



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **ENVASERV RESEARCH CONSULT LTD**

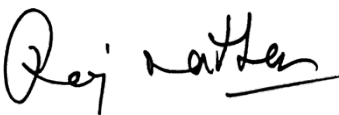
GC-035-7872, 8 DR. LAMPTEY STREET, SOWUTUOM  
ACCRA, REPUBLIC OF GHANA

**Testing Laboratory TL-803**

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date April 16, 2023



  
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**President**

IAS is an ILAC MRA Signatory

Visit [www.iasonline.org](http://www.iasonline.org) for current accreditation information.

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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## ENVASERV RESEARCH CONSULT LTD

[www.ivaservconsult.com](http://www.ivaservconsult.com)

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**Contact Phone** +233-302925173

*Accredited to ISO/IEC 17025:2017*

*Effective Date April 16, 2023*

<b>Water</b>	
APHA 23 <sup>rd</sup> Edition, 2120B; PALINTEST PHOT 47	Color
APHA 23 <sup>rd</sup> Edition, 2130B; PALINTEST PHOT 48	Turbidity
APHA 23 <sup>rd</sup> Edition 2320B; PALINTEST PHOT 37	Alkalinity (CO <sub>3</sub> , CaCO <sub>3</sub> , HCO <sub>3</sub> )
APHA 23 <sup>rd</sup> Edition 2340; PALINTEST PHOT 15	Hardness
APHA 23 <sup>rd</sup> Edition 2510B	Electrical Conductivity
APHA 23 <sup>rd</sup> Edition 2540C	Total Dissolved Solids
APHA 2540D/Photometric method HACH Method 8006	Total Suspended Solids
APHA 23 <sup>rd</sup> Edition 3130; ASV (PDV 6000plus)	Heavy metals (Pb, Cr, Cu, Cd, Sn, Ag, Se)
APHA 23 <sup>rd</sup> Edition 4500B C	Determination of Boron as B
APHA 23 <sup>rd</sup> Edition 4500-Cl G; PALINTEST PHOT 108	Chlorine - Free, Total/Available
APHA 23 <sup>rd</sup> Edition 4500CN-C+E	Total Cyanide
APHA 23 <sup>rd</sup> Edition 4500CN-E	Free Cyanide
APHA 23 <sup>rd</sup> Edition 4500D; PALINTEST PHOT 46	Method for Chloride Ions in Water
APHA 23 <sup>rd</sup> Edition 4500- H+B	pH

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APHA 23 <sup>rd</sup> Edition 4500-Norg	Total Kjeldahl Nitrogen
APHA 23 <sup>rd</sup> Edition 4500-NH3 A; PALINTEST PHOT 94-95	Nitrogen (Ammonia)
APHA 23 <sup>rd</sup> Edition 4500-NO3 E; PALINTEST PHOT 23	Method for the Determination of Nitrogen (Nitrates)
APHA 23 <sup>rd</sup> Edition 4500-O G	Dissolved Oxygen
APHA 23 <sup>rd</sup> Edition 4500-P A; PALINTEST PHOT 28	Method for the Determination of Phosphates
APHA 23 <sup>rd</sup> Edition 4500-SO <sub>4</sub> 2 D; PALINTEST PHOT 32	Method for the Determination of Sulphate
APHA 23 <sup>rd</sup> Edition 5210B	BOD
APHA 23 <sup>rd</sup> Edition 5220D; ASTM D1252 B; PALINTEST PHOT 80-83	COD
APHA 23 <sup>rd</sup> Edition 5310C; Walkley Black Method	Total Organic Carbon
APHA 23 <sup>rd</sup> Edition 5520C; ASTM D7066-4; EPA 413.2; EPA 418.1	Total Oil and Grease
APHA 23 <sup>rd</sup> Edition 9222B	Total Coliforms, <i>E. coli</i>
ASTM D1292-15	Standard Test Method for Odor in Water
ASTM D4458-15	Standard Test Method for Chloride Ions in Brackish Water, Seawater, and Brines
ASTM D4658, SM 4500-S2-D; PALINTEST PHOT 33	Standard Test Method for Sulfide Ion in Water
Flame Photometer	Alkalis (K, Na, Li, Ca, Ba)
PALINTEST ARSENIC TEST KIT (GUTZEIT TEST)	Method for the Determination of Arsenic
PALINTEST PHOT 18-19	Method for the Determination of Iron as Fe
PICRIC ACID METHOD (In-house)	WAD Cyanide

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SM 4500-CO <sub>2</sub> C	CO <sub>2</sub> content
<b>Glycol</b>	
ASTM D1122-16(2017); ASTM D5931-13(2017)	Standard Test Method for Density or Relative Density of Engine Coolant Concentrates and Engine Coolants by the Hydrometer (Also Digital Density Meter)
ASTM D1123-99(2015)	Standard Test Method for Water in Engine Coolant Concentrate by the Karl Fischer Reagent Method
ASTM D1287-11	Standard Test Method for pH of Engine Coolant
ASTM D1881-17; ASTM D4921-95(2012)	Standard Test Method for Foaming Tendencies of Engine Coolant
EPA 3510	Test Method for Hydrocarbon Content Using Separating Funnel Liquid-Liquid Extraction
PALINTEST PHOT 18 &19	for the Determination of Iron Content
SM 2540A/Photometric method HACH Method 8006	Method for Total Suspended Solids
<b>Ambient Air/Gas</b>	
AS 3580.4.1-2008	H <sub>2</sub> S content
AS 3580.5.1-1993	Nitrogen Dioxide
AS 3580.7.1-1992	Carbon monoxide
AEROQUAL AQM65 LASER COUNTER METHOD	Particulate Matter
AEROQUAL AQM65 PID	Volatile Organic Compounds
GPA 2286-14	Method for the CO <sub>2</sub> Content
<b>Petroleum/Lube Oil/Condensate</b>	
Ashing & Analysis by PDV and UV-VIS	Wear metals, contaminants, additives
ASTM D86-17	Standard Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure
ASTM D130; IP 227	Method for the Detection of the Corrosiveness of Aviation Turbine on Silver
ASTM D156	Standard Test Method for Saybolt Color of Petroleum Products (Saybolt Chromometer Method)
ASTM D189-06(2014)	Standard Test Method for Conradson Carbon Residue of Petroleum Products

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ASTM D323-15a	Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method)
ASTM D381-12(2017)	Standard Test Method for Gum Content in Fuels by Jet Evaporation
ASTM D473-07(2017)	Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method
ASTM D482-13	Standard Test Method for Ash From Petroleum Products
ASTM D611-12(2016)	Standard Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbons
ASTM D664-17a	Determination of Acid Number of Petroleum Products by Potentiometric Titration
ASTM D892-18	Standard Test Method for Foaming Characteristics of Lubricating Oils
ASTM D1142-95(2012)	Standard Test Method for Water Vapor Content of Gaseous Fuels by Measurement of Dew-Points Temperature
ASTM D1298-12(2017); IP 160	Standard Test Method for Density, Relative Density, API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method
ASTM D1318-16	Standard Test Method for Sodium in Residual Fuel Oil (Flame Photometric Method)
ASTM D1742-18	Standard Test Methods for Oil Separation from Lubricating Grease During Storage
ASTM D2265-15	Standard Test Method for Dropping Point of Lubricating Grease Over Wide Temperature Range
ASTM D2420-13(2018)	Standard Test Method for Hydrogen Sulfide in Liquefied Petroleum (LP) Gases (Lead Acetate Method)
ASTM D2500-17a	Standard Test method for Cloud Point of Petroleum Products and Liquid Fuel
ASTM D2711-17	Standard Test Method for Demulsibility Characteristics of Lubricating Oils
ASTM D3230-13(2018)	Standard Test Method for Salts in Crude Oil (Electrometric Method)
ASTM D3944-12(2017)	Standard Test Method for Solidification Point of Petroleum Wax
ASTM D4294-03	Standard Test Method for Sulphur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry
ASTM D4928-12(2018); ASTM D6304-16e1	Standard test Method for Water in Crude Oils, Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration
ASTM D5853; ASTM D97	Standard Test Method for Pour Point of Crude Oils/ Petroleum Products
EPA 1020 A	Standard Test Methods for Flash Point of Liquids by Small Scale Closed Cup Tester (or Apparatus)

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Heated & Unheated Viscometer (correlates to ASTM D445; IP 71)	Viscosity @ 20°C / 40°C
Insoluble Test Cell (correlates to IP 316)	Determination of Heptane Insolubles in Used Lubricating Oils
Internal SOP	Lubricating Oil Aging Characteristics (Conradson Carbon Residue Method)
IP 48	Determination of Oxidation Characteristics of Lubricating Oil
IP 400	Determination of Base Number of Petroleum Products by Conductimetric Titration Method
SX-100K Portable Cetane Analyzer (According to ASTM D4737-03; ASTM D613; EN ISO 5165)	Cetane Number
SX-100K Portable Octane Analyzer (According to ASTM D2699-86; ASTM D2700-86)	Anti Knocking Index AKI (Pump Octane Number)
SX-100K Portable Octane Analyzer (According to ASTM D2699-86; ASTM D2700-86)	Motor Octane Number
SX-100K Portable Octane Analyzer (According to ASTM D2699-86; ASTM D2700-86)	Research Octane Number
Test Cell Correlates to ASTM D4740-04(2014)	Cleanliness & Compatibility
Water in Oil Test Cell (correlates to IP 386)	Determination of Water in Crude Petroleum
<b>Soil/Sediment</b>	
EPA METHODS 3050 plus APHA 23 <sup>rd</sup> Edition and PDV 6000plus Analyzer	Heavy metals (Pb, Cr, Hg, Cd, Sn, Ag, Se)
Flame Photometer	Alkalis (K, Na, Li, Ca, Ba)
ISO/TR 11046:1994	Determination of Mineral Oil Content by Infrared Spectrometry
PALINTEST ARSENIC TEST KIT (GUTZEIT TEST)	Method For The Determination of Arsenic
<b>Fertilizer</b>	

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GFAM-K3	Potassium
GFAM-N1	Nitrogen
GFAM-P8	Phosphorus