

STEPHEN KAMAU WANGARI
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CAREER OBJECTIVE

- To pursue a rewarding and challenging career, which would offer me an opportunity to utilize my resources to the fullest for the general betterment of humanity.

EDUCATION

2019-2021: Bachelor of Technology in Industrial and Applied Chemistry : TECHNICAL UNIVERSITY OF KENYA.

2016-2018: TVET Diploma in ANALYTICAL CHEMISTRY: KABETE NATIONAL POLYTECHNIC

Focus on: Inorganic chemistry, Organic chemistry, Physical chemistry, Analytical chemistry techniques, Instrumental methods, chromatographic techniques and Classical methods.

2011-2014: Kenya certificate of Secondary Education, **KIKUYU BOYS HIGH SCHOOL**

2003-2010: Kenya Certificate of Primary Education, **NGURIUNDITU PRIMARY SCHOOL**

PROFESSIONAL SPECIALITIES

- ❖ Spectroscopic Methods (**UV/Vis, FES, GFAAS, FAAS, ICP-MS, Cold Vapor-AAS, ICP-OES, MP-AES**).
- ❖ Chromatographic Methods (**LC-MS/MS, GC-MS/MS, HPLC**).
- ❖ Chemical Analytical techniques (Gravimetric analysis).
- ❖ Method Development and Validation.
- ❖ Equipment and Analytical Balance Verifications and **Basic Instrument maintenance**.
- ❖ Sampling.
- ❖ Analytical Standards preparations.
- ❖ Identification, Neutralization, and Disposal Strategies for Abandoned and Stockpiled Dual-Use Chemicals.
- ❖ Sample Analysis.
- ❖ Quality Control and Assurance (QA/QC).
- ❖ Laboratory Waste Management.
- ❖ Laboratory safety and First Aid.
- ❖ XRD, XRF Instruments.
- ❖ Specimen Preparation and Lab Analysis
- ❖ Environmental Impact Assessment.
- ❖ Quality Management System.
- ❖ Data Analysis and Uncertainty of measurements.
- ❖ Internal Quality Auditing.
- ❖ Methods for Analysis of Food Contaminants: Rapid Screening Rapid Screening and Confirmatory Techniques.
- ❖ Occupational Health and Safety (OSH).

WORK EXPERIENCE

09/01/2020 to date –Present: Laboratory Technologist, Chemical Science Investigations (CSI International Laboratories)

Duties and Responsibilities

- ❖ Analytical standards preparation.
- ❖ Heavy metal contamination analysis using **AAS, FAAS, MP-AES, ICPOES, ICPMS.**
- ❖ Analysis of available nutrients in Milk, Meat and other animal products.
- ❖ Preparing culture media and reagents for microbial Analysis.
- ❖ Coordination of Proficiency Testing Programs in water and Food Samples.
- ❖ Maintenance of measurement records as per ISO 17025 requirements and QMS.
- ❖ Food and Feed Proximate analysis of Carbohydrates, Proteins, Fibre, Crude Fat Content, Crude Oil and Vitamins.
- ❖ Soil Fertility evaluation and Fertilizer recommendation.
- ❖ Preparing samples and specimens for laboratory analysis.
- ❖ Fertilizer quality evaluation.
- ❖ Livestock feed formulation analysis.
- ❖ Training and supervision of students on attachment, internship and new staff in the Laboratory.
- ❖ Ensuring health and safety requirements are adhered to according HSE requirements.
- ❖ Analysis of pesticide MRLs in Fresh Produce using HPLC, GC-FID, GC-ECD, LCMS, GCMS.
- ❖ Mycotoxin(aflatoxin) maximum limits analysis using HPLC, LCMS.
- ❖ Data Logging in equipment logbook.
- ❖ Maintenance of Laboratory hygiene and ultimate cleanliness.
- ❖ Implementing laboratory work schedules as per ISO 17025 guidelines.
- ❖ Portable water analysis and water quality evaluation and recommendation.
- ❖ Data interpretation and recommendation.
- ❖ Complete chemical analysis of effluent water from industries.
- ❖ Determination of BOD/COD in wastewater samples.
- ❖ Gravimetric analysis of gypsum for industrial use.
- ❖ Titrimetric determinations of treated water.
- ❖ Instrument calibration and maintenance.
- ❖ Analysis of hydrocarbons from Industrial Effluents (BTEX, TPH, PAH) using **GCFID, GCMS.**
- ❖ Pharmaceutical products analysis and quality assurance using **HPLC, UV-vis, GCFID, LCMS.**
- ❖ Sampling.
- ❖ Maintenance of client Database.
- ❖ Air quality monitoring and recommendations.
- ❖ Research and development.
- ❖ Report formulation and analytical data interpretation.
- ❖ Effluent treatment plant (**ETP**) recommendations.
- ❖ Method validation, Development and Verification.
- ❖ Preparing for KENAS Audits annually.
- ❖ Analysis of in process, raw material and finished pharmaceutical and industrial products.
- ❖ Industrial Effluents Analysis, consultancy and Treatment.

January 2019 to 06-01-2020 – Present: Intern, Kenya Plant Health Inspectorate Service (KEPHIS)

KEPHIS is a government parastatal whose responsibility is to assure the quality of Agricultural inputs and produce for Food security, globally competitive agriculture and sustainable development.

Responsibilities

- ❖ Glassware Verification and Analytical balance calibration.
- ❖ Analytical Standards preparation.
- ❖ Chemical and physical analysis on food/agricultural products in accordance using the standard operating procedures.
- ❖ Mycotoxin (Aflatoxin) analysis using **LC-MS/MS, HPLC**.
- ❖ Heavy Metals contamination Analysis using **AAS, FAAS, ICP-MS, ICP-OES, GF-AAS**
- ❖ Analysis of pesticides MRLs on fresh produce using **GC-MS/MS, LC-MS/MS, HPLC**
- ❖ Analysis of water for irrigation suitability using multiparameter photometer, **UV/Vis**
- ❖ **Fertilizer, Manure, and Feeds Analysis using Soxhlet extraction, Kjeldahl method, UV/VIS, FAAS, MP-AES.**
- ❖ Complete Soil fertility testing and Fertilizer recommendation.
- ❖ Method Development and Validation.
- ❖ Perform percent (%) loss on ignition (Moisture content and Ash content).
- ❖ Analysis of organic and inorganic trace contaminants in plants, soil, crops, water and animal produce.
- ❖ Portable water analysis.
- ❖ Pesticides and Fertilizer formulations analysis.
- ❖ Sample archiving and disposal of overdue samples (past 3months).
- ❖ Irrigation water analysis and recommendations.
- ❖ Ensuring QA/QC procedures are maintained according to SANAS requirements.

4th Sept 2017-30th Dec 2017: Research work/Project, Determination of Heavy Metals in effluents from petrol stations (Industrial area), **Kabete National Polytechnic**

Responsibilities

- ❖ Routine laboratory maintenance
- ❖ Sample collection, preservation, and preparation, Extraction and analysis
- ❖ Report writing and results interpretation
- ❖ Research work presentation

4th Sept 2017- 30th Dec 2017: Attachment: Ministry of Mining and Geological Surveys

Responsibilities

- ❖ Calorific value determination using **Bomb calorimeter**
- ❖ Qualitative Analysis of elemental composition using **XRF, XRD Instruments.**
- ❖ Qualitative and quantitative chemical composition/determination using **AAS, UV/Vis, FAAS, ICP-MS and Infrared photometer**
- ❖ PH testing, instrument calibration, centrifugation and volumetric/coulometric titrations
- ❖ Ensure proactive continual capture of important environmental parameters of COD, BOD, Waste water, hazards waste and heavy metals.
- ❖ Gravimetric analysis of gypsum for industrial use
- ❖ Working in accordance with GLP, SOP and ISO-17025 requirements
- ❖ Titrimetric determinations in raw and treated water samples
- ❖ Report formulation and Analytical data interpretation
- ❖ Sample reception and registration for analysis

Professional Short Trainings

1. First aid and safety procedures: Trained at St. John's ambulance.
2. Methods for Analysis of Food Contaminants: Rapid Screening and Confirmatory Techniques by international Food Safety training Laboratory in UNIVERSITE LAVAL-QUEBEC(CANADA)
3. Trained on cGLP, ISO-17025:2017 by Kenya Accreditation Service (KENAS).
4. Attended Basic operational and applications training on the Thermo scientific iCAP-7400 Duo ICP-OES by Anatech Instruments (Pty) Limited.
5. Computer Applications trained at Arknet Computer College.
6. Electrical Installation trained at Muguga Youth Polytechnic.
7. Trained on Quality control and Quality assurance at CSI International Limited.
8. Attended basic operational and applications training on the SpectrAA-5 Varian AAS by Ultra Engineering Systems CO. Limited.
9. Internal Quality Auditing trained at Kenya Accreditation Service (KENAS)
10. Fire Marshall Training at New Sonic Quality Inspectors.
11. Competence training and evaluation on determination total organic carbon (TOC) in soil at Kenya Plant Health Inspectorate Service.
12. Occupational Health and Safety (OSH) trained at New Sonic Quality Inspectors.
13. Attended basic operational and Applications Training on Gas Chromatography-(GC-5890-HP) by Ultra Engineering Systems CO. Limited.
14. Identification, Neutralization, and Disposal Strategies for Abandoned and Stockpiled Dual-Use Chemicals in Kenya-Kenya Chemical Society.
15. Basic Application Training on ICPMS by Analytic Jena on : -Instrument Operation and setup of PQMS, Software navigation with Aspect MS, Method Development and Optimization ,Calibration, measurement and data evaluation.

Other skills

- Quality inspection and Auditing
- Report writing and recommendation's
- Analytical skills
- Computer application skills and data presentation.
- Quality control and Quality Assurance
- Data Entry and Statistical data analysis
- Team player and self-drive
- Time management skills
- Driving skills and Personal integrity and attention to detail.

REFEREES

- 1. Mr. Jared Onyango Nyangau**
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