



Specimen Submission Guidelines for Microbiology Tests

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- Pack and separate specimens collected for submission accordingly to avoid contamination in clean individual plastic bags.
- **AVOID** using staples as they can puncture the packing material and thus can result in contamination of the specimens. Secure plastic bags with rubber bands or use zip-lock bags.
- Label packed specimens legibly with **specimen type**, **specimen identification codes** and the **collection date**. Use permanent marker or self-stick labels.
- Place the packed specimens into a larger plastic bag held secure with rubber bands to prevent leakage.
- Pack specimens in a **styrofoam box or suitable transport box** with sufficient **refrigerant materials (ice/gel packs or dry ice)** and courier or hand-deliver to the laboratory along with the Submission form which clearly states the Customer name and address, Billing information, Sender particulars, Specimen details, etc.
 - **AVOID** pooling organ/tissue specimens together to avoid false negative or inaccurate results.
 - Use sterile containers or plastic bags whenever possible.
 - Bacteria isolation and identification must be carried out before performing antibiotic sensitivity tests.
 - For faster and more accurate results in bacterial identification, [21BACI-B038] is recommended which utilizes Automated Identification System capable of identifying 500 different bacteria up to species level. The list of identifiable bacteria can be found at www.vfad.com.my/bacteria-id
 - Sampling materials such as sterile gauze and cotton swabs, buffered peptone water (BPW) and agar plates are available for sale from the laboratory.





SPECIMEN	SPECIMEN COLLECTION GUIDELINES	RELEVANT TESTS
Organ/ Tissue	<ul style="list-style-type: none"> o Collect 25-50 g in clean plastic bags. o For day-old chicks (DOC), collect a pool of 5 livers, 5 yolk sacs and 5 gastrointestinal tracts (GIT) (or any other suitable organs) in separate plastic bags. o For larger birds and other animals, collect small portions of liver and GIT (or any other suitable organs) in separate plastic bags. o Tie securely with rubber bands. 	21BACI-B038 Bacterial Identification (Up to Species Level) 21BACI-B002* General Bacterial Identification (Up to Genus Level) 21BACI-B001 Salmonella Isolation & Serotyping 21BACI-B003 Vancomycin Resistant Enterococci Screening 21BACI-B004* Vancomycin Resistant Enterococci Species Typing 21BACI-B005* <i>Staphylococcus aureus</i> 21BACI-B006 Methicillin-Resistant <i>Staphylococcus aureus</i> 21BACI-B007* Vancomycin-Resistant <i>Staphylococcus aureus</i> 21BACI-B008* <i>Shigella</i> spp. 21BACI-B010* <i>Escherichia coli</i> Isolation & Identification 21BACI-B011* <i>Clostridium perfringens</i> and <i>Clostridium</i> spp. 21BAMC-B013 Enterobacteriaceae Count (Culture & Enumeration) 21BAMC-B014* <i>Clostridium perfringens</i> Count (Culture & Enumeration) 21BAMC-B015 Standard Plate Count (Culture & Enumeration) 21BAMC-B016 Total Coliform Count (Culture & Enumeration) 21BAMC-B017 <i>E. coli</i> Count (Culture & Enumeration) 21BAMC-B018 Total Yeast and Mould Count (Culture & Enumeration) 21BAMC-B019 Yeast Count (Culture & Enumeration) 21BAMC-B021* <i>Pseudomonas</i> Count (Culture & Enumeration) 21BAMC-B022 Coagulase-Positive Staphylococci Count (Culture & Enumeration) 21BAMC-B023* Lactic Acid Bacteria Count (Culture & Enumeration) 21BAMC-B030 Antimicrobial Sensitivity/ Susceptibility Test - 5 Discs 21BAMC-B031 Antimicrobial Sensitivity/ Susceptibility Test - 10 Discs 21BAMC-B032* Minimum Inhibition Concentration - Broth Dilution 21BAMC-B033* Minimum Inhibition Concentration - Agar Dilution
Fluff & Egg Shell	<ul style="list-style-type: none"> o Collect 25-50 g in clean plastic bags. o Tie securely with rubber bands. 	
Chick Box Liner	<ul style="list-style-type: none"> o Collect 25-50 g of soiled portions of liners in clean plastic bags. o Tie securely with rubber bands. 	
Gauze Swabs	<ul style="list-style-type: none"> o Use gauze swabs for nests, floor, egg sorting table, surfaces, etc. o Moisten the gauze swabs with sterile BPW (or any other suitable solution). o Invert the plastic bag over hand to act as glove and expose the swab. o After swabbing, draw back the plastic to its original position. o Tie securely the outer surface of the bag with rubber bands. 	





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Cotton Swabs	<ul style="list-style-type: none"> Use cotton swabs for faecal, cloacal, throat swabbing, etc. Moisten the swabs with sterile BPW (or any other suitable solution). Place soiled or specimen swabs in the plastic bag provided or in a sterile bottle. Tie securely with rubber bands. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BAAR-B044 Total Antibiotic Residues Screening Test (Egg & Swab)</p>
Feed/Other Solid Products	<ul style="list-style-type: none"> Collect ~100 g in clean plastic bags. Tie securely with rubber bands. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BACI-B009* Sterility Test 21BACI-B055* <i>Vibrio parahaemolyticus</i> 21BACI-B056* <i>Vibrio cholerae</i> 21BAMC-B036* <i>Bacillus cereus</i> Count (Culture & Enumeration)</p>
Water/ Liquid Products	<ul style="list-style-type: none"> Collect ~500 mL in clean, leak-proof plastic bottle or container. Tighten bottle cap to prevent leakage. Place bottle in a clean plastic bag and seal. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BAMC-B035 Bacteriological Water Quality Indicator 21BACI-B009* Sterility Test 21BACI-B055* <i>Vibrio parahaemolyticus</i> 21BACI-B056* <i>Vibrio cholerae</i></p>
Milk	<ul style="list-style-type: none"> Collect 100-500 mL in clean, leak-proof plastic bottle or container. Tighten bottle cap to prevent leakage. Place bottle in a clean plastic bag and seal. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BACI-B042* <i>Campylobacter</i> spp. 21BACI-B043* <i>Listeria</i> spp. 21BAAR-B012 Total Antibiotic Residues Screening Test (Meat & Milk)</p>



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Meat	<ul style="list-style-type: none"> o Collect 25-50 g in clean plastic bags. o Tie securely with rubber bands. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BACI-B042* <i>Campylobacter</i> sp. 21BACI-B043* <i>Listeria</i> sp. 21BAAR-B012 Total Antibiotic Residues Screening Test (Meat & Milk)</p>
Eggs	<ul style="list-style-type: none"> o Place eggs into suitably sized egg trays for padded protection. o Fasten the egg tray and tie with string or rubber bands. o Indicate on submission form if a few eggs are to be pooled as one sample. o Pool of 5 eggs is recommended for Total Antibiotic Residues Screening Test - [21BAAR-B044]. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BACI-B042* <i>Campylobacter</i> sp. 21BACI-B043* <i>Listeria</i> sp. 21BAAR-B044 Total Antibiotic Residues Screening Test (Egg & Swab)</p>
Raw/ Processed Food	<ul style="list-style-type: none"> o Collect ~100 g in clean plastic bags. o Tie securely with rubber bands. 	<p>Same as above (21BACI-B001, B002*, B003, B004*, B005*, B006, B007*, B008*, B010*, B011*, B038, 21BAMC-B013, B014*, B015, B016, B017, B018, B019, B021*, B022, B023*, B030, B031, B032*, B033*)</p> <p>21BACI-B042* <i>Campylobacter</i> sp. 21BACI-B043* <i>Listeria</i> sp. 21BACI-B055* <i>Vibrio parahaemolyticus</i> 21BACI-B056* <i>Vibrio cholerae</i> 21BAMC-B036* <i>Bacillus cereus</i> Count (Culture & Enumeration)</p>
Agar Plates (for Air Quality Monitoring)	<ul style="list-style-type: none"> o Expose agar plates for the duration of time required. o Seal plates with Parafilm and pack in a clean plastic bag. o Indicate on submission form the type of agar medium used and the duration of exposure. 	<p>21BAMC-B025* Standard Plate Count (Plate Counting) 21BAMC-B026* Coliform / <i>E. coli</i> Count (Plate Counting) 21BAMC-B027* Total Yeast and Mould Count (Plate Counting) 21BAMC-B028* <i>Pseudomonas</i> Count (Plate Counting)</p>



SPECIMEN	SPECIMEN COLLECTION GUIDELINES	RELEVANT TESTS
Pure Bacteria Culture on Agar Plate/Slant	<ul style="list-style-type: none"> o Streak bacteria on agar plate/slant. o Seal plate/bottle and pack in a clean plastic bag. 	21BAMC-B030 Antimicrobial Sensitivity/ Susceptibility Test - 5 Discs 21BAMC-B031 Antimicrobial Sensitivity/ Susceptibility Test - 10 Discs 21BAMC-B032* Minimum Inhibition Concentration – Broth Dilution 21BASV-B033* Minimum Inhibition Concentration - Agar Dilution 21BAMC-B034* Freeze Drying – Bacteria 21BAMC-B054* Cryopreservation of Bacteria and Yeast
Detergent/ Plant Extracts/ Solid Products/ Liquid Products	<ul style="list-style-type: none"> o For solid products, collect ~10 g in clean plastic bags and tie securely with rubber bands. o For liquid products, collect ~10 ml in sterile, leak-proof bottle or container. Tighten bottle cap to prevent leakage and place bottle in a clean plastic bag and seal. 	21BAMC-B046* Anti- <i>Salmonella</i> activity assay 21BAMC-B047* Anti-VRE activity assay 21BAMC-B048* Anti-E. coli activity assay 21BAMC-B049* Anti- <i>Staphylococcus aureus</i> activity assay 21BAMC-B050* Anti- <i>Pseudomonas</i> activity assay 21BAMC-B051* Anti- <i>Bacillus</i> activity assay 21BAMC-B052* Anti-Yeast activity assay 21BAMC-B053* Anti-MRSA activity assay

TEST TYPE	SPECIMEN REQUIREMENTS
Bacterial Isolation & Identification; Bacterial Culture & Enumeration	Organs/tissue, fluff & egg shell, chick box liner, swabs, feed, water, milk, meat, eggs, food, etc.
Environmental/Hatchery Monitoring	Agar plates
Antibiotic Residues Screening	Meat, milk, eggs, swabs
Microbial Inhibition – Antibiotic Sensitivity, Minimum Inhibition Concentration	Pure bacterial cultures
Freeze-drying & Cryopreservation of Bacteria and Mould & Yeast	Pure bacterial cultures
Antimicrobial Activity e.g. Anti-<i>Salmonella</i> activity assay	Detergents, plant extracts, solid/liquid products



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ANTIBIOTIC DISCS FOR ANTIBIOTIC SENSITIVITY TESTS

Amoxicillin/clavulanic acid, ampicillin, cefoxitin, ceftiofur, cephalixin, cephalothin, chloramphenicol, ciprofloxacin, colistin, doxycycline, enrofloxacin, erythromycin, florfenicol, flumequine, fosfomycin, fusidic acid, kanamycin, lincomycin, metronidazole, nalidixic acid, nitrofurantoin, norfloxacin, rifampicin, spectinomycin, spiramycin, streptomycin, tetracycline, tilmicosin, trimethoprim

*(subject to availability of antibiotic discs)

[Disclaimer: Tests marked "" in this guidelines are "Not SAMM Accredited" and are not included in the SAMM Accreditation Schedule of this laboratory]*