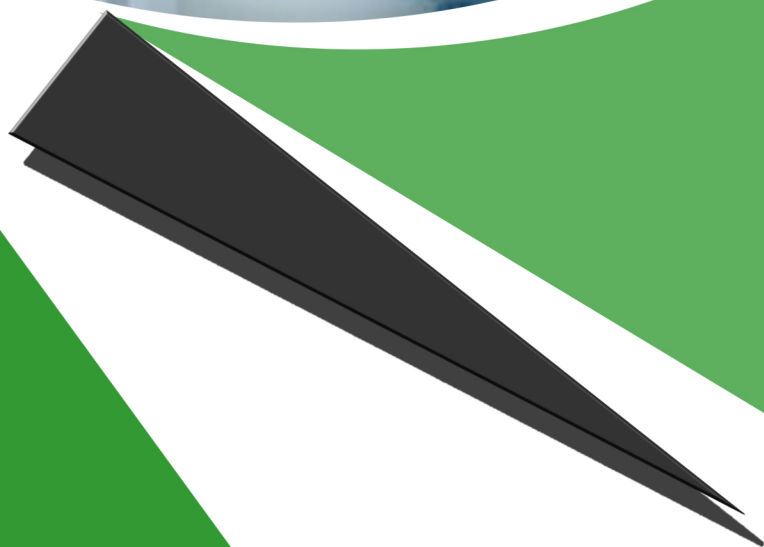


RICHFLOOD LABORATORY BROCHURE



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Industries benefiting from Richflood state-of-the-art laboratory services include Petroleum, chemical, materials, energy, manufacturing mining, agriculture, electronic, power, pharmaceutical, and more Richflood Testing follows ASTM, ISO, and local industry standards



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RICHFLOOD LABORATORY

Accredited by The Federal Ministry Of Environment and National Environmental Standards & Regulations Enforcement Agency (NESREA), Department Of Petroleum Resources (DPR) ISO Certification in View



LABORATORY SERVICES

- ▶ **Water/Effluent/Sediment/Soil Sampling Services**
- ▶ **In-situ testing services**
- ▶ **Soil Analysis (Physico - Chemical, Bacteriological, Chemical etc)**
- ▶ **Water/Effluent Analysis**
- ▶ **Air Quality Analysis/Modelling**
- ▶ **Agricultural Land Soil Survey**
- ▶ **Soil Fertility and Suitability Analysis**
- ▶ **Laboratory Procurement Consultancy Services**
- ▶ **Laboratory Result Interpretation**
- ▶ **Training Courses (Open and Customized Courses)**
- ▶ **Research Collaboration Available**
- ▶ **Environmental Studies (EIA, EAu, EPRP, EMP etc)**

Office Address: 4 Justice Chukwudifo Oputa Street, Asokoro, Abuja - FCT, Nigeria

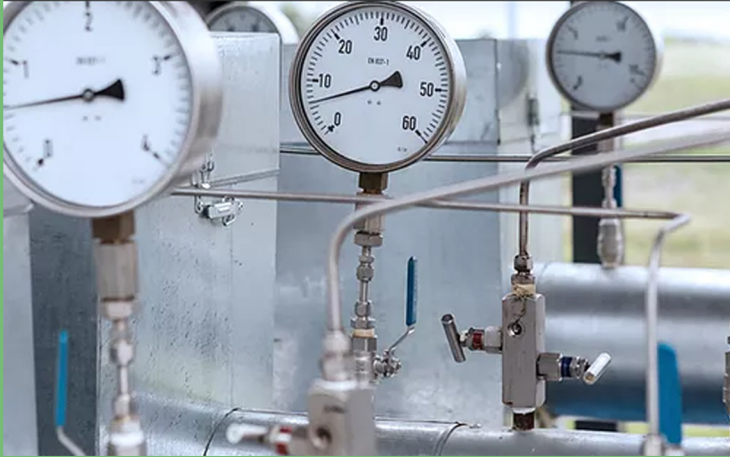
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Contact Us today for your Laboratory needs

GHG's Monitoring



**ENVIRONMENTAL AIR EMISSIONS
AND AMBIENT AIR QUALITY**



EFFLUENT MONITORING



SOIL QUALITY



**Ground Water and Surface Water
Regulatory Compliance**



**Combustion Facilities Emissions
Monitoring**





ISO 17025:2017 (General Requirements for Testing and Calibration Laboratories) ACCREDITATION

In line with the mandate of Richflood Laboratories Ltd to ensure quality of laboratory services and meeting International standards and recognition, the Laboratory has commenced the processes of ISO 17025:2017 Accreditation and complying with all the requirements as laid down on the standards Laboratories which meet the requirements of ISO 17025 also operate in accordance with the requirements of ISO 9001 (Quality Management System) that are relevant to calibration and testing activities..Complying with ISO 17025 requirements assist testing and calibration laboratories set up a quality management system that conforms to ISO 17025:2017, the international standard for laboratory quality systems. Compliance with this standard provides a globally accepted basis for laboratory accreditation. The standard specifies the management and technical requirements to be met by testing and calibration laboratories

Atomic Absorption Spectrometers (AAS)



The 235ATS Atomic Absorption Spectrometer is for analysts requiring nitrous oxide to run Al, Si, Ga, Ge Ba, Be, Ti, Va, Zr, Nb, Mo, Hf Ta, and W. The automated gas box allows for push button oxidant change-over, from Air to Nitrous oxide for safety

The 235ATS also features a flame detector which will turn the gases off shall the flame extinguish

Model 910 Buck Gas Chromatograph



Model 910 chassis; ambient to 400°C column oven; On-column injector with carrier EPC; single channel PeakSimple data system at-a-glance" display of" temperatures, pressures, voltages, and detector parametersThe 910 can control up to 16 heated zones, three gas sampling valves, and seven EPC gas pressures

DR6000 UV-VIS Spectrophotometer with pre-programmed methods



The DR6000 is designed to deliver accurate results by supporting the operator with each step they perform with the TNTplus offering:

Sample preparation: reduced handling steps, precise dosing

Sample analysis: automatic test recognition, expiration date check, etc

Utilization of the new Truecal™ software to eliminate lot to lot variation



Bante 900P: pH/Conductivity/DO Meter

Multiparameter water meter has 15 functions can be set for measurement of

- pH
- ORP
- Ion
- Conductivity/TDS/Salinity/Resistivity
- Dissolved Oxygen



Series 500 Portable Air Quality Monitor

The Series 500 air quality sensor enables accurate real-time surveying of common outdoor air pollutants, all in an ultraportable handheld monitor. Air quality professionals typically use the Series 500 for short term air quality studies and carrying out checks on pollution "hot spots". The Series 500 can also be deployed for short term fixed monitoring by adding an optional outdoor enclosure.

Testing Methods at Richflood Laboratories Ltd

Visible & Ultraviolet / Visible Spectroscopy EPA Methods

EPA Method - 420_2 - Phenolic materials in water and waste by colrimeter

EPA Method - 110_1 - Colorimetric

EPA Method - 110_2 - Platinum-Cobalt method

EPA Method - 110_3 - Color Spectrophotometric

EPA Method - 130_1 - Hardness, Total mg- per -L as CaCO₃ Colorimetric

EPA Method - 206_4 - Arsenic colormetric

EPA Method - 212_3 - Boron - Colorimetric

EPA Method - 420_1 - Drinking water by visible spectrophotometer

Atomic Absorption Spectroscopy EPA Methods

EPA - 218_4 - Chromium, Hexavalent Atomic absorption, Chelation Extraction
EPA - method - 206_3 - Arsenic Atomic absorption A - Gaseous-Hydride
EPA Method - 235_1 - Iridium AA Direct Aspiration
EPA Method - 420_2 - phenolic materials in water and waste by colrimeter
EPA Method - 200_0 metals analysis by Atomic Absorption.pdf
EPA Method - 200_13 - Trace element determination via Graphite furnace
EPA Method - 200_9 - Determination Of Trace Elements By Stabilized Temperature
EPA Method - 200__9 - Trace Elements In Water, Solids, and Biodolids By
EPA Method - 202_1 Aluminum - Atomic Absorption, Direct Aspiration
EPA Method - 202_2 - Aluminum - Atomic Absorption-Graphite Furnace
EPA Method - 204_1 - Antimony - AA - Direct Aspiration
EPA Method - 204_2 - Antimony AA - Furnace Technique

Atomic Absorption Spectroscopy EPA Methods




EPA Method - 206_2 - Arsenic AA - Furnace Technique
EPA Method - 206_5 - Arsenic Sample Digestion Prior to Hydride analysis
EPA Method - 208_1 - Barium AA - Direct Aspiration
EPA Method - 208_2 - Barium AA - Furnace Technique
EPA Method - 210_1 - Beryllium AA - Direct Aspiration
EPA Method - 210_2 - Beryllium AA - Furnace Technique
EPA Method - 213_1 - Cadmium - AA - Direct Aspiration
EPA Method - 213_2 - Cadmium AA Furnace Technique
EPA Method - 215_1 - Calcium AA Direct Aspiration
EPA method 218_5 - Chromium, Dissolved Hexavalent AA - Furnace
EPA Method - 218_1 - Chromium AA, Direct Aspiration
EPA Method - 218_3 - Chromium AA, Chelation Extraction
EPA Method 218_2 - Chromium AA, Furnace Technique
EPA Method - 219_2 - Cobalt AA - Furnace Technique
EPA Method - 220_1 - Copper by AA Direct Aspiration
EPA Method 220_2 - Copper AA Furnace Technique
EPA Method - 231_1 - Gold Atomic absorption
EPA Method - 231_2 - Gold AA Furnace Technique
EPA Method - 235_2 - Iridium AA Furnace Technique
EPA Method - 236_1 - Iron AA, Direct Aspiration

Atomic Absorption Spectroscopy EPA Methods

EPA Method - 236_2 - Iron AA Furnace Technique
EPA Method - 239_1 - Lead AA Direct Aspiration
EPA Method - 239_2 - Lead AA Furnace Technique
EPA Method - 242_1 - Magnesium AA Direct Aspiration
EPA Method - 243_1 - Manganese AA Direct Aspiration
EPA Method - 243_2 - Manganese AA Furnace Technique.pdf
EPA Method - 245 - Determination of Mercury in Water
EPA Method - 245_1 - Mercury - Manual Cold Vapor Technique
EPA Method - 245_5 - Mercury In Sediment Manual Cold Vapor
EPA Method - 246_1 - Molybdenum AA Direct Aspiration
EPA Method - 246_2 - Molybdenum AA Furnace Technique
EPA Method - 249_1 - Nickel AA Direct Aspiration
EPA Method - 249_2 - Nickel AA Furnace Technique
EPA Method - 252_1 - Osmium AA Direct Aspiration

Atomic Absorption Spectroscopy EPA Methods

EPA Method - 252_2 - Osmium AA Furnace Technique
EPA Method - 253_1 - Palladium AA Direct Aspiration
EPA Method - 253_2 - Palladium AA Furnace Technique
EPA Method - 255_1 - Platinum AA Direct Aspiration
EPA Method - 255_2 - Platinum AA, Furnace Technique
EPA Method - 258_1 - Potassium AA Direct Aspiration
EPA Method - 264_1 - Rhenium AA Direct Aspiration
EPA Method - 264_2 - Rhenium AA Furnace Technique
EPA Method - 265_1 - Rhodium AA Direct Aspiration
EPA Method - 265_2 - Rhodium AA Furnace Technique
EPA Method - 267_1 - Ruthenium AA Direct Aspiration
EPA Method - 267_2 - Ruthenium AA Furnace Technique
EPA Method - 270_2 - Selenium AA Furnace Technique
EPA Method - 270_3 - Selenium AA Gaseous Hydride
EPA Method - 272_1 - Silver AA Direct Aspiration
EPA Method - 272_2 - Silver AA Furnace Technique
EPA Method - 273_1 - Sodium AA Direct Aspiration
EPA Method - 273_2 - Sodium Atomic Absorption Furnace Technique
EPA Method - 279_1 - Thallium AA Direct Aspiration
EPA Method - 279_2 - Thallium AA Furnace Technique
EPA Method - 282_1 - Tin AA Direct Aspiration
EPA Method - 282_2 - Tin AA Furnace Technique
EPA Method - 283_1 - Titanium AA Direct Aspiration
EPA Method - 283_2 - Titanium AA Furnace Technique
EPA Method - 286_1 - Vanadium AA Direct Aspiration
EPA Method - 286_2 - Vanadium AA Furnace Technique
EPA Method - 289_1 - Zinc AA Direct Aspiration
EPA Method - 289_2 - Zinc AA Furnace Technique
EPA method - 200_2 - Sample Preparation Procedure
For Spectrochemical





Atomic Absorption Spectroscopy EPA Methods

EPA Method - 502_2 - VOC by Purge and trap GC with PID and ECD
EPA Method - 502_2re - VOC in water via Purge and trap
GC with PID and ECD
EPA Method - 504_1 - EDB-DBCP - ECD GC
EPA Method - 505 - Pesticides and PCB via ECD GC
EPA Method - 505_21 - Organohalide Pesticides by ECD GC
EPA Method - 506 - Phthalate and Adipate Esters by PID GC
EPA Method - 506rev1 - Phthalate and Adipate Esters In
Drinking Water by PID GC
EPA Method - 507 - Nitrogen- and Phosphorus-NPD GC
EPA Method - 507rev2 - Nitrogen - and Phosphorus-NPD GC
EPA Method - 508 - Chlorinated Pesticides by ECD GC
EPA Method - 508_11 - Pesticides - Herbicides - ECD - GC
EPA Method - 508_1re2 - Pesticides - Herbicides - ECD - GC
EPA Method - 508_a - Polychlorinated Biphenyls By ECD GC
EPA Method - 508rev31 - Chlorinated Pesticides by ECD GC
EPA Method - 509rev1 - Ethylene Thiourea ETU by ECD GC
EPA Method - 515_1 - Chlorinated Acids by ECD GC
EPA Method - 515_1re4 - Chlorinated Acids by ECD GC
EPA Method - 515_2 - Chlorinated Acids by ECD GC

EPA Method - 515_3 - Chlorinated Acids in drinking water
by ECD GC

EPA Method - 548 - Endothall in Drinking water by ECD GC

EPA Method - 551 - Chlorination Disinfection Byproducts
by ECD GC

EPA Method - 551_1 - Chlorination Disinfection Byproducts
by ECD GC

EPA Method - 552 - Haloacetic Acids In Drinking Water
by ECD GC

EPA Method - 552_1 - Haloacetic Acids and Dalapon by ECD GC

EPA Method - 552_2 - Haloacetic Acids and Dalapon by ECD GC

EPA Method - 554 - Carbonyl Compounds In Drinking Water
by Gradient HPLC

EPA Method - 602 - Purgeable Aromatics In Water by Purge and
trap ECD GC

EPA Method - 603 - Acrolein and Acrylonitrile by Purge and
trap FID GC

EPA Method - 604 - Phenols by FID GC

EPA Method - 606 - Phthalate Ester by ECD GC

EPA Method - 608_1 - Organochlorine Pesticides by ECD GC

EPA Method - 608_2 - Organochlorine in waste water by ECD GC

EPA Method - 609 - Nitroaromatics and Isophorone by ECD
FID GC

EPA Method - 610 - Polynuclear Aromatic Hydrocarbons
by GC and HPLC

EPA Method - 611 - Haloethers by ECD GC

EPA Method - 612 - Chlorinated Hydrocarbons by ECD GC

EPA Method - 614_1 - Organophosphorus Pesticides by ECD GC

EPA Method - 615 - Chlorinated Herbicides by ECD GC

EPA Method - 616 - Carbon-, Hydrogen in pesticides by FID GC

EPA Method - 617 - Organohalide Pesticides and PCB by ECD GC

EPA Method - 618 - Volatile pesticides by ECD GC

EPA Method - 620 - Diphenylamine by NPD GC

EPA Method - 622 - Organophosphorus Pesticides by NPD GC

EPA Method - 622_1 - Thiophosphate Pesticides by NPD GC

EPA Method - 627 - Dinitroaniline Pesticides by ECD GC

Richflood Laboratories Ltd

List of Accreditation

- ▼ Federal Ministry of Environment (FMEnv)
- ▼ Department of Petroleum Resources (DPR)
- ▼ Institute of Public Analyst Of Nigeria (IPAN) (in View)
- ▼ ISO 17025:2017 (in view)

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Technical Capabilities



- | | |
|--|---|
| <ul style="list-style-type: none">Ecological AssessmentsCultural Heritage and ArcheologyAir QualityBiodiversity StudiesSpecies SurveyEnvironmental PermittingHabitat SurveyCorporate Sustainability and Climate ChangeEcological Impact AnalysisManagement PlansHydrological SurveyLand Acquisition and Right of WayHydrogeological SurveyRemediation ManagementLaboratory ServicesImpact Mitigation MonitoringRiver Health AssessmentsMergers & Acquisition Risk MitigationStakeholders Engagement PlanResettlement Action Planning and Implementation | <ul style="list-style-type: none">Regulatory Compliance MonitoringRichflood Specialist Disinfection ServicesWater ResourcesStrategic Environmental AssessmentsEnvironmental and Social Impact AssessmentsEnvironmental AuditingGeographic Information System (GIS) technologyCommunity Development PlanningCarbon and energy due diligenceManagement Systems and ComplianceCarbon Foot-printingHealth Impact AssessmentsClimate Change Mitigation and AdaptationOil Spills Clean up and RemediationEnvironmental Protection and Rehabilitation PlanSocio-economic Impact AssessmentsEnvironmental and Social Due DiligenceInvestment Risk AssessmentLearning and Change ImplementationEnvironmental Due Diligence, M&A Solutions |
|--|---|

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