

A24 – CALA Checklist for Microbiology

Revision 3.17 – March 22, 2012

Laboratory Name: _____

Appendix Name: _____

Appendix Number: _____

Assessor: _____

Date: _____



CALA

Laboratory Accreditation

CALA CHECKLIST FOR MICROBIOLOGY

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
01		DOCUMENT CONTROL								
01	4.3	<p><u>Document review</u>: verify that there is a documented method.</p> <p><u>Implementation</u>: verify that the current authorized test method and necessary supporting work instructions are available to the analyst</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
02		TEST METHOD VALIDATION/VERIFICATION								
01	5.4	<p>Verify that there are method validation results, and a statement that the method is fit for the intended use. The level and rigour of validation will depend on whether there are modifications from the reference method or if it is an in-house developed method (see CALA Policy A12). Modifications from the reference method shall be documented. As a minimum, the lab shall maintain records of:</p> <ul style="list-style-type: none"> • Successfully participate in PT as per P02-03 Proficiency Testing Policy for Accreditation; • Repeatability- estimated using a minimum of 10 replicates of a known positive sample, or duplicate data collected over a period of time; • Qualitative tests are based upon performance history and media QC; • Estimation of measurement uncertainty. <p>NOTE: for records of Method Validation, cite B.03.09 in A02</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
03		TEST METHOD								
01	4.2.1 5.4.1	<p>Verify that all necessary successive steps in the test procedure are adequately documented in the test method, and are based on the latest valid edition of a published reference method, including:</p> <ul style="list-style-type: none"> • Details on reagent preparation, storage and shelf life; • Procedure for media preparation, including quality control and safety procedures for handling of media (e.g., m-Endo-LES is known carcinogen); • Colony counting and reporting criteria; • Equipment, supplies, etc. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
04		SAMPLING								
01	5.7	<p>Verify that the sample history requirements are 1) documented and readily available and 2) appropriate and implemented; i.e.,</p> <ul style="list-style-type: none"> • procedures specified to protect integrity of the sample during transport, including: <ul style="list-style-type: none"> • sterile sample bottles; • chlorinated samples in sterilized bottles pretreated with sodium thiosulphate; • holding time of samples must not exceed time specified by appropriate method/regulation; • samples kept cool during transport. • minimum 1 bottle from each lot of new, certified bottles verified for sterility or for influence on parameters 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
05		TEST METHOD - STOCK CULTURES								
01	5.4.1 5.4.2	<p><u>Document review:</u> verify that procedures are in place for maintenance of stock cultures, and that they are documented and readily available.</p> <p><u>Implementation:</u> verify that procedures are followed:</p> <ul style="list-style-type: none"> if organism is purchased: verify that there is a certificate with the organism name, plus confirmation on selective medium if organism was isolated from the environment: verify that it was properly characterized, and that confirmation on selective medium is performed annually 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
06		METHOD QUALITY CONTROL								
01	5.9	<p>Verify that method (and media) quality control is 1) either included or referenced in the test method and 2) implemented; i.e.,</p> <p>Method QC</p> <ul style="list-style-type: none"> perform duplicates to monitor within-run precision for quantitative methods; see P07; method blanks; monthly inter-technician comparison readings to monitor precision; monthly parallel analyses on at least one positive sample to monitor inter-technician method precision; confirmation of samples organisms done routinely as per reference method, per technician for membrane filtration methods (see interpretation in P07); 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation				
			1	2	3	Comments	1	2	3	Comments	
06		METHOD QUALITY CONTROL (continued)									
		<p>Media QC</p> <ul style="list-style-type: none"> records kept of all QC performed on media including date of preparation, lot number of dry reagents and/or purchased media, results of QC testing, etc. (see 11.01); pH of medium checked after autoclaving (or preparation); sterility checked per batch of media; positive control culture (traceable to ATCC or equivalent) performed per batch of media; if media is used for Mf, then the positive control must be applied using MF; for MF methods, compare positive control cultures on selective and non-selective media once per <u>batch</u> of media and compare recovery rates of the positive control culture (see P07); negative control culture (traceable to ATCC or equivalent) performed per batch of media; negative control can be streaked on the media; quantitative methods using non-selective media only: compare recovery rates on an old/previous batch of media to a new batch, using the same technique to do test (e.g., MF or spread plate or pour plate); <p>NOTE: for the definition of a <i>batch</i>, refer to the Interpretation in P07.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
07		TEST METHOD CONTENT - OTHER WORK INSTRUCTIONS (Procedures)								
01	5.4.1	<p>Verify that all necessary supporting work instructions are documented and readily available; e.g.,</p> <ul style="list-style-type: none"> • glassware cleaning procedures; • sample disposal procedures; • supporting test methods (e.g., pH); • equipment instruction manuals; • requisite reference texts; • computer software related procedures (including LIMS procedures, such as data entry and approval); • disinfection/sterilization and disposal of biohazardous material. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
08		CONDUCT OF TESTING								
01	5.4.1 4.2.1	Verify that the test procedure and all supporting work instructions are performed as documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
09		EQUIPMENT								
01	5.5.1 5.5.2 5.5.4 5.5.12	<p>Verify that all instruments required for the test procedure are available, uniquely identified, functioning properly, and safeguarded from adjustments that would invalidate results including:</p> <ul style="list-style-type: none"> • fridges for sample and reagents storage are maintained within the specified temperature range and temperatures monitored and recorded daily; • stereomicroscope (or equivalent) and incident light for counting colonies on m-Endo agar (see P07); 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
		EQUIPMENT (continued)								
		<ul style="list-style-type: none"> Quebec colony counter (or equivalent) for pour plate and spread plate method(s); Bunsen burners or other flame source available and functioning properly; incubators available and functioning properly; i.e., adequate humidity; maintained within the specified temperature range; temperatures monitored and recorded at least once daily; and spatial variability in incubators checked annually (see PO7); water baths available and functioning properly; i.e., maintained within the specified temperature range; temperatures monitored and recorded at least once daily (suggest continuous monitoring or twice daily using a min-max thermometer); availability of back up equipment or back up plan in case of equipment failure (cite B.04.01); autoclave available; procedure in place to ensure autoclaves is functioning properly (e.g., monthly test of autoclave performance using a spore strip or spore suspension, capable of demonstrating a 6 log kill of Bacillus stearothermophilus; log of autoclave use - i.e., items, temperature, pressure, time (cite O7.01); a regularly scheduled maintenance program for each service where service was required (cite B.04.02). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
09		SUPPORT EQUIPMENT								
02	5.2.2	Verify that all support equipment required for the test procedure is available, functioning properly, and where necessary, calibrated; e.g., computers, pH meter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
09		OUT OF SERVICE EQUIPMENT								
03	5.5.7 5.5.9	Verify that out of service equipment is clearly isolated or clearly labeled or marked as being out of service, and that equipment is checked and validated before return to service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
09		EQUIPMENT REQUIRING CHECKS OR CALIBRATION								
04	5.2.2 5.5.5 5.5.8	Verify that all requiring checks or calibration is labeled to indicate the status, including the date last checked/calibrated and expiry criteria or date when due* (e.g., checks of biosafety cabinet, calibration of semi-automated pipettes and thermometer) * not required for equipment checked daily or as-used; see P07	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
10		SUPPLIES - AVAILABILITY								
01	4.6.2 5.5.1	Verify that all supplies required for the test procedure are available and meet requisite requirements and/or specifications (includes test organism, reagents, reference materials); specifically: <ul style="list-style-type: none"> records of reference standard/materials certificates; if producing water in house and it is used to dilute samples, or make media or reagents, check conductivity daily or as-used and have procedures in place to verify that the water is not having a negative impact on the conduct of the test (see P07). if purchasing distilled water, and it is used to dilute samples or to make media or reagents, have procedures in place to verify that the water is not having a negative impact on the conduct of the test. A certificate shall be obtained from the supplier prior to use (see P07). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
10		SUPPLIES - AVAILABILITY (continued)								
		<ul style="list-style-type: none"> hydrophobicity of filters tested (e.g., "charcoal" test or confluent growth or other method); inhibitory effects of filters tested by comparison of recoveries on a membrane filter and a spread plate; accuracy of dispensing apparatus checked regularly; sterile rinse buffer/ distilled water available; disinfectants available and used routinely for cleaning bench area. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10		SUPPLIES - STORAGE								
02	5.3	Verify that all supplies are stored under appropriate conditions (as specified in reference method or by regulator, etc.) and in a manner which satisfies requirements for safety, security, separation of incompatible materials, and see ease retrieval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10		SUPPLIES - LABELING								
03	4.13.2	Verify that all reagents and media are labeled with material, concentration or purity, date prepared and /or expiry date; verify that the media is appropriately labeled, stored under proper conditions, and storage times are met	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10		SUPPLIES - TEST ORGANISM ID								
04	4.13.2	Verify that all information required to properly identify test organisms appear on their containers (i.e., name or number of organism, and date subcultured)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Item	Clause	Requirement	Document Review				Implementation			
			1	2	3	Comments	1	2	3	Comments
10		SUPPLIES - LABWARE								
05	5.5.1	Verify that all labware is adequate cleaned and, where required, labware quality control incorporates analytical testing; specifically, <ul style="list-style-type: none"> • use sterile labware; • filter units cleaned thoroughly; • procedures in place to ensure there is no carryover between membrane filtrations (e.g., UV boxes, hot water). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11		RECORD KEEPING								
01	4.13.2 4.9 4.13.2 5.5.5 4.13.2 5.6	Maintain records related to the performance of the test method; e.g., <ul style="list-style-type: none"> • analyst worksheet or notebook (1); • record of non-conformances and actions taken (2); • reagents preparation log (3); • equipment maintenance log (4); • stock culture maintenance log (5); • records of gravimetric traceability (6); • records of volumetric traceability (7); • records of temperature traceability (8). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- (1) includes, as appropriate, calibration data, test date (including QC data), experimental variables (e.g., temperature, etc.); analyst ID; sample ID; equipment ID; test organism lot no.; test method ID; date and time of test.
- (2) includes as appropriate, non-conformances related to: test method variances; sample history; method performance; interferences; and data validation.
- (3) includes, as appropriate, supplier, grade, batch no.; dates of preparation of verification; measurement of weights, volumes, time intervals, temperatures and related calculations; relevant processes (e.g., pH adjustment, sterilization); verification results; discard date.
- (4) includes, as appropriate, identity of the equipment and its software; manufacturer, model, serial no.; checks that equipment complies with laboratory specifications; date commissioned; repair and maintenance history; calibration history; any damage, malfunction or modification to the equipment; location.

- (5) includes, as appropriate, organism name; date of subculture and initial of technician; purity check on non-selective medium each time the working subculture is transferred (generally, this is done weekly)
- (6) includes, as appropriate, traceability of balance and/or weights to a national standard and daily or as-used checks. (See A61- CALA Traceability Policy)
- (7) includes, as appropriate, traceability of auto pipettes, dilutors, etc., that play a defining role in analytical accuracy, and daily or as-used checks (see A61 - CALA Traceability Policy).
- (8) includes, as appropriate, traceability of working thermometers to a national standard for those working thermometers that measure temperatures that play a defining role in analytical uncertainties (see A61 - CALA Traceability Policy).

		OTHER ITEMS TO CHECK; CITE A02	1	2	3
		<ul style="list-style-type: none"> • adequate separation between incompatible activities (cite B.02.05) • smooth surface on floors, walls, ceiling and benches (cite B.02.01) • person responsible for signing authority and data validation possesses the technical knowledge relevant to the scope of accreditation (cite B.01.01) • technicians have demonstrated competency relative to the test being accredited (cite B.01.01) • appropriate reporting of non-detects, taking dilution factors and sample volumes into consideration (cite B.09.02) • procedures in place for reporting of adverse results to authorities having jurisdiction (cite A.03.01) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Assessor Notes:

Note: This table (below) is a summary of common media types/methods, and generally accepted incubation times and temperatures. It is not meant to be a prescriptive requirement and can be used as a guideline. If in doubt, check the reference method

Parameter	Medium	Incubation Temp. (°C)	Incubation Time (hours)	Suggested Positive Control Culture	Suggested Negative Control Culture
PA	PA Broth	35 +/- 0.5	24/48/72	<i>E. coli</i>	Not applicable
PA Colilert	Colilert Media	35 +/- 0.5	Check manufacturer specifications	<i>Enterobacter</i> (TC only) <i>E. coli</i> (TC & EC)	<i>Staphylococcus aureus</i>
HPC	m-HPC PCA	35 +/- 0.5	46 +/- 2	<i>E. coli</i> (use almost anything)	Not applicable
Total Coliforms	m-ENDO LES	35 +/- 0.5	23 +/- 1	<i>E. coli</i>	<i>Staphylococcus aureus</i>
Total Coliforms <i>E. coli</i>	DC Medium	35 +/- 0.5	23 +/- 1	<i>Citrobacter</i> (TC only) <i>E. coli</i> (TC & EC)	<i>Staphylococcus aureus</i>
Total Coliforms and <i>E. coli</i>	mColi-Blue	35 +/- 0.5	23 +/- 1	<i>Enterobacter</i> (TC only) <i>E. coli</i> (TC & EC)	<i>Staphylococcus aureus</i>
<i>E. coli</i>	FC BCIG	44.5 +/- 0.2	20 +/- 2	<i>E. coli</i>	Fecal streptococci
Fecal Coliforms	m-FC m-TEC	44.5 +/- 0.2	24 +/- 2	<i>E. coli</i>	Fecal streptococci
<i>Staphylococcus aureus</i>	Baird Parker MSA	35 +/- 0.5	46 +/- 2	<i>Staphylococcus aureus</i>	<i>E. coli</i> (or any coliform)
<i>Pseudomonas aeruginosa</i>	M PA agar Pseud. Agar F	41.5 +/- 0.5	Check reference method	<i>Pseudomonas aeruginosa</i>	<i>E. coli</i> (or any coliform)
Fecal streptococci	m-Enterococcus	35 +/- 0.5	46 +/- 2	Fecal streptococci	<i>E. coli</i> (or any coliform)
Enterococcus	ME agar EIA substrate	41 +/- 0.5 41 +/- 0.5	46 +/-2 20 minutes	Fecal streptococci	<i>E. coli</i> (or any coliform)
Coliforms confirmatory test	Lauryl Tryptose Lactose Purple EC Broth	35 +/- 0.5	46 +/- 2	<i>Enterobacter</i> or <i>E. coli</i>	Fecal streptococci
<i>E. coli</i> confirmatory test	EC-MUG	44.5 +/- 0.2	24 +/- 2	<i>E. coli</i>	Fecal streptococci
Fecal Coliforms	A-1 Broth	35 +/- 0.5 44.5 +/- 0.2	3 +/- 0.5 21 +/- 2	<i>E. coli</i>	<i>Streptococcus faecalis</i>