DENR RECOGNIZED SIGNATORIES

For All Analyses
Elizabeth P. Sevilleno

For Bacteriological Analysis
Zafia A. Aborot
Morena G. Beronio
Therese Gail B. Delos Reyes
Carlo Chantilly Rey A. Esperanza
Lilibeth M. Francisco
Alexander S. Maturan

For Metals and Physical-Chemical Analyses
Noel Angelo L. Ayang
Cris Zaldy T. Bamba
Jennifer T. Tagupa-Jose
Rose Ann B. Torreta

For Physical-Chemical Analyses
Jane Carmelle P. Belleca
John Joseph A. Gochingco
Andrea Keite P. Guiao
Bernadette D. Susano.

*Exclusive of sampling; Analytical methods and references approved for water and wastewater are in Annex CR 018/2021.

ELR LABORATORY CODE NO. NCR-15
Page 2 of 4

Republic of the Philippines DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES Visayas Avenue, Diliman, Quezon City

This

CERTIFICATE OF RECOGNITION

C.R. No. 018/2021

is hereby granted to

Manila Water Laboratory Services

Central Laboratory Building, MWSS Compound, Katipunan Road, Balara, Quezon City

after having been assessed and found to comply with the documentation, analytical 1998, Guidelines for the Designation of DENR Recognized Environmental Laboratories. performance and other technical requirements of Administrative Order No. 63, series of

cancelled. This certificate is valid for three years from date of issue unless otherwise revoked or

fifteenth day of October, year two thousand and twenty-one at Quezon City, Philippines. In testimony whereof, I have hereunto signed this Certificate and issued the same this

ROY A. CIMATU
Secretary

SCOPE OF RECOGNITION *

Water and Wastewater
Ammonia as NH₃-N
BOD; Cadmium
Chemical Oxygen Demand
Chloride; Coliform, Fecal
Coliform Total; Color (True)
Copper, Total; Dissolved Oxygen
Lead; Nitrate as NO₃-N
Oil and Grease; pH
Phosphate

Surfactants (Methylene Blue Active Substances)
Temperature; Total Dissolved Solids
Total Suspended Solids.

Settleable Solids

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Page 1 of 4

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Visayas Avenue, Diliman, Quezon City

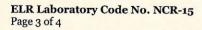
ANNEX CR 018/2021

Manila Water Laboratory Services

RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

PARAMETERS	ANALYTICAL METHODS	REFERENCES
Ammonia as NH ₃ -N	Ammonia – Selective Electrode Method	SMEWW 4500-NH ₃ D
BOD	5-Day BOD Test	SMEWW 5210 B
Cadmium	Electrothermal Atomic Absorption Spectrometric Method (Nitric Acid/ Hotplate Digestion)	SMEWW 3111 B (SMEWW 3030 E)
	Inductively Coupled Plasma – Emission Spectroscopy Method (Nitric Acid/ Hydrochloric Acid Hotplate Digestion)	SMEWW 3120 (SMEWW 3030 F)
Chemical Oxygen Demand	Open Reflux Method	SMEWW 5220 B
Chloride	Argentometric Method	SMEWW 4500-Cl- B
Coliform, Fecal	Multiple Tube Fermentation Technique – Fecal Coliform Procedure	SMEWW 9221 E
Coliform, Total	Multiple Tube Fermentation Technique – Standard Total Coliform Fermentation Technique	SMEWW 9221 B
Color (True)	Visual Comparison Method	SMEWW 2120 B
Copper, Total*	Direct Air – Acetylene Flame Method (Nitric Acid/Hydrochloric Acid Hotplate Digestion)	SMEWW 3111 B (SMEWW 3030 F)
Dissolved Oxygen	Iodometric Method - Azide Modification	SMEWW 4500-O C
Lead	Electrothermal Atomic Absorption Spectrometric Method (Nitric Acid/ Hotplate Digestion)	SMEWW 3111 B (SMEWW 3030 E)
	Inductively Coupled Plasma – Emission Spectroscopy Method (Nitric Acid/ Hydrochloric Acid Hotplate Digestion)	SMEWW 3120 (SMEWW 3030 F)





Republic of the Philippines DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Visayas Avenue, Diliman, Quezon City

ANNEX CR 018/2021 Manila Water Laboratory Services

RECOGNIZED PARAMETERS AND ANALYTICAL METHODS

Water and Wastewater

PARAMETERS	ANALYTICAL METHODS	REFERENCES
Nitrate as NO ₃ -N	Nitrate Electrode Method	SMEWW 4500-NO ₃ - D
Oil and Grease	Liquid-Liquid, Partition - Gravimetric Method	SMEWW 5520 B
рН	Electrometric Method	SMEWW 4500-H+ B
Phosphate	Stannous Chloride Method	SMEWW 4500-P D
Settleable Solids	Imhoff Cone Method	SMEWW 2540 F
Surfactants (Methylene Blue Active Substances)	Anionic Surfactants as MBAS	SMEWW 5540 C
Temperature	Laboratory and Field Methods	SMEWW 2550 B
Total Dissolved Solids	Gravimetric, Dried at 180°C	SMEWW 2540 C
Total Suspended Solids	Gravimetric, Dried at 103-105°C	SMEWW 2540 D

 $^{{}^*}Recognition\ for\ this\ parameter\ does\ not\ include\ marine\ water\ and\ samples\ with\ high\ dissolved\ solids.$

