemiology.

RUBEOLA - Measles

DLS Department:	Virology
OUTREACH Test Code:	Serology (IgG)- MEAE PCR-VIS
Methodology:	EIA/ PCR
Availability:	M-F
Turn-around-Time:	MEAE – 2-4 days, PCR Send Out
Specimen Requirements:	Serum or whole blood collected in 7 ml red stoppered tube for EIA Throat swab, NP swab, or NP aspirate collected in viral transport media (M4RT) or Urine for PCR
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-shipper with cold pack virus
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack. Send M4RT specimen on cold pack. Ship M4RT frozen if delayed shipping.
Unacceptable Conditions:	
Reference Range:	Consistent with Immunity – Immunity Reference Range ≥ 20.0 eu/mL , PCR – Not Detected
CPT Code:	EIA – 86765 PCR- 87798
Additional Comments:	Immune status – send single specimen. Diagnostic status requires acute and convalescent specimens. Diagnostic specimens need prior approval from the Division of Epidemiology.

SALMONELLA

DLS Department:	Bacteriology/ Environmental Microbiology
OUTREACH Test Code:	Stools- SGT Culture isolate- SGT
Methodology:	Isolation Identification Antigenic Testing
Availability:	M-F
Turn-around-Time:	Clinical-8-10 days Food- 5-15 days
Specimen Requirements:	Isolation- Stool Identification and Antigenic Typing- Pure culture isolate. Agar slant: Heart infusion, trypticase soy, blood or chocolate agar
Collection Kit/Container:	Stools - Cary Blair
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Clinical – Enteric Food-Food Kit
Specimen Handling and Transport:	Food specimens - Ship overnight in cooler with cold packs. Call laboratory before sending specimens.
Unacceptable Conditions:	Stools 7 days or older
Reference Range:	
CPT Code:	Stool- 87045 Identification and Antigenic Typing- 87147
Additional Comments:	Stool-Mail immediately after collection; to be received within 24 hours. Provide fresh grown on slants and mail immediately at room temperature. Food- By request of Epidemiology or Food Safety Branch/ONLY for investigation of foodborne disease outbreaks

SHIGELLA

DLS Department:	Bacteriology/ Environmental Microbiology
OUTREACH Test Code:	Stools- SHGR Culture isolate- SHGR
Methodology:	Isolation Identification and antigenic typing
Availability:	M-F
Turn-around-Time:	Clinical-8-10 days Food- 5-15 days
Specimen Requirements:	Isolation- Stool Identification and Antigenic Typing- Pure culture isolate. Agar slant: Heart infusion, trypticase soy, blood or chocolate agar
Collection Kit/Container:	Stools - Cary Blair
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Clinical – Enteric Food-Food Kit
Specimen Handling and Transport:	Food specimens - Ship overnight in cooler with cold packs. Call laboratory before sending specimens.
Unacceptable Conditions:	Stools 7 days or older
Reference Range:	
CPT Code:	Stool- 87045 Identification and Antigenic Typing- 87147
Additional Comments:	Stool-Mail immediately after collection; to be received within 24 hours. Provide fresh grown on slants and mail immediately at room temperature. Food- By request of Epidemiology or Food Safety Branch/ONLY for investigation of foodborne disease outbreaks



STAPHYLOCCUS AUREUS

DLS Department:	Bacteriology
OUTREACH Test Code:	Stool - MEP Pure culture isolate on agar slant- MC
Methodology:	Isolation and Identification
Availability:	M-F
Turn-around-Time:	Stool-3-7 days Pure culture isolate- 24hrs- 7days Food- 5-15 days
Specimen Requirements:	Clinical- Stool Isolation- Pure culture isolate on agar slant: Heart Infusion, trypticase soy, blood or chocolate agar slant Food- By request of Epidemiology or Food Safety Branch/ ONLY for investigation of foodborne disease outbreaks
Collection Kit/Container:	Clinical – Stool -Cary Blair Transport Media
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Enteric Collection Food Kit
Specimen Handling and Transport:	Food specimens - Ship overnight in cooler with cold packs. Call laboratory before sending specimens.
Unacceptable Conditions:	Stools 7 days or older.
Reference Range:	NA
CPT Code:	87046, 87153
Additional Comments:	Clinical testing- Only by request of the Division of Epidemiology. Stool-Mail immediately after collection; to be received within 24 hours. Isolate - Provide fresh grown on slants and mail immediately at room temperature. Food- By request of Epidemiology or Food Safety Branch. ONLY for investigation of foodborne disease outbreaks.

STREPTOCOCCAL INFECTION- See Miscellaneous Culture

DLS Department:	Bacteriology
OUTREACH Test Code:	
Methodology:	
Availability:	
Turn-around-Time:	
Specimen Requirements:	
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	
CPT Code:	
Additional Comments:	

SYPHILIS

DLS Department:	Virology
OUTREACH Test Code:	IGGE
Methodology:	EIA NOTE: Screening and confirmation tests performed according to DLS established algorithm
Availability:	M-F
Turn-around-Time:	48 hours- 5 days
Specimen Requirements:	Serum or whole blood in 7 ml red stoppered tube. CSF
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-Shipper
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack.
Unacceptable Conditions:	
Reference Range:	Normal Range: Non-Reactive
CPT Code:	Syphilis IgG 86780 VDRL 86593 TP-PA 86780
Additional Comments:	

TUBERCULOSIS

DLS Department:	Mycobacteriology
OUTREACH Test Code:	Clinical Samples- SCP Clinical Isolates- TBCP
Includes:	Mycobacterium tuberculosis complex and currently other Mycobacteria other than tuberculosis.
Methodology:	Direct Acid Fast Bacillus Smear, culture identification by DNA Probe, HPLC, or genetic sequencing, PCR from concentrates, drug susceptibility studies on MTB isolates only.
Availability:	M-F (in lab by 9:30am)
Turn-around-Time:	24 hours for direct smear and PCR testing Final results for culture are available in up to 6 weeks
Specimen Requirements:	Clinical Samples- Sputum, bronchial wash, bronchial alveolar lavage (BAL), fresh tissue, spinal fluid, pleural fluid, pus, urine, other body fluids. (No stool) Clinical Isolates- Referred isolates for identification and drug susceptibility studies
Collection Kit/Container:	Isolates- Mailing container furnished by submitter Ensure collection container lids are screwed on correctly and tightly to prevent leakage.
Patient Preparation:	Submit 3 specimens(preferably over 3-5 days), but as quickly as over 24 hours (not optimal) Early morning sputa(at least 5ml) are optimal(at least 1 specimen out of 3 must be early morning Sputa, suctioned sputa, saline-induced sputa, and invasively obtained specimens (BAL, bronchial washes and tissues) from other times are also permitted

TUBERCULOSIS CONTINUED

Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Sputum Collection
Specimen Handling and Transport:	Clinical Samples- mail immediately after collection; to be received within 24 hours; cold packs preferred-room temperature acceptable. Clinical Isolates- Provide fresh growth on media; ship immediately at room temperature; avoid extreme temperatures
Unacceptable Conditions:	Volumes less than 2ml of sputum will have a disclaimer.
Reference Range:	No acid fast bacilli
PCR Testing:	Smear positive specimens should be sent for PCR if no prior diagnosis of TB infection has been made. Testing of smear negative specimens requires prior approval and consultation with the TB program (502-564-4276)
CPT Code:	87015, 87116, 87143, 87149

Additional Comments: Do not create "new" order on existing patients in the Outreach system. Search for the patient and add order so the entire TB history on the patient remains together. It is important to indicate in the ask it at order questions what TB drugs and when TB drugs were administered to the patient.

Do not cover media growth with patient labels. Place label on bottom portion or right below cap so growth on slant can be viewed through tube.

TULAREMIA

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	PCR/ Culture Identification
Availability:	M-F
Turn-around-Time:	PCR 24-48 hours Culture 4 days
Specimen Requirements:	Pure culture isolate on tubed chocolate agar
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	Mailing container furnished by submitter
Unacceptable Conditions:	
Reference Range:	PCR-"No Francisella tularensis DNA detected by real-time PCR." Identification of organism submitted
CPT Code:	PCR 87153 Identification 87040
Additional Comments:	Call the Division of Laboratory Services for specific instructions before sending any specimens. Refer to the Sentinel Guidelines on asm.org for more information.

VARICELLA ZOSTER (CHICKENPOX)

DLS Department:	Virology
OUTREACH Test Code:	Serology- VZE Molecular - HSVP
Methodology:	Serology EIA Molecular- Isothermal Amplification Technology
Availability:	M-F
Turn-around-Time:	48-72 hours
Specimen Requirements:	Serology- Serum or whole blood in 7 ml red stoppered tube Molecular- Lesion swab collected in viral transport media
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-shipper with Cold Pack
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. Ship on cold pack.
Unacceptable Conditions:	
Reference Range:	Serology: Consistent with Immunity – Immunity Reference Range >20.0 eu/mL Molecular – Varicella Zoster Virus DNA Not Detected
CPT Code:	Serology 86787 Molecular 87798
Additional Comments:	Single serum for immune status. Send Acute and Convalescent sera for diagnosis

VIBRIO CHOLERAЕ

DLS Department:	Bacteriology
OUTREACH Test Code:	VIB
Methodology:	Identification and Typing
Availability:	M-F
Turn-around-Time:	48 hours- 7 days
Specimen Requirements:	Clinical - Stool Identification and Typing- Pure culture isolate
Collection Kit/Container:	Stool – Cary Blair Culture Isolate: Submitter packaging
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Enteric Collection
Specimen Handling and Transport:	
Unacceptable Conditions:	Stool 7 days or older
Reference Range:	
CPT Code:	87046
Additional Comments:	Call the laboratory if Vibrio is suspected and before shipping specimen.

Note: For bacteriological and chemical water analyses, all samples must be collected and submitted by authorized collectors. Samples not requiring chain of custody precautions must arrive in the laboratory within 30hrs of collection and are to be kept at <8°C during transport. Use FedEx label provided. Recommend sample collection on Monday, Tuesday, or Wednesday and mail the same day. Samples requiring chain of custody precautions must arrive in the laboratory (DLS or another certified laboratory) within 6hrs of collection and are to be kept at <8°C during transport. If you have any questions about submission of water samples, contact DLS at 502-564-4446.

WATER BACTERIOLOGICAL ANALYSIS

DLS Department:	Environmental Microbiology
OUTREACH Test Code:	WATERB
Includes:	Total coliform count and E. coli
Methodology:	LTB/BGGB(SM9921D), Colilert(SM9223B)
Availability:	M-TH
Turn-around-Time:	Recreational and Drinking water- 24-48 hours Water from dairies- 2-4 days
Specimen Requirements:	Recreational water, Drinking water from private supplies, Water from dairies. Follow registered sanitarians protocols.
Collection Kit/Container:	100ml Collection bottle containing sodium thiosulfate
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Water Sample Collection
Specimen Handling and Transport:	Transport within 30hrs of collection on cold packs.
Unacceptable Conditions:	> 30 hours post collection on all waters <100ml, Expired collection bottle
Results Include:	Acceptable limits for drinking water: <1 per 100ml (none detected)
Additional Comments:	

WATER BACTERIOLOGICAL ANALYSIS LEGIONELLA

DLS Department:	Environmental Microbiology
OUTREACH Test Code:	WLEG
Includes:	L. pneumophila
Methodology:	Legiolert
Availability:	M-F
Turn-around-Time:	Drinking and non-drinking water
Specimen Requirements:	Recreational water, Drinking water from private supplies, Water from dairies. Follow registered sanitarians protocols.
Collection Kit/Container:	100ml Collection bottle containing sodium thiosulfate
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Water Sample Collection
Specimen Handling and Transport:	Transport within 30hrs of collection on cold packs.
Unacceptable Conditions:	> 30 hours post collection on all waters <100ml, Expired collection bottle
Results Include:	<1 per 100ml (none detected)
Additional Comments:	Positive samples may be reported before 7 days.

WEST NILE VIRUS

DLS Department:	Virology
OUTREACH Test Code:	West Nile IgM- WNM
Methodology:	Serology EIA
Availability:	Weekly
Turn-around-Time:	2-4 days
Specimen Requirements:	2ml Serum or whole blood in 7ml red stoppered tube, CSF
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Multi-shipper with cold pack
Specimen Handling and Transport:	Specimen should be stored at 2-8°C prior to shipping. Ship ASAP. If possible, ship on cold pack. CSF can be refrigerated or frozen prior to shipment.
Unacceptable Conditions:	
Reference Range:	Antibody Not Detected; Antibody Not Detected Range <0.90
CPT Code:	86788
Additional Comments:	Send acute and convalescent sera

YERSINIA (PLAGUE)

DLS Department:	Preparedness
OUTREACH Test Code:	MC
Methodology:	Culture Identification PCR
Availability:	M-F
Turn-around-Time:	Culture: 4-5 days PCR: 24- 48 hours
Specimen Requirements:	Pure culture isolate on tubed media
Collection Kit/Container:	
Collection and Packaging Instructions:	
Specimen Handling and Transport:	Mailing container furnished by submitter
Unacceptable Conditions:	
Reference Range:	No <i>Y. pestis</i> DNA detected by real-time PCR assay Identification of organism submitted
CPT Code:	Identification -87070 PCR - 87153
Additional Comments:	Refer to the Sentinel Guidelines on asm.org for more information.

ZIKA

DLS Department:	Preparedness/Virology
OUTREACH Test Code:	IgM – MVS, PCR – MVPCR
Methodology:	PCR
Availability:	M-F
Turn-around-Time:	IgM – Send Out PCR:24- 48 hours
Specimen Requirements:	At least 1.5ml serum and CFS, 3ml urine
Collection Kit/Container:	Collect both Serum and Urine if possible on all Zika submissions IgM -Collect one SST tube PCR- Collect two SST tubes and at least 3ml of urine. Urine should always be collected with a patient-matched serum specimen.
Collection and Packaging Instructions:	https://chfs.ky.gov/agencies/dph/dls/Pages/default.aspx Zika Virus Collection and Packaging
Specimen Handling and Transport:	
Unacceptable Conditions:	
Reference Range:	Serum -No Zika, dengue, or chikungunya RNA detected by rRT-PCR Urine- No Zika RNA detected by rRT-PCR
CPT Code:	87662 – PCR 86794 - IgM
Additional Comments:	Sample must have prior approval from Epidemiology before sending to DLS. (rRT-PCR) assay allows for testing of serum and cerebrospinal fluid for Zika, Chikungunya, and Dengue viruses; urine may only be tested for Zika virus Serum and cerebrospinal fluid to detect anti-Zika IgM antibodies