

ONESMUS MULWA MUNYAO
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Trained and experienced Chemist and Quality Control Professional with over (10) years proven track record of researching and innovating new products in manufacturing and production. I have a background that includes participation in groundbreaking research in the areas of quality control and assurance. I am equally experienced in running consistent research and laboratory bench studies, writing scientific reports and maintaining research lab operations and equipment's. I am currently finalizing my PhD program in Chemistry at Kenyatta University with research interest in Cement and Concrete Technology.

Personal Details:

- Date Of Birth: 20th January 1985
- Language: Proficient in English and Kiswahili

Education and Professional Qualification:

- **PhD in Chemistry, Kenyatta University, 2017-to date**
- **Master of Science (Chemistry) , Kenyatta University, 2015;**
- **Bachelor of Science (Industrial Chemistry), Upper Second Class Honours, Kenyatta University, 2011;**

Key Professional Skills and Competencies:

- Knowledge of process improvement methodologies and tools, statistical methodologies and routine analysis.
- Proficient in ISO/IEC 17025:2005 and ISO 9001:2015.
- Experienced in conducting laboratory studies to verify chemical processes for the production of target products.
- Skilled in designing tactical execution of laboratory experiments to support the development of manufacturing process.
- General knowledge and understanding of safe workplace and laboratory operations.
- Knowledge of hazardous material handling and the ability to recognize potential exposure issues.
- Vast knowledge of research particularly in areas of Physical and Applied Chemistry
- Working knowledge of the techniques of chemical analysis and the interpretation of the results of these analytical methods.
- Ability to develop policies and procedures for quality programs and activities
- Experienced in QA and QC programs and activities in line with QMS that lead to improvement in product development.
- Solid Integrity, commitment to service and respect for diversity
- Well versed in Computer Packages Word, Excel, Access, Power-point, Internet

PROFESSIONAL EXPERIENCE

Acting Quality Control, Research and Product Development Manager; August 2019- to date;

Savannah Cement Limited

Duties and Responsibilities

- Statutory products quality compliance within the East African Region
- Formulating, enforcing and reviewing the quality manual and plan and all quality documentation and reporting
- Defining and tracking customer service standards and charter to assure that their expectations are met.
- Equipment reliability: Assuring laboratory and plant equipment performance reliability through adoption of scheduled calibration program, CRMs analysis and accuracy tracking
- Continuous process and quality performance monitoring and improvement to assure maximized output and efficiency
- Laboratory safety, health and environment management
- Specifying, pre-verification and qualification of all the materials quality specifications including sourcing
- Champion raw materials management to assure product and process quality consistency
- Coordinate internal and external SHEQ Audits in conjunction with KEBS

Quality Control Supervisor;

Savannah Cement, June 2012 to Date;

Duties and Responsibilities:

- Establishment of standard operating procedures for chemical, shift and physical laboratories and commissioning of all laboratory equipment's.
- Installation, calibration and operation of XRF equipment.
- Preparation, standardization and validation of reagents for chemical analysis.
- Championing both quality and safety audits within the plant.
- Product development such as hydraulic road binder-a road stabilization product, CEM I 42.5N- a cement type for standard gauge railway and Karuma dam construction projects and limestone exploration projects
- Championing the Root Cause Analysis and QMS training programs for quality staff and participating in plant optimization processes.
- Coordinating with process and production department to ensure product quality is maintained.
- Drawing up calibration schedule for the laboratory testing equipment's and ensuring that both internal and external calibrations are done as per the schedule.
- Ensuring that the test results produced are accurate and reliable and within acceptable limits.
- Controlling laboratory inventories, ensuring that all the laboratory activities are carried out in a safe environment.

Key Achievements

- Successfully managed the SGR project phase 2A–Nairobi to Naivasha in terms of technical support- Formulating the appropriate mix concrete designs to suit the specifications for the railway construction
- Awarded as the most innovative employee of the years 2018 and 2019.
- Successfully researched and developed the CEM I 42.5N- One of the first cement specifications in line with the new standard gauge railway in Kenya and Karuma hydropower project in Uganda.
- Actively involved in plant optimization exercise with key focus on maintaining a world class clinker factor.
- Successfully developed Hydraulic Road Binder (HRB) – the first soil stabilizer product in East Africa.
- Conducted fundi seminars and customer site visits to offer technical support to sales and marketing team.

Chemist;

National Cement Limited, November 2010 to May 2012;

Duties and Responsibilities:

- Inspected, received and sampled all incoming raw materials
- Prepared and Standardized chemical reagents
- Performed Chemical analysis of raw materials and cement to confirm and certify compliance with Kenya Standard specifications.
- Commissioning and operation of raw material preparation equipment's in the physical laboratory such as; pilot ball mill, jaw crusher and pulveriser
- Physical analysis and testing of cement, actively involved in limestone exploration project.
- Maintenance of Laboratory records and all aspects of laboratory cleanliness and proper handling of laboratory equipment's and apparatus.
- Participated in production and quality project assessments and Involved in calibration of laboratory equipment's.

Key Achievements

- Developed standard operating procedures for analyzing limestone samples
- Successfully developed an alternative procedure for determining Calcium Oxide in cement.
- Awarded recognition by the section head as the best analyst of the year 2011
- Conducted customer site visits to offer support to sales and commercial team.

Professional Seminars/ Conferences and Trainings Attended

- Attended and participated in 5th Doctoral School on characterization of blended cements held in EPFL- Lausanne Switzerland, 23rd April 2019- 26th April, 2019.
- Attended and participated in Mapei Cement Academy in Milan Italy, 6th -8th June, 2018

- Attended and presented a paper during the 1st Kenya National Dam Conference held at Flamingo Beach Hotel Mombasa from 8th -9th March, 2018-*"Synergy in Water Resources Infrastructure for water Security"*
- Attended 9th International Kenya Chemical Society Conference held at the United States International University-Africa- 9th-12th May, 2017- *"The Role of Chemistry in Inventing a Sustainable Future"*
- Attended 8th International Kenya Chemical Society Conference held at the University of Nairobi- Chiromo Campus from 5th - 8th May, 2015; *"Applied Chemistry and Technology in Industry"*
- 31st Postgraduate seminar held at Kenyatta University on 30th November, 2015; *"Supporting National Economy Through Research"*
- Trained as an internal auditor on EMS ISO 14001: 2015 and OHSAS 18001: 2007- Bureau Veritas, 2017.
- Quality Assurance in laboratory Testing- ISO/IEC 17025:2005 training held at Bamburi Beach Hotel from 24th -28th November 2014.

Research Publications

Munyao, O.M., Thiong'o J.K., Muthengia, J.W., Romano, M., Mutitu, D.K., Muriithi, G., Mwiti, J.M. (2020). Study on the effects of *Thiobacillus intermedius* bacteria on Physico-Mechanical properties of Mortars of Ordinary Portland Cement. *Heliyon Journal*.

Munyao, O.M., Thiong'o J.K., Muthengia, J.W., Romano, M., Mutitu, D.K., Muriithi, G. (2019). Use of Bacillus Species Bacteria in Protecting Concrete Structures from sulphate Attack- A Review- *Journal of Chemical Reviews*.

Mutitu, D.K., Munyao, O.M., Muthengia, J.W., Thiong'o, J.K., Romano, M., Genson, M. (2019). Influence of *Lysinibacillus sphaericus* on compressive strength and water sorptivity in microbial cement mortar. *Heliyon Journal*.

Mutitu, D.K., Munyao, O.M., Muthengia, J.W., Thiong'o, J.K., Romano, M., Mwiti, J.M. (2019). Effects of Biocementation on some properties of cement-based materials incorporating *bacillus* species bacteria- A review, *Journal of Sustainable cement-based materials*.

Munyao, O.M. (2017). Effect of Partial Replacement of Ordinary Portland Cement with GGBFS on Compressive Strength Performance, *IOSR Journal of Applied Chemistry* Vol.10, Issue II Ver.II, pp 26-29.

Munyao, O. M., Thiong'o, J. K. and Muthengia, J.W. (Jan. 2016). Effect of Sulphate ions in Mixing Water on Cement Mortar Performance, *IOSR Journal of Applied Chemistry* Vol. 9, Issue 1 Ver. I, pp 11-15.

Festus, N.M., Thiong'o, J. K., Muthengia, J.W., and Munyao, O.M. (Feb. 2016). Pozzolanicity and Compressive Strength Performance of Kibwezi Bricks Based Cement, *IOSR, Journal of Applied Chemistry*, Vol. 9, Issue 2 Ver. II, pp. 28 – 32.

REFEREES

Please feel free to contact the under mentioned in regard to my competence, work ethic, performance and / or any other aspect with respect to me:

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