DAN MKANDAWIRE

LABORATORY TECHNICIAN | MICROBIOLOGY | CHEMICAL & ENVIRONMENTAL ANALYSIS

Phone: +260 972 901 095
Email: dmandawire@gmail.com
Location: Kamwala South, Lusaka, Zambia

PROFESSIONAL PROFILE

Experienced laboratory professional with over 20 years of practical laboratory experience in microbiological, chemical and environmental analysis. Holds a Bachelor of Science in Microbiology**,** Master of Science in Sanitation, and Advanced Certificate in Science Laboratory Technology**.**

Extensive hands-on experience in laboratory testing, sample handling and preparation, reagent preparation, analytical procedures, laboratory equipment operation, maintenance and recalibration, quality and safety procedures, data interpretation, and accurate recording and reporting of analytical results.

Experience includes laboratory work involving water, wastewater, sludge, soils, sediments, aggregates, food and drug samples and food-related materials. Supported academic, research, consultancy and industrial assignments involving organizations including ZABS, Zambia Breweries, ZEMA, NWASCO, ZESCO, Zambia Sugar, Trade Kings, KCM, Nanga Farms Plc, Hotels and World Vision**.**

Strong analytical and problem-solving skills with proven ability to work independently and as part of a team. Experienced in training and supervising laboratory personnel, maintaining laboratory equipment and supporting effective laboratory operations with a strong commitment to accuracy, safety and reliable analytical results.

CORE LABORATORY COMPETENCIES

- Microbiological analysis
- Chemical analysis
- Water and wastewater analysis
- Food and drug sample analysis
- Environmental sample analysis
- Sample handling and preparation
- Reagent preparation
- Laboratory testing procedures
- Laboratory equipment operation
- Equipment maintenance and recalibration
- Quality control and quality assurance practices
- Analytical data interpretation
- Results recording and reporting
- Laboratory documentation

- Laboratory safety and chemical handling
- Problem solving and troubleshooting
- Technical reporting
- Staff training and supervision
- Teamwork and multidisciplinary collaboration

PROFESSIONAL EXPERIENCE

CHIEF ENGINEER

Department of Civil and Environmental Engineering, University of Zambia
April 2023 – July 2025

- Supervised and trained laboratory technical staff in laboratory operations, procedures and safe working practices.
- Provided technical guidance and support to laboratory personnel.
- Oversaw laboratory equipment maintenance and procurement.
- Supported technical reporting and laboratory documentation.
- Chaired technical staff meetings and contributed to departmental technical decision-making.
- Implemented improved laboratory maintenance and safety practices.
- Supported effective coordination of laboratory activities, equipment and technical resources.
- Promoted teamwork and continuous improvement in laboratory operations.
- Oversaw laboratory procurement and budgeting.

LABORATORY TECHNICIAN

University of Zambia – Environmental Engineering Laboratory
August 2002 – April 2023

- Conducted routine and project-based laboratory analysis of water, wastewater, sludge, soils, sediments and aggregates for academic, research and consultancy purposes.
- Performed microbiological and chemical analyses using established laboratory procedures and analytical techniques.
- Received, handled and prepared samples for laboratory analysis while maintaining sample integrity.
- Prepared reagents and laboratory materials required for analytical work.
- Operated, maintained and recalibrated laboratory instruments and equipment.
- Conducted routine checks on laboratory equipment and reported equipment-related problems.
- Recorded, interpreted and reported analytical results accurately.
- Prepared technical reports and maintained laboratory records and documentation.
- Applied laboratory safety procedures when handling chemicals, reagents, samples and equipment.

- Supported laboratory users, undergraduate students and postgraduate researchers during practical and research activities.
- Guided students and technical personnel in laboratory procedures, equipment use and safe working practices.
- Supported laboratory consultancy and analytical projects involving ZABS, Zambia Breweries, ZEMA, NWASCO, ZESCO, Zambia Sugar, Trade Kings, KCM, Nanga Farms Plc, Hotels and World Vision.
- Worked effectively with multidisciplinary teams on laboratory, environmental and research assignments.

LABORATORY TECHNICIAN

High Protein Foods, Lusaka
June 2002 – August 2002

- Prepared and Conducted laboratory analysis of raw materials (maize, Soya beans), stock feeds, boiler water, crude oil and finished cooking oil**.**
- Interpreted analytical results and supported quality and food-safety requirements.
- Maintained laboratory equipment and work areas.
- Recorded and reported analytical results in accordance with laboratory procedures.
- Followed laboratory safety requirements when handling samples, chemicals and laboratory equipment.

INDUSTRIAL ATTACHMENT

Food and Drugs Control Laboratory
January 2001 – April 2001

- Conducted microbiological and chemical analysis of food and drug samples**.**
- Prepared food and drug samples for laboratory testing.
- Performed pesticide analysis using gas chromatography**.**
- Followed established laboratory procedures and safety requirements.
- Assisted with analytical documentation and reporting.

EDUCATION

MASTER OF SCIENCE IN SANITATION

University of Zambia | 2020 – 2023

BACHELOR OF SCIENCE IN MICROBIOLOGY

University of Zambia | 2014 – 2018

ADVANCED CERTIFICATE IN SCIENCE LABORATORY TECHNOLOGY

Evelyn Hone College | 1999 – 2001

GRADE 12 CERTIFICATE

Mumbwa Secondary School | 1995 – 1997

PROFESSIONAL DEVELOPMENT

International Training Programme on Competence of Laboratories and their Management Systems

Bureau of Indian Standards (BIS), India | November 2019

TECHNICAL SKILLS

- Microbiological laboratory techniques
- Chemical laboratory techniques
- Water and wastewater testing
- Food and drug sample testing
- Environmental sample analysis
- Sample preparation and handling
- Reagent preparation
- Laboratory instrumentation
- Equipment maintenance
- Equipment recalibration
- Analytical data recording
- Results interpretation
- Technical reporting
- Laboratory documentation
- Laboratory safety
- Chemical and reagent handling
- Computer literacy

PROFESSIONAL ATTRIBUTES

- Strong analytical and problem-solving skills
- High attention to detail and accuracy
- Good verbal and written communication
- Ability to work independently
- Ability to work effectively as part of a team
- Good laboratory organization
- Strong commitment to safety and quality
- Ability to train and support colleagues
- Adaptability and willingness to learn
- Responsible handling of laboratory equipment and materials

REFERENCES

Mr. E. Mutati
University of Zambia, Civil & Environmental Engineering Department
Tel: +260 977 296 198 | +260 211 290 962

Dr. J.M. Tembo
University of Zambia, Civil & Environmental Engineering Department
Tel: +260 973 190 310 | +260 211 290 962

Dr. J. Kabika
University of Zambia, Civil & Environmental Engineering Department
Tel: +260 977 880 126 | +260 211 290 962