



Republic of the Philippines
Department of Health
**ASSESSMENT TOOL FOR ACCREDITATION OF
LABORATORY FOR DRINKING WATER ANALYSIS**

Annex A
A.O. No. 2020- 0031

I. HEALTH FACILITY INFORMATION

Name of Facility: _____

Address: _____

Geographic Coordinates of the Facility: Latitude: _____ Longitude: _____

Email Address: _____ Tel. / Fax Nos.: _____

Name of Owner: _____ Tel. / Fax Nos.: _____

Name of Head of Laboratory: _____

Accreditation No.: _____ Expiry Date : _____

Date Issued: _____

Type of application: ☐ New ☐ Renewal ☐ Others: (specify)

Classification:

Institutional Character: ☐ Institution-based ☐ Freestanding

Ownership: ☐ Government ☐ Private
☐ National ☐ Single Proprietorship
☐ Local ☐ Corporation
☐ Others: (specify) ☐ Others: (specify)

Service Capability:

- ☐ Category A. Microbiological
☐ Category B. Physical Chemical
☐ Category C. Microbiological-Physical-Chemical

PART 1 - SERVICES

***Notes:** In the appropriate box, place a check mark (✓) if the LDWA is compliant or X-mark if not compliant.
Conduct document review of at least 10 sample documents.

CRITERIA	INDICATOR	EVIDENCE	AREAS	COMPLIED	REMARKS
I. LEADERSHIP AND MANAGEMENT					
A. MANAGEMENT REVIEW					
Standard: The provider organization's management team provides leadership, acts according to the organization's policies and has overall responsibility for the organization's operation, and the quality of its services and its resources					
1. Organizational Structure/Chart	Presence of organizational structure	OBSERVE Observe if the organizational structure / chart is posted in conspicuous area.	Lobby		
2. The organization and its services develop their vision, mission and corporate goals based on agreed-upon values	Presence of written vision, mission, and goals of the laboratory and all services	DOCUMENT REVIEW Written vision, mission and goals OBSERVE Posted vision and mission in a conspicuous area	Laboratory and Administrative Services		
3. The organization and its services develop their policies and procedures.	Written policies and procedures manual for all services	DOCUMENT REVIEW Written Policies Procedure manual	Laboratory and Administrative Services		
4. Administrative and technical monitoring and Evaluation activities to assess management and organizational performance	Presence of evaluation and monitoring activities to assess management and organizational performance	DOCUMENT REVIEW Accomplishment reports or other annual reports as applicable Supporting documents for evaluation and monitoring of activities such as records, logbooks, checklist of supplies, inspection report, purchasing or procurement and acceptance of supplies, etc.	Administrative Office		

II. HUMAN RESOURCE MANAGEMENT					
A. HUMAN RESOURCES PLANNING					
Standard: Workload is monitored and appropriate guidelines consulted to ensure that appropriate staff numbers and skill mix are available to achieve desired customer and organizational outcomes.					
1. The organization documents and follows policies and procedures for hiring, credentialing, and privileging of its staff.	Presence of policies and procedures for hiring, credentialing and privileging of staff	DOCUMENT REVIEW Policies and procedures for hiring, credentialing and privileging of staff INTERVIEW Human Resources Management Officer/Personnel Officer	Personnel/ Administrative office		
2. Staff numbers and skill mix are based on actual services offered.	Refer to Attachment of Assessment Tool for Personnel	DOCUMENT REVIEW List of laboratory personnel based on HR records Payroll Schedule of duties for the previous and current month 201 files of employees	Personnel/ Administrative office		
B. STAFF RECRUITMENT, SELECTION, APPOINTMENT AND RESPONSIBILITIES					
Standard: There are relevant orientation, training and development programs to meet the educational needs of management and staff.					
1. Professional qualifications are validated, including evidence of professional registration /license where applicable, prior to employment	Presence of Qualification Standards	DOCUMENT REVIEW Check Qualification Standards; procedures in hiring. OBSERVE Check valid PRC ID, PRC License, PAM Registration, Certificate, and valid ID	Personnel/ Administrative office		

2. The staff are provided with a documented job description outlining accountabilities and responsibilities	Proof that staff are provided with job description outlining their accountabilities and responsibilities	DOCUMENT REVIEW Written job descriptions with conforme	Personnel/ Administrative office		
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C. STAFF TRAINING AND DEVELOPMENT

Standard: There are relevant orientation, training and development programs to meet the educational needs of management and staff.

1. New personnel , new graduates and external contractors are adequately supervised by qualified staff	Proof that new personnel are adequately oriented and supervised	DOCUMENT REVIEW Documentation of orientation conducted INTERVIEW Ask new personnel about the lines of authority and supervision and if the supervision is adequate	Personnel/ Administrative office		
2. Annual plan on training activities	Presence of annual plan on training activities	DOCUMENT REVIEW Annual plan (including resource/budgetary allocation) on training activities	Personnel/ Administrative office		

III. INFORMATION MANAGEMENT

A. DATA COLLECTION AND AGGREGATION

Standard: Relevant, accurate, quantitative and qualitative data are collected and used in a timely and efficient manner for delivery of patient care and management of services

1. Records are stored, retained and disposed of in accordance with the guidelines set by National Archives of the Philippines (NAP)	Policies and procedures on record storage, retention and disposal.	DOCUMENT REVIEW Logbooks on record storage, retention and disposal OBSERVE Proper storage of records	Administrative Office		
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2. The organization defines data sets, data generation, collection and aggregation methods and the qualified staff who are involved in each stage.	Presence of annual statistical reports and other additional laboratory statistics as determined by the management (Refer to National Archives of the Philippines (NAP) per DC No. 70 s. 1996)	<p>DOCUMENT REVIEW Policies and procedures on record storage, safekeeping and maintenance, retention and disposal.</p> <p>Compilation of data used for administrative purpose from procurement, delivery, storage, including sample requests, analysis, reports, monitoring tools, QC data.</p> <p>OBSERVE Presence of Available raw data in accordance with the methods used and sample received</p>	Administrative Office		
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B. RECORDS MANAGEMENT

Standard: The laboratory shall maintain records in a manner that allows reconstruction of all activities, easy retrieval and minimum retention.

1. The laboratory has a control on all documents that form its quality system both internal and external	Presence of policies in the control of all documents that form its quality system both internal and external	<p>DOCUMENT REVIEW Proof of designation of document control officer</p> <p>OBSERVE Policies and procedures on the following: 1. Availability of the authorized editions of documents 2. Periodic review and revision of the documents 3. Removal of invalid or obsolete documents 4. All handwritten amendments clearly marked, initialed and dated</p>	Administrative Office / Section		
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		5. Copies of the SOP Manual available at the bench or work area 6. Work instructions of the SOP match the SOP Manual			
2. The laboratory has policies and procedures, handling of quality of technical records and devotes resources, including infrastructure to protect records against loss, destruction, tampering and unauthorized access or use. Only authorized individuals can make entries in the logbooks.	Presence of policies and procedures on protection of laboratory records against loss, destruction, tampering and unauthorized access or use, and in maintaining confidentiality/ privacy.	DOCUMENT REVIEW Logbooks for borrowing and retrieval of laboratory files OBSERVE Access to laboratory records Audit trail	Administrative Office / Section		
SAFE PRACTICE AND ENVIRONMENT A. CUSTOMER AND STAFF SAFETY Standard: The laboratory plans a safe and effective environment of care consistent with its mission, services, and with laws and regulations. When needed, the organization reports information about infections/chemical threat to personnel and public health agencies.					
1. An incident reporting system identifies potential harms, evaluates causal and contributing factors for the necessary corrective and preventive action	Presence of incident reporting system/ sentinel event monitoring system (which may include health care associated infections, unexpected deaths, acid spills, falls, etc.)	DOCUMENT REVIEW Presence of safety manual Record of sentinel events Incident Report Corrective or Preventive Actions OBSERVE Presence of actual PPEs and other safety gadgets. Monitoring tools on safety	Administrative Office / Section		

V. IMPROVING PERFORMANCE

Standard: The laboratory has a planned systematic organization- wide approach to process design and performance measurement, assessment and improvement.

1. Continuous Quality Improvement Program	Presence of Quality Improvement Program	DOCUMENT REVIEW CQI plan and proof of implementation a. Monitoring tool b. Corrective actions for non-compliance INTERVIEW Ask about their activities on CQI.	Administrative Office		
Standard: The laboratory provides better care service as a result of continuous quality improvement activities					
2. Customer satisfaction survey	Presence of customer satisfaction survey	DOCUMENT REVIEW Domains of the survey form used. Survey results and how complaints / comments are acted upon. Logbook of corrective actions OBSERVE	Administrative Office		
3. Quality Assurance Program The laboratory shall prepare and adopt a quality assurance program to establish, maintain and improve the quality of data generated by the laboratory.	<u>Internal Quality Assurance</u> Presence of written procedures on quality control for monitoring of validity of tests and calibrations.	DOCUMENT REVIEW Documentation of the following: 1. Regular use of certified reference materials, use of QC samples. 2. Replication using the same or different methods 3. Re-testing or recalibration of samples 4. Correlation of results for different characteristics of a sample	Administrative Office		

	<p><u>External Quality Assurance</u> The laboratory shall participate in proficiency testing programs.</p>	<p>5. Recording of results so as trends are detectable and statistical techniques may be applied to the reviewing of the results where practicable</p> <p>6. Conduct of internal quality audit at least once a year.</p> <p>7. All quality control charts shall be available at all times</p> <p>8. Corrective actions in case of failed IQC and/or for non-compliance on QC criteria</p> <p>DOCUMENT REVIEW</p> <p>1. Record of receipt of samples for EQAS from NRL.</p> <p>2. Records of results submitted to NRL</p> <p>3. Record of corrective action taken when evaluation of performance is below satisfactory.</p> <p>4. Certificate of Proficiency in External Quality Assessment Scheme (EQAS) by NRL.</p> <p>5. Corrective Actions in case of failed proficiency testing and/or for non-compliance on QC criteria.</p>			
<p>VI. EQUIPMENT, INSTRUMENTS, REAGENTS, AND SUPPLIES Standard: Necessary equipment, instruments, reagents and supplies shall be in place for the safe and efficient operation of the laboratory.</p>					
1. Availability of functional and operational equipment /instruments.	Proof that the equipment /instruments are functional and operational.	OBSERVE			

2. Records of inventory of equipment/ instruments/ reagents	Presence of updated records of inventory of equipment/ instruments/ reagents.	DOCUMENT REVIEW Updated inventory records			
3. Program for preventive/ corrective maintenance of equipment/ instruments.	Presence of policies and procedure for preventive/ corrective maintenance of equipment/ instruments.	DOCUMENT REVIEW Records of preventive maintenance reports Proof of corrective actions			
4. Calibration of equipment designed and operated so that calibrations and measurements are traceable to the International System of Units (SI Units).	Presence of calibration reports of each equipment.	DOCUMENT REVIEW Proof of calibration (reports/ certificates)			
5. Calibration of volumetric laboratory wares designed and operated so that calibrations and measurements are traceable to the International System of Units (SI Units).	There shall be a written program for calibration of volumetric laboratory wares.	DOCUMENT REVIEW Proof of calibration (reports/certificates)			
6. There shall be appropriate reagents/ supplies to perform the water analysis.	The reagents/ supplies conforms to the requirements of NRL, PNSDW	DOCUMENT REVIEW Readily available inventory of reagents/ supplies			
VII. ANALYTICAL METHODS Standards: The laboratory shall use appropriate methods and procedures for all tests.					
Method Selection: Analytical methods that are appropriate for the analyte and	Method Selection: Analytical methods that are appropriate for the	OBSERVE			

sample matrix based on the current PNSDW.	analyte and sample matrix based on the current PNSDW.				
Uncertainty of Measurement	Uncertainty of Measurement	DOCUMENT REVIEW Updated inventory records			
Calculations and Data Transfers	The laboratory shall ensure calculations and data transfers are checked in a systematic manner.	DOCUMENT REVIEW Proof of signed documents			
Standard Method Verification	Standard Method Verification of analytical methods for trace analysis.	DOCUMENT REVIEW Proof of Method Verification			
Outsourcing of Tests: Outsourcing can be only allowed due to equipment failure or system failure; only for the accredited service	The laboratory shall conform to the guidelines for outsourcing of tests set by the NRL	DOCUMENT REVIEW Policies for Outsourcing of Tests List of sub contracted laboratories.			
Reporting of outsourced tests	The laboratory shall attach the results of the tests outsourced from other accredited laboratories to the principal test results/ reports.	DOCUMENT REVIEW Files of the copy of test results from referring laboratory			
VIII. SAMPLING Standards: There shall be a system for receiving, accessioning, collection and disposal of sample.					
Sample Collection:	There shall be written procedures for collection of sample at sampling location. Samples collected by certified sampler	DOCUMENT REVIEW Policies and procedures for collection of sample at sampling location. Certificate of samplers issued by NRL or DOH-CHD			

Sample data and Operations	There shall be written procedures for recording sample data and operations.	DOCUMENT REVIEW Presence of records of the following: 1. Sampling procedure used 2. Identification of the sample 3. Environmental conditions 4. Diagrams (or equivalent) to identify sampling location			
Handling of Sample:	There shall be written procedures for the management of sample to ensure protection of integrity of the sample and the interests of the laboratory and customer.	DOCUMENT REVIEW Policies and procedures for the management of samples as to the following: 1. Receipt 2. Handling 3. Protection 4. Storage 5. Retention and/ or disposal 6. Criteria for sample rejection			
Sample Identification	There shall be a system for identifying sample for test.	DOCUMENT REVIEW OBSERVE			
Sample suitability, sample abnormalities or sample deficiencies	Policies and procedures on the received abnormal or deficient samples submitted for analysis.	DOCUMENT REVIEW Records of abnormal or deficient samples. Records of instructions given to clients OBSERVE Proof that the customer was informed.			

Sample integrity	There shall be appropriate facilities to maintain the integrity of the sample and the protection of the secured sample and records	DOCUMENT REVIEW Policies and procedure on the maintenance of sample integrity. OBSERVE			
IX. REPOTING OF RESULTS Standards: Results shall be reported accurately, clearly, unambiguously and objectively, and in accordance with specific instructions in the methods.					
Test Results/ Report	All observations, data and calculations shall be recorded.	DOCUMENT REVIEW Records of all observations, data and calculations Test reports shall include, but not limited to, the following information: 1. Date of the test 2. Client details (name, address, contact number) 3. Name and signature of analyst 4. Certifying Chemist seal for chemical analysis results 5. Name and signature of laboratory head/ certifying officer 6. Analyte 7. Sample details (source if available, date and time of sampling, sample code) 8. Method used 9. Test results 10. PNSDW values, if applicable 11. MDL/LOQ for trace analysis			

Logbooks and Worksheets	There shall be logbooks and/or worksheets	DOCUMENT REVIEW Presence of records of the following: 1. Sampling procedure used 2. Identification of the sample 3.Environmental conditions 4. Diagrams (or equivalent) to identify sampling location			
Handling of Sample:	There shall be written procedures for the management of sample to ensure protection of integrity of the sample and the interests of the laboratory and customer.	DOCUMENT REVIEW Logbooks and worksheets shall have the following data: 1. Date of the test 2. Name of analyst 3. Analyte 4. Sample details (source, date and time of sampling, sample code) 5. Test observations 6. All rough calculations 7. Relevant instrument traces 8. Relevant calibration data			
X. NATIONAL LAWS AND DOH ISSUANCES Standards: The LDWA shall comply will all the relative laws and DOH issuances.					
1. Anti-smoking – in compliance to RA 9211 EO No. 26 s. 2017, “Providing for the Establishment of Smoke-Free Environments in Public and Enclosed Places”	Proof of implementation of policies and procedures on anti-smoking	DOCUMENT REVIEW Policies and procedures on anti-smoking OBSERVE “No Smoking” signage posted in a conspicuous spaces	Hallways Toilets Offices Working area		

2. Hazardous waste management – in compliance to RA 6969 (Toxic and Hazardous Waste Act)	Proof of implementation of policies and procedures on waste management	DOCUMENT REVIEW • Policies and procedures on the implementation of RA 6969	Administrative Office		
3. Health Emergency Management Services (HEMS) – in compliance to AO 2004-0168 "National Policy on Health Emergencies and Disasters"	Proof of implementation of the Emergency Management Plan (e.g. fire drill, earthquake drill, etc.)	DOCUMENT REVIEW • Result of self-assessment and how gaps were resolved OBSERVE Exit plans posted in all hallways and rooms	Laboratory		
4. R.A. 10173: Data Privacy Act	Proof of implementation of R.A. 10173	DOCUMENT REVIEW Policies and procedures on the implementation of RA 10173	Administrative Office		

PART II – PERSONNEL

The laboratory shall ensure personnel performing specific tasks are qualified on the basis of education, training, experience and/ or demonstrated skills, and appropriate supervision is provided when staff is being trained. It shall ensure personnel are employed or contracted, and contracted personnel are supervised, competent and work in accordance with the quality system. It shall maintain current job descriptions for managerial, technical and key support staff.

POSITION	QUALIFICATION	EVIDENCE	NUMBER/ RATIO	COMPLIED	REMARKS
Head of the Laboratory	<p><u>Category A</u> 3-years administrative management, technical experience in water laboratory – theoretical and practical, training requirements, at least three (3) years in service.</p> <p>Sanitary Engineer, Clinical Pathologist, Registered Medical Technologist, or Certified Microbiologist.</p> <p><u>Category B</u> Chemist with 3-years administrative management, technical experience in water laboratory, theoretical and practical, training requirements, at least three (3) years in service.</p> <p><u>Category C</u> Any of the abovementioned expertise, with Masteral degree, 3-years administrative management, technical experience in water laboratory, theoretical and practical, training</p>	<p>DOCUMENT REVIEW</p> <ul style="list-style-type: none"> • Updated PRC I.D • PSP Board Certificate for Clinical Pathologist • Certificate/Diploma as Microbiologist • Certificates of Trainings attended including Laboratory Management • Record of employment • Proof of employment/ Appointment (notarized) 	1		

POSITION	QUALIFICATION	EVIDENCE	NUMBER/ RATIO	COMPLIED	REMARKS
	requirements, at least three (3) years in service.				
Analysts	<p>Bachelor's Degree with at least two (2) years' experience</p> <p>For Microbiological Analysis: Registered Medical Technologist/Certified Microbiologist/ Registered Food Technologist</p> <p>For Chemical / Physical Analysis: Registered Chemist/ Registered Chemical Technician</p>	<p>DOCUMENT REVIEW</p> <ul style="list-style-type: none"> • PRC License/ID • PRC Board Certificate • Certificate/Diploma as Microbiologist (for microbiological analysis) • Certificate of Proficiency for Microbiology analysts from NRL-EOHTM • Record of Work Experience (minimum of 2 years) in the theory and practice of water analysis • Certificates of Trainings attended • Proof of Employment/ Appointment (notarized) • Authorization and Competency approved by the head of the laboratory. 	<p>1 analyst</p> <p>1 analysts</p>		
Laboratory Aide/ Technician	Finished at least 2 years in college with training in clerical and laboratory support for at least 6 months	<p>DOCUMENT REVIEW</p> <ul style="list-style-type: none"> • Certificates of Trainings attended • Proof of Employment/ Appointment (notarized) 	1		
Administrative Staff (Designate)	Administrative staff shall have in-house training in relevant administrative procedures.	<p>DOCUMENT REVIEW</p> <ul style="list-style-type: none"> • Proof of Employment/ Appointment (notarized) • Certificates of Trainings attended • Proof of designation 			

POSITION	QUALIFICATION	EVIDENCE	NUMBER/ RATIO	COMPLIED	REMARKS
Sampler	Water Sampler must be certified by DOH.	DOCUMENT REVIEW <ul style="list-style-type: none"> • Certificate of Trainings from NRL • Proof of Employment/ Appointment (notarized) 	1		

PART III – PHYSICAL PLANT

Adequate facility shall be in place for the safe and efficient operation of the laboratory.

DOCUMENTS	COMPLIED	REMARKS
<p>1. Work Area</p> <p>The work area shall correlate with the volume and type of analysis to be undertaken including provision for periods of peak workload.</p> <p>It shall the following minimum areas:</p> <ol style="list-style-type: none"> 1. Counter top for sample processing 2. Storage cabinet for equipment, instruments, reagents and supplies 3. Sink with strong water supply for cleaning and sterilizing 4. Fume hoods for handling of acids and organic chemicals 5. Containment facility for bacteriological analysis 		
<p>2. Utilities</p> <p>The laboratory shall be housed in a permanent building with adequate power supply, water supply, and ventilation.</p> <p>There shall be adequate running water in the work area.</p> <p>Air conditioning unit may be used for improved ventilation.</p>		
<p>3. Waste Facility</p> <p>There shall be a written policy for laboratory waste management (which includes handling, storage, and disposal) following universal guidelines.</p> <p>There shall be a waste management plan.</p> <p>There shall be an inventory of waste chemicals including estimate concentration, means of disposal or containment, and frequency of disposal.</p> <p>For Classification B and C, there shall be a Memorandum of Agreement (MOA) with DENR accredited hazardous waste treatment facility</p>		

<p>4. Housekeeping There shall be a written policy for laboratory housekeeping following universal guidelines.</p> <p>The laboratory shall be kept clean, dust-free, odor-free, safe and secured.</p> <p>There shall be a written program for vermin control</p>		
<p>5. Personnel Safety There shall be a written policy for safety of personnel following universal guidelines.</p> <p>Provision of Personal Protective Equipment, personnel safety devices such as safety gloves, safety glasses, laboratory gowns, and face masks, shall be available when appropriate.</p>		

OBSERVATIONS/FINDINGS (may use separate additional sheets if needed):

PART IV – EQUIPMENT/INSTRUMENT

FUNCTIONAL EQUIPMENT	QUANTITY	AREA	COMPLIED	REMARKS
ADMINISTRATIVE SERVICE				
Computer with Internet Access	1	Administrative Office		
Emergency Light		Lobby, hallway, office/unit and/or stairways		
Fire Extinguishers	1 per unit or area	Lobby, hallway, office/unit and/or stairways		
Generator set	1	Generator set house		
LABORATORY FOR DRINKING WATER ANALYSIS				
MANDATORY PARAMETERS				
<input type="checkbox"/> Color (Apparent)		<input type="checkbox"/> Arsenic	<input type="checkbox"/> Nitrate	
<input type="checkbox"/> Turbidity		<input type="checkbox"/> Cadmium	<input type="checkbox"/> Total Dissolved Solids	
<input type="checkbox"/> Thermotolerant Coliform (E.coli)		<input type="checkbox"/> Lead	<input type="checkbox"/> Disinfectant Residual	
For other parameters not included in the mandatory tests, please fill out the provided form.				
Test/ Method	Equipment	Reagent/ Media	Laboratory Materials	Remarks
<input type="checkbox"/> Microbiological General Requirement	<input type="checkbox"/> Autoclave <input type="checkbox"/> Balances, top – loading <input type="checkbox"/> Hot plate with magnetic stirrer <input type="checkbox"/> Oven sterilizer <input type="checkbox"/> Water bath maintained at $44.5 \pm 0.5^{\circ}\text{C}$ <input type="checkbox"/> Incubator maintained at $35 \pm 0.5^{\circ}\text{C}$ <input type="checkbox"/> Distilling Apparatus / Water Purifier	(Refer to specific microbiological test methods below)	<input type="checkbox"/> Erlenmeyer flasks, 250mL, 500mL, 1000mL <input type="checkbox"/> Graduated cylinders, 100mL, 500mL, 1000mL <input type="checkbox"/> Petri dishes, 15 x 100 mm <input type="checkbox"/> Pipets, 10mL, 1 mL <input type="checkbox"/> Reagent bottles, brown and clear <input type="checkbox"/> Stainless spatulae and spoons	

	<input type="checkbox"/> Bacticinerator / Similar Flame Sterilization Device <input type="checkbox"/> Isolation Hood: Laminar or biological Safety Cabinet <input type="checkbox"/> pH Meter <input type="checkbox"/> Refrigerator <input type="checkbox"/> Stove <input type="checkbox"/> Thermometer		<input type="checkbox"/> Test tube baskets and racks <input type="checkbox"/> Inoculating loops <input type="checkbox"/> Sterile applicator sticks <input type="checkbox"/> Sampling bottles: 100mL, 200mL, 500 mL	
<input type="checkbox"/> Total Coliform Test: Multiple Tube Fermentation Technique (MTFT)		<input type="checkbox"/> Lauryl Tryptose Broth(LTB) <input type="checkbox"/> Brilliant Green Lactose Bile Broth (BGLB)	<input type="checkbox"/> Test tubes: <input type="checkbox"/> 25 x 150 mm; 16 x 150 mm w/caps <input type="checkbox"/> Durnham tubes: <input type="checkbox"/> 10 x 75 mm; 5 x 50 mm	
<input type="checkbox"/> Thermotolerant Coliform Tests: MTFT		<input type="checkbox"/> EC Medium (EC)		
<input type="checkbox"/> Total Coliform Test: Membrane Filtration Technique (MF)	<input type="checkbox"/> Membrane filtration apparatus, manifold and vacuum pump <input type="checkbox"/> Microscope, binocular, wide-field dissecting microscope	<input type="checkbox"/> LES Endo Agar (Endo) <input type="checkbox"/> M-Endo Medium	<input type="checkbox"/> Membrane filters, 0.45µm pore size <input type="checkbox"/> Forceps, smooth blunt <input type="checkbox"/> Absorbent pads, 48 mm <input type="checkbox"/> Culture dish, 15x60mm; 9x50mm	
<input type="checkbox"/> Coliform Test: MF	<input type="checkbox"/> Membrane filtration apparatus, manifold and vacuum pump <input type="checkbox"/> Microscope, binocular, wide field dissecting microscope	<input type="checkbox"/> M-FC Medium	<input type="checkbox"/> Membrane filters, 0.45µm pore size <input type="checkbox"/> Forceps, smooth blunt <input type="checkbox"/> Absorbent pads, 48 mm <input type="checkbox"/> Culture dish, 15x60mm; 9x50mm	
<input type="checkbox"/> Presence-Absence (P-A) Coliform Test		<input type="checkbox"/> LTB <input type="checkbox"/> P-A Broth	<input type="checkbox"/> 200 mL sterile bottle	
<input type="checkbox"/> Colilert (Enzyme Substrate)	<input type="checkbox"/> Comparator (from the manufacturer) <input type="checkbox"/> Ultraviolet light,366nm	<input type="checkbox"/> Enzyme substrate water test kits, validated by NRL-EOHTM	<input type="checkbox"/> Sampling bottle	

<input type="checkbox"/> Gram Stain	<input type="checkbox"/> Microscope, binocular, wide-field dissecting microscope	<input type="checkbox"/> Nutrient Agar <input type="checkbox"/> Crystal Violet <input type="checkbox"/> Gram's Iodine <input type="checkbox"/> 95% Ethyl Alcohol <input type="checkbox"/> Safranin O <input type="checkbox"/> Immersion Oil <input type="checkbox"/> Sterile water	<input type="checkbox"/> Forceps <input type="checkbox"/> Microscope glass slides <input type="checkbox"/> Staining rack <input type="checkbox"/> Wash bottle <input type="checkbox"/> Inoculating loop <input type="checkbox"/> Dropper <input type="checkbox"/> Test Tube (50x5 mm)	
<input type="checkbox"/> IMViC tests		<input type="checkbox"/> Nutrient Agar <input type="checkbox"/> Tryptone Broth (TB) <input type="checkbox"/> MR-VP medium (MRVP) <input type="checkbox"/> Simmon's Citrate Agar(SCA) <input type="checkbox"/> Kovac's reagent <input type="checkbox"/> Methyl red solution <input type="checkbox"/> Barritt's reagent (a naphthol solution) <input type="checkbox"/> O'Meara's reagent (KOH solution)	<input type="checkbox"/> Inoculating loops <input type="checkbox"/> Pasteur pipets <input type="checkbox"/> Droppers	
<input type="checkbox"/> Heterotrophic Plate Count (HPC)	<input type="checkbox"/> Colony counter, dark field <input type="checkbox"/> Vortex mixer	<input type="checkbox"/> Phosphate Buffer Solution (PBS) <input type="checkbox"/> 0.1% Peptone water <input type="checkbox"/> Plate Count Agar (PCA) <input type="checkbox"/> Tryptic Soy Agar (TSA) <input type="checkbox"/> Nutrient Agar	<input type="checkbox"/> Petri dishes <input type="checkbox"/> Pipets (10ml, 1.1ml, 1.0ml) <input type="checkbox"/> Bent-glass rod (spreader), if spread plated technique is used.	
<input type="checkbox"/> Chemical Laboratory General Requirement	<input type="checkbox"/> Refrigerator <input type="checkbox"/> Thermometer/ Thermohygrometer <input type="checkbox"/> Analytical Balance <input type="checkbox"/> Distilling or Water Purification System to produce Type I water <input type="checkbox"/> Fume Hood		<input type="checkbox"/> Volumetric Flask (5mL, 100mL, 250mL, 500mL, 1000mL) <input type="checkbox"/> Beakers (50mL, 100mL, 250, 500, 1000mL) <input type="checkbox"/> Pipettes (graduated and volumetric: 1mL, 5mL, 10mL, 25mL, 50mL) <input type="checkbox"/> Graduated Cylinder (50mL, 100mL) <input type="checkbox"/> Erlenmeyer flasks	

			(250mL) <input type="checkbox"/> Funnels <input type="checkbox"/> Reagent Bottles: <input type="checkbox"/> Amber and Clear (100ml, 250ml, 500ml 1000mL)	
<input type="checkbox"/> Arsenic <input type="checkbox"/> ICP <input type="checkbox"/> Hydride Generation AAS <input type="checkbox"/> EAAS	<input type="checkbox"/> ICP <input type="checkbox"/> Hydride Generation AAS <input type="checkbox"/> EAAS	For Hydride Generation AAS/EAAS: <input type="checkbox"/> Nitric Acid <input type="checkbox"/> Hydrochloric Acid <input type="checkbox"/> Standard As <input type="checkbox"/> Calibration standards <input type="checkbox"/> QC standards <input type="checkbox"/> Sodium Borohydride <input type="checkbox"/> Sodium Iodide <input type="checkbox"/> Potassium Persulfate <input type="checkbox"/> Perchloric Acid	For ICP/EAAS: <input type="checkbox"/> Argon For ICP/ AAS/EAAS: <input type="checkbox"/> Reaction Cell	
<input type="checkbox"/> Cadmium <input type="checkbox"/> FAAS <input type="checkbox"/> EAAS <input type="checkbox"/> ICP	<input type="checkbox"/> FAAS <input type="checkbox"/> EAAS <input type="checkbox"/> ICP	For FAAS/EAAS/ICP/ASV: <input type="checkbox"/> Nitric Acid <input type="checkbox"/> Hydrochloric Acid <input type="checkbox"/> Standard Cd <input type="checkbox"/> Calibration standards <input type="checkbox"/> QC standards	For FAAS: <input type="checkbox"/> Acetylene Gas For EAAS/ICP: <input type="checkbox"/> Argon <input type="checkbox"/> Hot plate <input type="checkbox"/> Fumehood	
<input type="checkbox"/> Lead <input type="checkbox"/> FAAS <input type="checkbox"/> EAAS <input type="checkbox"/> ICP	<input type="checkbox"/> FAAS <input type="checkbox"/> EAAS <input type="checkbox"/> ICP	<input type="checkbox"/> Standard Lead <input type="checkbox"/> Calibration standards <input type="checkbox"/> QC standards	For FAAS: <input type="checkbox"/> Acetylene Gas	

		For FAAS/EAAS/ICP/ASV: <input type="checkbox"/> Nitric Acid <input type="checkbox"/> Hydrochloric Acid	For EAAS/ICP: <input type="checkbox"/> Argon <input type="checkbox"/> Hotplate <input type="checkbox"/> Fumehood	
<input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrate Electrode Method (NEM) <input type="checkbox"/> Cd Reduction Method (CRM) <input type="checkbox"/> Ion Chromatograph	For NEM: <input type="checkbox"/> pH meter, expanded-scale For CRM: <input type="checkbox"/> Spectrophotometer For IC: <input type="checkbox"/> Ion Chromatograph	<input type="checkbox"/> Standard Nitrate For NEM: <input type="checkbox"/> Aluminum Sulfate <input type="checkbox"/> Silver Sulfate <input type="checkbox"/> Boric Acid <input type="checkbox"/> Sulfamic Acid <input type="checkbox"/> Sodium Hydroxide For CRM: <input type="checkbox"/> Cd granules <input type="checkbox"/> Hydrochloric Acid <input type="checkbox"/> Copper Sulfate <input type="checkbox"/> Color reagent: phosphoric acid, sulfanilamide, N-(1-naphthyl)-ethylene diamine dihydrochloride <input type="checkbox"/> Ammonium Chloride <input type="checkbox"/> EDTA For IC: <input type="checkbox"/> Eluent solution (Sodium carbonate, sodium bicarbonate) <input type="checkbox"/> Regenerant solution (Sulfuric acid)	For NEM: <input type="checkbox"/> Double-junction reference electrode <input type="checkbox"/> Nitrate Ion electrode For CRM: <input type="checkbox"/> Reduction column	
<input type="checkbox"/> Color (Apparent) Visual comparison Method		<input type="checkbox"/> Potassium Hexachloroplatinate <input type="checkbox"/> Cobaltous Chloride	<input type="checkbox"/> Nessler tubes, 100 mL,	

		<input type="checkbox"/> Sodium Hydroxide <input type="checkbox"/> Sulfuric Acid	short form	
<input type="checkbox"/> Turbidity Nephelometric Method	<input type="checkbox"/> Nephelometer <input type="checkbox"/> Turbidimeter	<input type="checkbox"/> Turbidity standards		
<input type="checkbox"/> pH	<input type="checkbox"/> pH meter	<input type="checkbox"/> KCl filling solution <input type="checkbox"/> Buffer solutions (pH4, 7, 10) <input type="checkbox"/> QC- buffer (KH ₂ PO ₄ or Na ₂ HPO ₄)	<input type="checkbox"/> Magnetic stirrer	
<input type="checkbox"/> Total Dissolved Solids	<input type="checkbox"/> Gravimetric	<input type="checkbox"/> Drying Oven	<input type="checkbox"/> Evaporating Dish <input type="checkbox"/> Dessicator <input type="checkbox"/> Glass fiber filter <input type="checkbox"/> Silica gel/desiccant <input type="checkbox"/> Filtration apparatus	
<input type="checkbox"/> Disinfectant Residual – Chlorine DPD colorimetric		<input type="checkbox"/> Chlorine meter or kit	<input type="checkbox"/> DPD for total chlorine and DPD for free chlorine <input type="checkbox"/> KMnO ₄	

***Acronyms:**

- FAAS–Flame Atomic Absorption Spectrometry
- EAAS–Electrothermal Atomic Absorption Spectrometry
- GC–Gas Chromatography
- ECD–Electron Capture Detector
- MS–Mass Spectrophotometer
- PID–Photoionization Detector
- HPLC–High-performance Liquid Chromatography
- ICP–Inductively Coupled Plasma
- IC–Ion Chromatography
- PFBHA–Pentafluorobenzyl-hydroxylamine
- PNSDW–Philippine National Standards for Drinking Water (2017)

Test/ Method	Equipment	Reagent/ Media	Laboratory Materials	Remarks
OTHERS:				



Republic of the Philippines
Department of Health

Annex A
A.O. No. 2020- 0031

ASSESSMENT TOOL FOR ACCREDITATION OF LABORATORY FOR
DRINKING WATER ANALYSIS

Name of Health Facility: _____

Date of Inspection: _____

RECOMMENDATIONS:

A. For Accreditation Process

☐ For Issuance of Certificate of Accreditation as

Validity from _____ to _____

☐ Issuance depends upon compliance to the recommendations given and submission of the following within _____ days from the date of inspection

☐ Non-issuance. Specify reason/s: _____

Inspected by:

Printed name

Signature

Position/Designation

Received by:

Signature: _____

Printed Name: _____

Position/Designation: _____

Date: _____



Republic of the Philippines
Department of Health

Annex A

A.O. No. 2020- 0031

ASSESSMENT TOOL FOR ACCREDITATION OF LABORATORY FOR
DRINKING WATER ANALYSIS

Name of Health Facility: _____

Date of Monitoring: _____

RECOMMENDATIONS:

A. For Monitoring Process

☐ Issuance of Notice of Violation

☐ Non-issuance of Notice of Violation

☐ Others. Specify _____

Monitored by:

Printed name

Signature

Position/Designation

Received by:

Signature: _____

Printed Name: _____

Position/Designation: _____

Date: _____