

HANDLING FEES

- a. Potable water P50.00
- b. Wastewater P100.00

VALUE ADDED TAX

The above prices are VAT exclusive and will be charged the normal 12% VAT.

TURNAROUND TIMES

- a. Chemistry Analyses 5 days
- b. Microbiology Analyses 3 days



We keep it flowing, for you.



BACKGROUND

The Water Utilities Corporation laboratory is committed to providing customers with accurate and cost effective laboratory services that in turn meet and/or exceed the expectations and requirements of its growing list of valued and satisfied customers. Analyses are performed by a professional team of chemists, microbiologists and laboratory technicians trained in the use of state-of-the-art analytical instrumentation. The laboratory employees realize the need for high quality data and recognize the impact that such data has on the key decisions made by our diverse list of customers. Employees undergo thorough competency assessments and continuous training on laboratory techniques, methodology, quality assurance, sample handling, documentation and reporting requirements based on a laboratory quality management system.

The laboratory provides analysis of water and wastewater sample matrices using various analytical methodologies and instrumentation. To ensure quality, standards are maintained; the laboratory participates in proficiency testing schemes and is accredited by Southern African Development Community Accreditation Service in accordance with ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories. A comprehensive water quality database is maintained on a Laboratory Information Management System (LIMS).

The primary objective of laboratory's quality management system is to produce quality data which is of known precision and accuracy which in turn ensures that such data can be relied on to represent the "true value" for a given sample. When extended to the field sampling process, the data accurately represents the larger volume from which the sample was originally taken.



We keep it flowing, for you.

CONTACT DETAILS

Teddy B. Ditsabatho
WATER QUALITY MANAGER

Address
Private Bag 00276
Gaborone

Phone Number: +267 3939181
Fax Number: +267 3975187
Mobile Number: +267 71304884

MAIN OBJECTIVES OF MONITORING

The main objectives of water quality monitoring are:

- qualitative and quantitative evaluation of water quality by continuous verification of the water quality correspondence to relevant regulatory standards (compliance to national drinking water specification, BOS 32 and wastewater standard, BOS 93)
- verification of observation of prescribed limits for water abstracted from the water body and discharge of polluting substances in wastewater.
- verification of efficiency of water treatment processes
- interpretation of long-term trends in the water pollution level fluctuations, and demonstration of attainment of prescribed water-protective goals
- provision for advanced warning about emergency pollution and overshooting prescribed limits.
- identification and evaluation of water quality problems, e.g. detection of toxic substances in surface and ground waters.

LABORATORY CAPACITY

The laboratory, located at the Mmamashia Water Treatment Works in Mmamashia, 1.8 km off Gaborone – Francistown A1 road, has 18 staff members currently performing laboratory analyses of:



General Chemistry

pH	Electrical Conductivity
Alkalinity	Turbidity
Total Dissolved Solids	Total Phosphorus
Color	Total Orthophosphate
Chemical Oxygen Demand (COD)	Total Volatile Solids
Chloride	Total Suspended Solids
Fluoride	Calcium and Total Hardness
Ammonia	Sulfate

Microbiological

Total coliforms	Faecal streptococci
Escherichia coli	Heterotrophic Plate Count
Faecal coliforms	Clostridium perfringens
Cryptosporidium and Giardia	Vibrio cholera
Legionella pneumophila	

Metals Analysis

Aluminum	Magnesium
Cobalt	Manganese
Cadmium	Mercury
Calcium	Nickel
Chromium	Potassium
Copper	Sodium
Iron	Zinc
Lead	

LABORATORY EQUIPMENT

The following equipment is available for the various analyses:

Equipment

pH meters	Electrical Conductivity meters
Chlorine meters	Turbidity meters
Photometers	Autotitrators
Ion Chromatographs	Mercury Analyser
ICP Optical Emission Spectrometer	GC Mass Spectrometer
	Microscope

TESTING CHARGES

Laboratory Analyses Fees

The following costs have been calculated and established in alignment with the current regional market prices of laboratory analysis. The revised costs are intended to recover costs of routine laboratory reagents, capital investment on equipment, instrument maintenance costs and general laboratory overheads.

A. Individual Analysis Costs

ANALYTE	COST (P)	ANALYTE	COST (P)
Alkalinity	57.30	Lead	40.00
Aluminium	40.00	Legionella pneumophila	51.00
Ammonium	40.00	Magnesium	40.00
Biological Oxygen Demand	76.90	Manganese	40.00
Bromide	61.05	Mercury	40.00
Cadmium	40.00	Nickel	40.00
Calcium	40.00	Nitrate	61.05
Calcium Hardness	57.60	Nitrite	61.05
Chemical Oxygen Demand	107.65	pH & Temperature	43.55
Chloride	61.05	Phosphate	61.05
Cobalt	40.00	Potassium	40.00
Conductivity & Total Dissolved Solids	43.60	Sodium	40.00
Chromium	40.00	Faecal streptococci	80.55
Clostridium perfringens	248.10	Sulphate	61.05
Copper	40.00	Total Chlorine	29.65
Cryptosporidium and Giardia	3 221.90	Total coliforms	117.40
Escherichia coli	117.40	Total Hardness	59.85
Faecal coliforms	79.00	Total Suspended Solids	173.21
Fluoride	61.05	Turbidity	38.25
Free Chlorine	29.65	Vibrio cholera	165.00
Heterotrophic Plate Count	322.00	Zinc	40.00
Iron	40.00	Algae	200.00

B. Group Costs

TYPE OF ANALYSIS	PARAMETERS	COST (P)
Drinking Water for human consumption	pH, turbidity, conductivity, total dissolved solids, Escherichia coli, faecal coliforms, faecal streptococci, total coliforms, free chlorine, total chlorine, anions and metals.	1,566.40
Drinking water for livestock and poultry	alkalinity, pH, turbidity, conductivity, total dissolved solids, faecal coliforms, total coliforms, Heterotrophic Plate Count, anions and metals.	1,688.45
Water quality for irrigation	pH, conductivity, total dissolved solids, suspended solids, Escherichia coli, faecal coliforms, anions and metals.	1,390.15
Wastewater	pH, temperature, dissolved oxygen, biological oxygen demand, chemical oxygen demand, turbidity, conductivity, total dissolved solids, faecal coliforms, total coliforms, ammonia, free chlorine, total chlorine, anions and metals.	1,637.65
New connections to existing WUC network	Escherichia coli, free chlorine, total chlorine, total coliforms and turbidity	293.95
Treated Water Check	Conductivity, total dissolved solids, iron, manganese, turbidity, free chlorine and total chlorine	221.15