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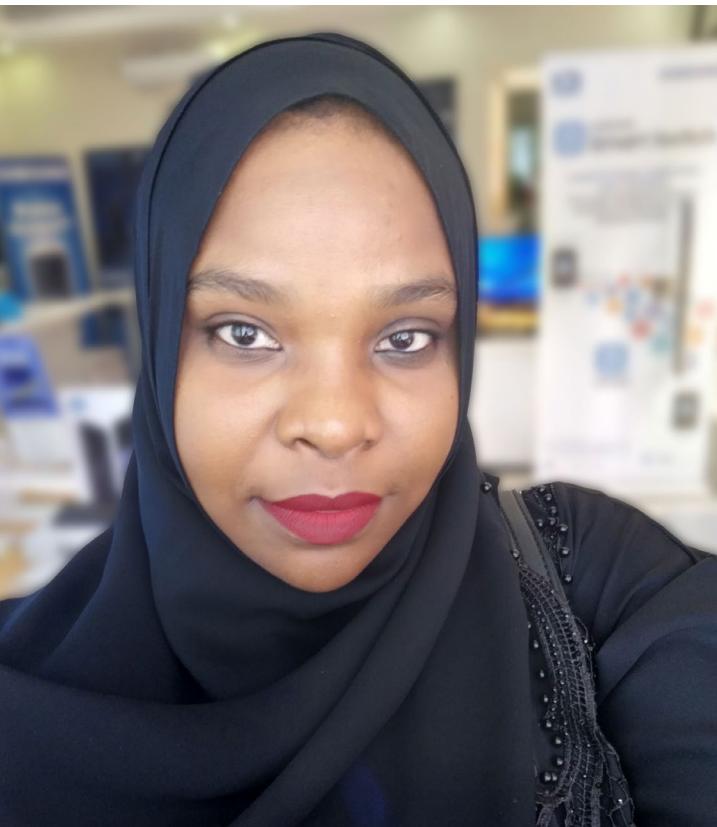
# The Benchmark

The Official Magazine of the Kenya Bureau of Standards



- 2** From the Corporate Communications Manager's Desk
- 3** KEBS in the fight against COVID-19
- 6** Standards supporting the fight against COVID-19
- 8** Measurement in health - The key to patient safety
- 10** Testing for global trade
- 12** First female ARSO president making great efforts for Africa standardization
- 16** Business continuity and risk management, when the unexpected happens
- 18** Prevention of aflatoxin contamination key for food and livestock feed safety
- 20** Harmonisation of EAC standards fosters regional trade
- 21** Food safety, global concerns, and the role of the Kenya food industry
- 23** KEBS moves to ease the product certification process with revised Standardization Mark scheme
- 24** Grace Anunda is the Secretary General of the Eastern Africa Association of Radiation
- 26** Pictorials
- 28** List of Standards Approved by the 126<sup>th</sup> Standards Approval Committee

# From the Corporate Communications Manager's Desk



Dear reader,

Welcome to another edition of our quarterly magazine – *The Benchmark*

Since the country recorded the first case of coronavirus (COVID-19) on 13th March 2020, the government has adopted various safety measures including social distancing, wearing of face masks when in public spaces, use of instant hand sanitizers, local manufacturing of personal protective equipment (PPEs) among others to curb the spread of the virus.

As the National standards body, the Kenya Bureau of Standards (KEBS) has been at the forefront in supporting government efforts in the fight against COVID-19.

In this issue we spotlight KEBS role in the fight against the virus. In an interview with the Managing Director, we feature over thirteen (13) standards that have been availed to manufacturers and the

public free of charge to support manufacturing of PPEs including Instant Hand Sanitizers, Critical Care Ventilators, Surgical Face Masks, Reusable Cloth Masks, Single-use Medical Examination gloves, Single-use Sterile Rubber Surgical Gloves, Protective Clothing used by health workers, health care Aprons and Overall Clothing, Nebulizers used to dispense medicine in mist of spray form, Spray Booths, and Face Shields among others. This has enabled entrepreneurs, technical and vocational education and training institutes, colleges as well as county governments to embark on the mass production and distribution of PPEs and sanitizers across the country.

It is our belief that, by prescribing the construction, performance and safety requirements for making PPEs, manufacturers stand guided to rapidly manufacture and supply safe products for local use.

We also reflect on how international standards aid and safeguard business continuity during the pandemic with the International Organization for Standardization (ISO) President, Mr. Eddy Njoroge.

Our profile feature introduces Ms. Grace Ateka, a radiation physicist at the Metrology Department. She speaks of how she has risen through the ranks to become one of the pioneer women in her field.

At the core of KEBS mandate lies the responsibility to protect the consumer against substandard products that might be harmful to or compromise their health and safety. We will take you through measures that we are undertaking to tackle the proliferation of substandard products in the country.

Harmonization of the East African Community (EAC) quality standards has come a long way. Find out how this continues to foster trade and spur economic growth in the region.

Finally, every year we commemorate the signing of the Meter Convention on 20 May 1875. We recap this year's the World Metrology Day celebrations anchored under the theme “*Standards for Global Trade*” with commentary on the critical role of measurements in facilitating global trade, trade decisions and patient safety in healthcare.

*Zeyana Mohammed*

# KEBS in the fight against COVID-19

By Evans Ongwae  
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**One-on-One with Lt Col (Rtd) Bernard Njiraini, Managing Director, Kenya Bureau of Standards (KEBS) on steps taken to Support the Government in the Fight Against COVID-19**



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To support the country's socio-economic development; KEBS has developed over 10,000 standards for various sectors, including relevant standards for the Big Four Agenda

## Specifically, what is KEBS's mandate and how does that support the country's socio-economic development

KEBS is the National Standards Body charged with the responsibility of managing Standards,

Metrology and Conformity Assessment infrastructure for the country through; promotion of standardization in commerce and industry, provision of testing and calibration facilities, product and system certification, undertaking educational work in standardization and practical application of standards and maintenance and dissemination of international system of units (SI) of measurements. To support the country's socio-economic development; KEBS has developed over 10,000 standards for various sectors, including relevant standards for the Big Four Agenda. We have

also embarked on SME's development to ensure their products meet quality threshold for regional and international markets therefore promoting innovation, trade and quality of life for Kenyans

## How has the Covid-19 pandemic impacted your sector

Covid-19 pandemic posed a great challenge to the realization of the 2019/2020 performance objectives in relation to key business areas. Since we are a facilitator of business for both locally manufactured goods and imported ones, there was a sharp decline in the global economic activity which obviously meant that our operations were significantly reduced. Overall, the pandemic brought about a new normal that was previously unanticipated. However, to be able to realize our objectives,



management quickly crafted Strategic interventions that were approved by the NSC to ensure that we remained on track to realize our objectives. We had to invoke our existing business continuity plans which included:

- Shifting to holding online ISO-Zoom meetings to develop standards for Covid-19 products like hand sanitizers, PPEs and Masks. These standards are available to the public free of charge as our contribution in fighting the pandemic
- Reviewed our product certification process to allow for online applications, remote assessments of production processes to allow for faster turnaround time in issuance of product permits
- Implemented a 24 hour working plan for the testing laboratories to ensure that the turnaround time for samples especially for Covid-19 fight related products were drastically reduced to allow for faster decisions.

**What is your vision for KEBS during these uncertain times and moving forward to a future that may be riddled with crises similar to the coronavirus? How do you plan to attain that vision?**

KEBS has realized the practical importance of having in place a robust business continuity plan to be able to provide its essential services even in the wake of any disruption. KEBS wants to see the business fraternity having to put in place such measures. As a guide, we are implementing

a Business Continuity Management System based on ISO 22301:2019 standard. This means that we shall have tested and exercised plans that will ensure our continued provision of essential services in the event of any disruption. We intend to help businesses do the same as we have now capacity built our training arm, the NQI and the Certification arm, the KEBS CB to be able to provide these services to the business fraternity.

**As the national quality vanguard, how is KEBS contributing towards the war against the Covid-19 pandemic?**

As earlier stated, KEBS has developed product standards for PPEs used as a first line of defense against Covid-19 within the shortest time and has availed the standards free of charge for use by our manufacturers on our website. We have also given priority to testing and product certification to any products that are to be used in the fight against the pandemic thereby reducing the time taken to be availed to the targeted users. To this end KEBS has certified over 130 firms for production of face masks, over 534 firms for instant hand sanitizers, 2 firms for Hospital Beds, 83 firms for other PPE's like coveralls, gloves and 2 firms for critical care ventilators.

**How effective has KEBS been in the battle against substandard products?**

KEBS has created a fully-fledged Market Surveillance Directorate with the sole mandate of standards enforcement at the market/retail level. The new directorate works closely with other government agencies in the fight against illicit trade. Through enhanced market surveillance activities over the past one year, KEBS has seized various substandard goods in the construction, food and agrochemical related products whose combined value is estimated to be over Kenya Shillings one Hundred Million. The seized products are normally destroyed at the expense of the dealer/manufacturer. Further, KEBS continues to proactively monitor products compliance at the points of sale and has put in place a comprehensive product monitoring plan covering engineering, chemicals and food products. Where non-compliances are detected, besides seizures, as part of our Corporate responsibility and in line with the "Wajibika na KEBS" campaign, we notify the wider public through the print and electronic media with the aim of protecting the general public from such substandard goods. The need to keep the public informed is premised on the simple but true belief that an informed public is the best bet in ensuring wide spread products compliance.

But it is important to note that manufacturing or offering for sale products which are non compliant is an offence as per the Standards Act Cap 496, Laws of Kenya.

**Evidently, KEBS has a role to play in the Big 4 Agenda, especially by supporting the manufacturing pillar. Can you highlight how the Bureau is playing this role?**

i. **Developing Standards in Support of the Big Four initiative.**

KEBS in the financial years 2019/2020 has developed the following standards

- a) Fifty (50) Standards in Agro-processing.
- b) Thirty (30) Standards in Engineering on Building and construction materials in the housing sector, and construction materials in oil and gas sector.
- c) Ten (10) Standards in Textile and Leather.

In essence the standards are market driven and are significant in ensuring the protection of environment, safety of Kenyans as well as support the economic development of the Nation in line with the Big 4 Agenda.

ii. **No. of Valid Permits for locally manufactured Products under SMEs**

The Key driver of Industrialization is the MSME sector. KEBS runs a product certification scheme that provides a subsidy for Product certification under the MSME category. This scheme, besides improving the product competitiveness, ensures that the products access markets both in Kenya and within the EAC trading block KEBS has set itself an ambitious target In the year 2020/2021 of increasing the number of valid permits for locally manufactured products certified under MSMEs from 3,000 in the last financial year to 4000 at the end of the current financial year

**What is KEBS' PVoC programme and how important is it to trade?**

KEBS monitors the quality of imported products. This is done under the Pre-Shipment Verification of Conformity (PVoC) Program where goods are inspected, tested and certified in the country of origin by KEBS contracted partners who issue the goods with a Certificate of Conformity (CoC).



KEBS has developed product standards for PPEs used as a first line of defense against Covid-19 within the shortest time and has availed the standards free of charge for use by our manufacturers on our website

However, KEBS recently commenced to undertake destination inspection of goods in the quest of easing the ability of doing business in Kenya. Under destination inspection, goods categorized as less risky are shipped into the country without a CoC, they are inspected and tested locally for compliance to standards and issued with a local CoC before they are released into the market.

**Your final remarks?**

KEBS exists as a service provider to facilitate industrial growth in Kenya and at the same time as a regulator to protect consumers from substandard goods. It is thus the responsibility of manufacturers to produce safe products and of consumers to be on the lookout for unscrupulous dealers who keep producing unsafe products that endanger human life. To this end KEBS is running a campaign christened "Wajibika na KEBS" which informs the general public to Verify the authenticity of KEBS quality marks on products by use of the KEBS Official Mobile App or sending a text to 20023 in the format of SM#Permit Number/ISM#UCR Number/.

# Standards Supporting the fight against COVID-19



## Instant hand sanitizers

KS EAS 789:2013 Instant hand sanitizers

## Masks

- KS 2636:2016 Surgical masks
- KPAS 2917: 2020 Reusable cloth mask



## Protective Clothing

KS ISO 13688:2013  
Protective clothing



## Face Shield

KPAS 2919:2020  
Personal Protective Equipment — Face shield

## Breathing Systems Filters

- KS ISO 23328 - 1: 2003 Breathing system filters for anaesthetic and respiratory use
- KS ISO 23328 - 2: 2002 Breathing system filters for anaesthetic and respiratory use



## Gloves

- KS ISO 11193-1:2008 Single-use medical examination gloves
- KS ISO 10282:2014 Single-use sterile rubber surgical gloves



## Critical Care Ventilators

- KPAS 2918:2020 Critical care ventilators
- KS ISO 10651: 2006 Lung ventilators for medical use – Particular requirement for basic safety and essential performance

## Sanitisation Booth

- KPAS 2920:2020 Sanitization booth



## Nebulizers

- KS ISO 27427 : 2013 Anesthetic and respiratory equipment — Nebulizing systems and components



# Measurement in health - The key to patient safety

By Dr. Henry Rotich



It is not uncommon to hear stories of someone or a close relative or friend who was misdiagnosed and has been receiving the wrong treatment regimen for a while with no signs of improvement. Sometimes the mistake is discovered soon enough, corrected and the patient continues to a full recovery. Others who are not so lucky end up with permanent disability and loss of life.

Sadly, these cases are not unique to Kenya but occur globally. The Institute of Medicine estimates 1.5 million preventable medication errors occur in the United States every year. In Kenya, although there exists no published statistics on medical errors, there have been serious reported cases of medical errors including misdiagnosis or late diagnosis, overdosing, underdosing among others.

Doctors rely on measurement results from medical devices to provide essential information for critical decision-making in diagnosis and treatment. Inaccurate measurements can jeopardize patient safety and can expose the most critically ill patients to severe hazards. If patient parameters cannot be measured properly, then treatment changes if those variables cannot be adjusted properly.

All these point to the need to use high quality medical equipment that produce accurate and reliable measurement results so as to safeguard patient safety.

From finding new ways to test, diagnose and treat to developing innovative medical devices, metrology, also known as the science of measurement, provides the foundation for modern medicine. However,

to accrue these benefits, measurements must be extremely accurate. Any form of error could mean life or death.

It is also crucial that doctors share with other medical scientists the same understanding and interpretation of the measurements or that the medical results are comparable. This is of importance owing to the large and increasing number of medical devices that are involved in clinical decision-making.

A key factor in achieving accuracy and comparability is continuous and regular calibration of medical devices. Calibration is simply the process in which an instrument's accuracy is compared to a recognized standard traceable to International System of Units (SI).

Across the world, National Metrology Institutes (NMIs), are the custodians of the SI units and are responsible for advancing the science of measurement by developing and validating new measurement techniques. Locally, the Kenya Bureau of Standards (KEBS) is the designated NMI with the responsibility to maintain custody of reference standards and disseminate the same to industry through calibration of their equipment.

KEBS has a sound metrology system that provides the necessary assurance and confidence that measurements are accurate as well as providing a sound basis for global trade today and helping us to prepare for the challenges of tomorrow. Furthermore, trust in conformity assessment reduces the cost of doing business across borders. This is made possible by use of a coherent reliable



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All these point to the need to use high quality medical equipment that produce accurate and reliable measurement results so as to safeguard patient safety.

measurement system in a country linked to the global metrology systems that assures mutual recognition of measurements worldwide.

KEBS, through the National Metrology Institute has been participating in reviews and approved scientific comparisons, operationalised quality management system and regularly takes part in international peer-review (regional and inter-regional) of claimed calibration and measurement capabilities. So far, KEBS has published a total of 17 Calibration and Measurement Capabilities (CMCs) in both physical and chemical Metrology.

In addition, KEBS has an excellent, well managed metrology and testing laboratories which are accredited to the International Organisation for Standardisation (ISO) under ISO/IEC 17025 for providing reliable measurements. Our staff are well trained and regularly participate in international measurement comparisons alongside other national metrology institutes of repute to underpin our measurement capabilities.

Some of the medical equipment calibrated at KEBS include ventilators, thermometers, blood pressure machines, oxygen flow meters (respirators), liquid (medication) flow meters, diagnostics and radiotherapy among others. Calibration reduces the potential risk of equipment performing out of specifications.

In more recent times, as the world adjusts to the current Covid-19 pandemic that has brought challenges as well as opportunities that underscore the crucial role of accurate measurements in supporting the fight against the virus, metrology is at the centre stage with colleagues, institutes and other scientists working hard and applying their knowledge in the science of measurement to find new ways to test for the virus, rapidly develop medical devices and ultimately to find a vaccine.

Moreover, KEBS continues to play a critical and essential role in checking the performance of the ventilators against the applicable Kenyan Standards. These ventilators undergo testing and calibration at KEBS before they are approved for use in hospital facilities in the fight against the COVID-19 virus. KEBS Dosimetry also continues to offer technical trainings and awareness on safety of diagnostic imaging and radiotherapy treatment.

KEBS Metrology laboratories will continue to collaborate with hospitals, laboratories and manufacturers to ensure that medical devices function properly and provide accurate results that can be trusted for improved patient safety.

# TESTING FOR GLOBAL TRADE

By Tom Oduor



Biological, Chemical, and Physical measurements are performed in many sectors worldwide to try and answer specific analytical questions pertaining to research, trade, crime scene investigations, product development, sports medicine, medical diagnostics, agriculture and even taxation. In order to make reasonable conclusions, accuracy of the result of the measurement process is key, this might be method dependent coupled with analyst skills.



“ The measurements undertaken cover product integrity, performance as well as safety for use

In today's globalized economy, comparable measurement results are needed: to avoid duplication of tests, unnecessary wastage of time and money, demonstrate transparency and enhance mutual recognition of the test results. This calls for a clear understanding and acceptance of the traceability concept among the measurements' fraternity owing to the large number of analytes handled and complexities associated with the respective matrices involved.

For all measurements done, comparability and traceability are both important to ensure fairness and transparency in all decisions made using the measurement results. Traceability in all measurements is achievable through use of metrologically traceable standards whereas comparability of analytical results rely quite heavily on clear evaluation and statement of uncertainty associated with reported results.

Kenya Bureau of Standards (KEBS) is the national reference laboratory for measurement sciences and has clear mandate as outlined in the Standards Act, Chapter 496 of the laws of Kenya. Key among the listed mandates is to:

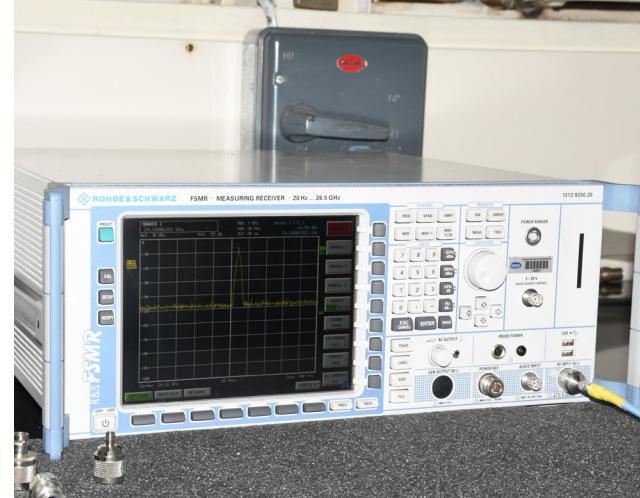


"To promote standardization in industry and commerce;

To make arrangements or provide facilities for the testing and calibration of precision instruments, gauges and scientific apparatus, for the determination of their degree of accuracy by comparison with standards approved by the Minister on the recommendation of the Council, and for the issue of certificates in regard thereto;

To make arrangements or provide facilities for the examination and testing of commodities and any material or substance from or with which and the manner in which they may be manufactured, produced, processed or treated"....

It is therefore important to note that all measurements carried out at KEBS actually facilitate trade locally, regionally and internationally. In the last one year, Testing Department carried out testing on



63,243 samples and in the process made more than 275,000 biological, chemical and physical measurements for trade facilitation, ensuring consumer safety and environmental protection.

In light of the current Covid-19 pandemic, KEBS has ensured that Biological, Chemical and Physical measurements continue and that products critical to the fight against the pandemic are tested for conformity to specific requirements and their quality assured before certification. The products tested in this situation include, instant hand sanitizers, medical devices, protective gear like, gloves, face masks, face shields, boots, gowns used in medical facilities, ventilators among others. The measurements undertaken cover product integrity, performance as well as safety for use. Validation of signals displayed through electrical measurements conducted on local innovations such as ventilators is critical to ensure that the right doses are administered in critical care situations; electrical measurements support this vital aspect of validating new equipment to ensure that the new products perform as declared/stated by the innovators. Evaluation of biocompatibility of medical devices used in critical care situations such as ventilators for genotoxicity, carcinogenicity and reproductive toxicity, cytotoxicity, irritation require accurate and traceable measurements. KEBS is positioning herself to ensure that this service is offered to the manufacturers and distributors of bio-medical devices to ensure that trade, distribution of these devices is facilitated, and that patient safety is safeguarded at all times.

The results of these measurements undertaken at KEBS Testing laboratories tests are all traceable to the SI and one critical test (ethanol content) is supported by a CMC filed at the BIPM demonstrating that the measurements done are comparable to others done elsewhere.



# First Female ARSO President Making Great Efforts for Africa Standardization

*By Joel Magu*

**Q & A with Africa Organization for Standardization  
Immediate Former President Dr. Eve Gadzikwa**



The world of leadership is still dominated by men particularly in Africa where women at top positions are incredibly few. In fact, women have to work twice as hard to gain half of the recognition the men receive. The accomplishments of Dr. Eve Gadzikwa are therefore, worth recognizing.

Appointed as the President of Africa Organization for Standardization (ARSO) in 2015, Dr. Gadzikwa treading paths few people dared to. The fact that she was the first woman in Africa to hold such a high position as far as standardization organizations are concerned cannot escape notice. In addition, she is the Director General of the Standards Association of Zimbabwe, a position she has held for 12 years, another great feat.

The Benchmark talked to her in an exclusive interview.

**You are the first female president of ARSO. I bet you are a role model to many women. What's the best career advice you've ever received?**

The appointment as the first woman President since its inception in 1977, is a huge honor not only for myself but also for African women. It clearly demonstrates that it is possible for a woman to hold the position as well as double up as the Director General, Chief Executive or Managing Director of a National Standards Body. One of the greatest advices I have received as a woman in my position is, to never stop pushing for more. It is in the spirit of wanting to do more that we realized the achievements made at ARSO... ARSO is now recognized as a reputable organization not only in Africa but also all over the world.

I want to encourage women especially on the African continent to rise up and complement their male counterparts by taking up higher positions of leadership. Women should be encouraged to show leadership qualities by articulating issues that affect and relate to poverty reduction as well as economic growth and development. Women should not shy away from the responsibilities of the transformation agenda towards the sustainable development goals. In fact, women should champion initiatives especially under the 4th industrial revolution.

**You were elected as the ARSO President by the 21st ARSO General Assembly held in Addis Abba, Ethiopia in August 2015. What did you set out to accomplish then? What were you able to accomplish?**

One of the greatest goals I set out to achieve when I was elected was to propel ARSO to the global stage. To do this, we had to strike partnerships with strategic global organizations with similar or close mandates to ARSO. I also aimed at increasing the membership of the organization such that no African country was left behind.

Thankfully, we made tremendous achievements in that

respect during my first three years in office. Among them was, winning huge respect for the African Organization for Standardization on the global stage. When compared to other institutions of its ilk, ARSO scored highly in terms of reputation.

This was evident through the amount of interest that had been expressed by various cooperating partners during the three years I headed ARSO. We saw cooperation with global bodies growing. There was a lot of growth in terms of cooperation with the rest of the world. Therefore, resulting to a number of partnership and expressions of interest to work with ARSO.

The partnerships signified the growth of the organization in consideration of visibility and presence on the global arena. I witnessed increase in the number of nations joining the membership of ARSO, by July 2019 the figure stood at 38 countries. This means that more than half of nations located in Africa were already members. Further, more nations expressed interest in becoming ARSO members. It is my hope that with time, all African countries will take up membership therefore, adding to the strength and unity of the continent as far as standardization is concerned.

It was my responsibility to ensure that no country was left behind. However, the achievements made so far are the result of hard work not only for me but also the entire ARSO family including the dedicated and hardworking secretariat. We worked as a team to achieve the strategic goals.

During my tenure which ended in 2019, there was conception of what is known as ARSO champions of which I am one of them. The idea of setting up the group of champions was born out of the need for progress of the continent as a whole. The champions are leaders who are charged with the responsibility of convincing non-members to join the organization and, thus, enjoy the privilege and benefits accorded to members. In the end, no country will be left in the cold under the African Continental Free Trade Area.

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# True, I hold various leadership positions both at home and abroad. Apart from ARSO presidency, I am the Director General for the Standards Association of Zimbabwe

We were also aiming for harmonization of standards. As you know, it is very difficult for us to move together if we are not united. We needed universal membership of ARSO so that we can develop a framework to promote inter and intra-Africa trade and driving one market using one standard. I am happy with the progress we made in relation to partnerships with international organizations such as ISO, of which members of ARSO are also members.

**As the president of Africa's intergovernmental standardization body, what did you find most challenging? What kept you going?**

While the progress the organization made during my tenure is tremendous, there is still huge challenges that need to be addressed. Among them is differences in the quality of products manufactured by member countries or traded in their markets. In pursuit of uniformity, the ARSO has to find a way of harmonizing the standards while ensuring the highest quality possible. Only then can the continent achieve the reputation it deserves as the producer of superior goods.

In the quest for a solution to the quality challenge, we worked hard to convince member and non-member states to give serious thought to standards harmonization. There is also need to seal the existing knowledge gaps. In that respect, therefore, ARSO has been working with policy makers to educate member states and the African public on the role of standards. ARSO also signed MOUs with such organizations as SADC, COMESA, Ae Trade Group in pursuit

of promoting free trade among African states. This is an ongoing journey that requires the commitment of all member states.

Africa also has diverse cultures and languages. As a result, there is the challenge of translating ARSO standards, technical and policy mandates into the national official languages to make them user friendly. One thing I had to learn very quickly was the issue of dealing with the complexity of the continent in so far as these sensitivities were concerned. The continent is very diverse and has 55 countries and regional blocs, making every part of the continent quite different.

**Your career spans over 25 years in the public and private sector. Are there instances you failed? What role has failure played in your career?**

Yes, I have served in various leadership positions in the public and private sector. Failure is inevitable when you are a leader but that should not discourage you. We learn from failure and failures inspired me to work even harder to solve challenges. I realized that, I cannot deal with all issues in a day and alone. Nevertheless, the challenges, including lack of enough human and financial resources, can be solved. Although I failed to achieve universal membership during my term in office, I am confident that this goal will be realized with the help of champions over time.

**Currently, you hold several leadership positions including Standards Association of Zimbabwe Director General among others. How do you do it all? In what ways have you surprised yourself?**

True, I hold various leadership positions both at home and abroad. Apart from ARSO presidency, I am the Director General for the Standards Association of Zimbabwe. I have got a busy job. I am also a married woman with two children, which means I also have to look after my family. I am married to a businessman in a pharmaceutical industry and both my daughter and son are young adults. My son is preparing to go to college while my daughter is already working. I should thank God; I got my children very early which was a blessing in disguise.



Starting off as a medical laboratory scientist and working in a microbiology behind the bench in my first degree, then switching over to business administration and leadership as my full-time career has been a tremendous transformation and growth within myself. I believe that women can as well excel just like men in different capacities given the chance.

However, the support of my family, organization the Standards Association of Zimbabwe (SAZ) and the government of Zimbabwe has propelled me to succeed. You cannot become the president of ARSO if you don't have the support of your own organization and government. This enabled me to balance my personal life and my professional responsibilities and duties at home and at ARSO. This challenging job was a delicate balancing act so that nothing suffers.

**You trained in marketing management and business administration, when/how did you get your career breakthrough? What's your advice to people who are stuck in a rut or are not sure if they are in the right career?**

I started off as a medical laboratory scientist. I outgrew it very quickly. I wanted to be a leader. Somebody who is in business leadership. The experience I have gained is unparalleled. I have met different people in different capacities. I want to encourage both men and women to raise the continent and contribute to it. "Don't wait for someone else to do it. We all have something to offer, in our small way. Take the opportunity to change the perception of the continent. Always be forward looking".

**Your term as the ARSO president came to an end. What are your future plans? What is in your bucket list?**

As I step down, I look back with pride and I'm very happy to have served my continent. I am planning to continue supporting ARSO in my capacity as the immediate former President but at the same time I plan to go international. I look forward to contributing to the continent as ARSO champion for Eastern and Southern Africa. I will also be very busy as Chairman of Africa 4th Industrial Revolution (4IR) Strategy and Road Map which is an ARSO project in partnership IEEE SA (USA). The sky is the limit.

**What are your views regarding the appointment of Eddy Njoroge as the President of ISO?**

Indeed, I stepped down as ARSO President at a time Africa had an opportunity for the first time in the history of the continent to lead on a global platform such as ISO under the leadership of Eddy Njoroge. I personally had the wonderful privilege to work with Eddy during my term in office as ARSO President. Africa could not have found a more befitting leader to steer ISO to greater heights. I have every confidence that Eddy will forge good relations not only with ARSO but also with the rest of the globe. He has the capacity to unite nations, promote standardization and raise the profile of ISO for generations to come. I wish President Njoroge every success during his tenure and echo my previous words, "it is time for Africa".

**Any parting words?**

I want to applaud women like the chairperson of the Kenya Accreditation Services (KENAS), Dr. Catherine Adeya among others in spearheading ARSO related mandates. Particularly, those that are technical in nature and require technical expertise and political goodwill for resource allocation and implementation so that the intended quality and standard of goods can be realized. I applaud such women for their courage and tenacity as they execute their mandates in a male dominated world.

I also cannot over emphasize the need for Africa to speak in one voice. It is time for Africa to rise and compete at a level playing ground with other first world nations like UK and USA.

# BUSINESS CONTINUITY AND RISK MANAGEMENT, WHEN THE UNEXPECTED HAPPENS



By Eddy Njoroge

The volcanic activity of Eyjafjallajökull, in Iceland in 2010 caught many businesses and governments unaware. The consequences of the volcanic ash cloud that spewed in the Icelandic and European air space was felt far and wide. The airline industry bore the brunt of it all. Planes could not fly and as a result, air travel and transport in various parts of world were cancelled due to the airspace restrictions.

Wider impact was also felt in businesses that rely on trade from airlines and airports. Global logistics firms were unable to transport goods by air. Closer home, producers of perishable goods, such as flowers, were hit hard due to the grounding of flights. It was estimated that the Kenyan economy was incurring a loss of \$3.8m each day of the disruption.

Such incidents can disrupt an organization or business enterprise any time. These disruptions can range from natural disasters like; forest fires, volcanic eruptions, flash floods among others as well as man-made disasters like; cyber-attacks, post-election violence, mutiny, terrorist attacks, among others.

Pandemics like SARS, H1N1 Virus, Ebola and now the COVID-19 are just some of the many unexpected yet possible threats to the smooth running of any organization or business.

In today's world, businesses operate in an increasingly uncertain environment. Businesses that rely on global supply chains face even more complex business environment. The key concern for most managers is disruption of day to day operations and how to mitigate further inconveniences.

It calls for robust business continuity planning to mitigate major disruptions. In the recent past, there has been a growing recognition, of a business-led process encompassing preparations for many forms of disruption which is now referred to as Business Continuity Management (BCM).

Business continuity has evolved much more than just data retrieval because of power failure, fire incident or a computer crash as was the case in 80's and 90's.

It is important to clarify the convergence between Business Continuity Management (BCM) and Risk Management. BCM is about actions required when the disruption occurs to keep the business or organization running while risk management is about the possibility of an adverse event happening and the mitigating actions an organization undertakes. Incorporating Risk management and BCM into wider organizational governance framework, not only gives a better view of totality of risk an organization faces but also places it on a pedestal to understand overall

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# These Standards are becoming widely adopted. They represent unanimity and represent globally agreed best practices

exposure to business interruption and fully prepare for any eventuality.

The interplay between international Standards and management systems like BCM and risk management will be of great importance. In the recent years, International Standards like those developed by International Organization for Standardization (ISO) have become central to BCM and Risk management.

ISO 31000; Risk management Standard developed by the Risk Management technical committee of ISO, was previously published in 2009 updated in 2018, under the leadership of British Standards Institute. It provides direction on how companies can integrate risk-based decision making into an organization's governance, planning, management, reporting, policies, values, and culture. By implementing ISO 31000 organizations can be able see both the positive opportunities and negative consequences associated with risk. It allows for more informed, and thus more effective, decision making, namely in the allocation of resources.

These Standards are becoming widely adopted. They represent unanimity and represent globally agreed best practices. For example, ISO 22301 borrows best practices from previous national Standards of Britain, Australia, Singapore, and the USA. ISO Standards are developed by a diverse range of specialists from all over the world, from all areas where the standards have an impact, such as industry, government, academia, standardization. Standards also provide an assessment platform if the business is ready for any interruption. Implementing BCM standard, does not necessarily offer competitive advantage but helps achieve organizational resilience when the real disruption happens.

In Kenya, adoption of BCM and Risk Management Standards can support key policies such as National Policy for disaster management in Kenya. They can offer significant contribution to county governments

on how well to prepare and manage risks in their operations.

Investing in BCM and Risk management is important to organizations due to unexpected shifts and new unforeseen challenges in the world today. The ability to recover, resume operations after a disruption, and steading the ship should be an immediate concern and a key focus area for businesses in Kenya - now more than ever before. Businesses then can rest and be assured that their frameworks of handling risks and business continuity is robust.



*The writer is The President of International Organization for Standardization (ISO) and a board member at Kenya Bureau of Standards. Contacts: njoroge@iso.org*



# Prevention of aflatoxin contamination key for food and livestock feed safety

By Margaret Aleke

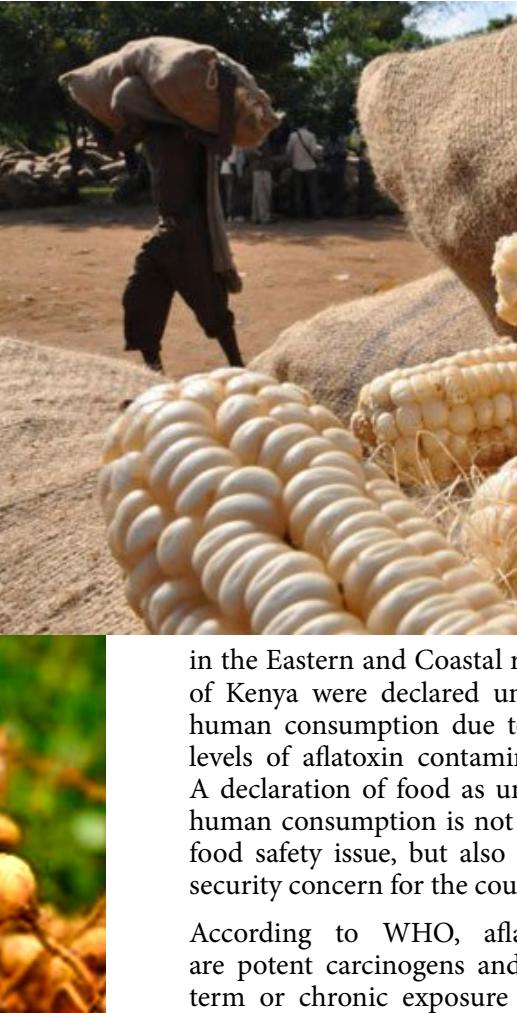


Aflatoxin contamination in Kenya has always been a complicated issue because of the numerous ways through which it can occur. It must, however, be confronted with urgency because of the grave danger it poses to human health. Aflatoxin formation can be triggered by many factors ranging from erratic weather patterns, poor soil fertility, poor crop husbandry to improper storage. Aflatoxins are not only ingested by consuming contaminated grains, but also through animal products such as milk.

The World Health Organization (WHO) defines aflatoxins as poisonous

substances produced by a group of fungi (molds) that are naturally occurring all over the world. Two closely related species, *Aspergillus flavus* and *A. parasiticus* are mainly responsible for producing aflatoxins of public health concern.

Kenya has witnessed periodic incidences of acute aflatoxin poisoning dating back to 1981 when approximately 16,000 turkeys died due to consumption of aflatoxin contaminated groundnut feeds. In 2004 and 2005 aflatoxicosis outbreak resulted in nearly 500 acute illnesses and the death of 200 people. In 2010, 2.3 million bags of maize grown



in the Eastern and Coastal regions of Kenya were declared unfit for human consumption due to high levels of aflatoxin contamination. A declaration of food as unfit for human consumption is not only a food safety issue, but also a food security concern for the country.

According to WHO, aflatoxins are potent carcinogens and long-term or chronic exposure affects all organs especially the liver and kidneys. They can also cause birth defects, stunted growth in children and even immunosuppression, hence decreasing resistance to infectious agents such as HIV, tuberculosis.

The key to tackling aflatoxin contamination in food is observing control measures both before and after harvest. This is however only possible where there is an all-inclusive linked approach, combining contamination reduction strategies at each step of the value chain and implementing the approach coherently and systematically by the different actors.

In Kenya, for instance the maize supply chain is complex and involves many stakeholders, including seed companies, research institutions, farmers, traders, wholesalers, retailers, posho millers and large-scale millers. A key challenge to implementing solutions to mitigate the impact or prevent aflatoxin contamination is the prevailing fragmented approach to aflatoxin control.

Pre-harvest aflatoxin contamination can be managed through enhancing the ability of the crop to resist fungal infection and/or preventing production of aflatoxins by the invading fungus. Currently seed selection is done based on potential productivity. Additionally, pre-harvest aflatoxin control requires seed developing companies to consider pest resistance, disease and drought tolerance, husk cover and flintiness of the grain.

Storage of produce is also a problem, particularly for the small farmers. Improper storage under conditions that favor mold growth, especially warm and humid storage environments, must be discouraged. For instance, piling of maize cobs against each other at harvest increases temperatures that result in favorable conditions for the fungus to thrive. It is recommended that maize cobs should be spread evenly on surfaces that prevent maize contact with soil to ensure effective drying over shorter periods while preventing additional contamination. Also recommended is use of well-ventilated storage structures and hermetic bags to control moisture and pests which enhance fungal growth and aflatoxin production in stored grains.

The post-harvest control involves different players including farmers,

bulking and storage operations, warehouses, distributors, wholesalers, cereal millers including posho millers, and traders as well as the consumers.

As a national standards body that promotes use of standards for protection of consumer health and facilitate trade, the Kenya Bureau of Standards (KEBS) has published standards on codes of practice for prevention and reduction of aflatoxin contamination, and aflatoxin limits in cereals, nuts and animal feed such as KS CAC RCP 51; KS CAC RCP 59; KS CAC RCP 45; and KS EAS 2 among others.

Through sampling, KEBS officers verify quality control measures that have been put in place by millers during manufacturing in order to demonstrate that Food Safety guidelines are adhered to.

This conformity assessment process recently led to KEBS ban the sale and consumption of several maize flour and peanut butter brands that were found to have high levels of aflatoxins above the safe limits. The challenge to enforcing the food safety standards is that these standards are only implemented in the formal marketing channels, yet most maize and other nuts and grain in Kenya are sold through informal marketing systems.

There is need to promote an inter-agency engagement, involving all the stakeholders to implement standards in the food supply chain right from planting, harvesting, drying, storage and packaging to eliminate aflatoxin contamination and ensure food and feed safety. Capacity building of farmers and other stakeholders on standards, good agricultural practices, Codes of Practice and post-harvest handling will assist in reducing the risk of aflatoxin contamination in the food value chain.

**The key to tackling aflatoxin contamination in food is observing control measures both before and after harvest**

*Ms. Margaret Aleke is a former Manager for Food Standards at KEBS.*

# HARMONISATION OF EAC STANDARDS FOSTERS REGIONAL TRADE

By Paul Kimeto



Harmonization is the process of minimizing redundant or conflicting standards that may have evolved or developed independently by the respective Partner States

There was considerable variation of standards within the East African Community (EAC) Partner States before the concept of harmonization came into being. As a result, businesses that wished to trade in the region were to comply with more than one set of standards for the same items. The EAC Common Market Protocol provides for “accelerated economic growth and development of EAC Partner States through the attainment of free movement of goods”. To support this, the EAC Customs Union Protocol Article 13 provides a legal structure for the development of an EAC mechanism to identify, monitor and remove Non-Tariff Barriers (NTBs) in the EAC. This was done by enactment of the East African Standard Quality Assurance Metrology and Testing Act (SQMT Act of 2006) which forms the legal framework for standards harmonization and implementation as well as guidelines on the entire conformity assessment spectrum in EAC. It provides for the harmonization of East African standards to reduce cost of production, enhance compliance and develop trade opportunities and it also provides for EAC Partner States to have quality marks and recognize them as equal to their own which facilitate free movement of certified products in the EAC.

Presently, standards harmonization in EAC is realized through the regional technical committees (TCs). There are currently 60 TCs spanning almost all the conventional disciplines such as engineering, chemical, food, agriculture among others. KEBS is secretariat to 17 TCs and the remaining are shared by the rest of the Partner States except South Sudan. EAC has been

successful in standards harmonization in comparison to other Regional Economic Communities (RECs) in Africa. This is due to the adoption of principles and procedures of developing EAC standards, which guides the entire harmonization process from start to finish. To-date, a total of 1668 standards have been harmonized, 532 indigenous and 1136 international standards endorsed for Partner States to adopt.

Harmonization of standards has brought benefits to East Africans. For instance, certification of products based on harmonized East African Standards has reduced the conformity assessment clearance time from approximately 21 days in 2014 to less than 7 days in 2019. In essence, this reduces the cost of doing business, improves business competitiveness and enhances trade.

The harmonization of standards in the EAC has benefited several stakeholders. The manufacturers and traders can now comply with only one common standard; regulators are able to assess the products based on one standard which saves on resources; and Partner States have seen improved trade facilitation. In order to further cut costs of harmonization in EAC, a Regional Standardization Plan is being developed. This will prioritize standardization subjects based on the needs of Partner States that will significantly save the duplication costs that have been witnessed in developing national standards first, and later taking them through the harmonizing process.

*The writer is a Manager for EAC Standards and COMESA office at the Kenya Bureau of Standards*



# Food Safety, Global Concerns, and the Role of the Kenya Food Industry

By Naomi J. Kitur

Food safety is the assurance that food will not cause adverse health effect for the consumer when it is prepared and/or consumed in accordance with its intended use. It relates to presence of food safety hazards in the food at the time of consumption.

Food safety hazards can be biological, chemical or physical agents in food. Biological hazards include pathogenic microorganisms that cause diseases such as Cholera, Hepatitis A and Typhoid among others. The microorganisms include bacteria, viruses and parasites. Aflatoxins, preservatives above allowable limits, pesticides used in vegetables and veterinary drugs for treating animals are examples of chemical hazards. Physical hazards on the other hand, are foreign substances which can physically injure the consumer during consumption of food, such as bones in fish fillet and stones in grains. Such hazards can and are known to occur at any stage of the food chain. Adequate control throughout the food chain is therefore essential to ensure food safety.

According to the World Health Organization (WHO), approximately 600 million people fall ill and 420,000 die annually globally, from consuming contaminated food. A 2015 WHO report on estimates of the global burden of foodborne diseases, indicates that the real tragedy of foodborne diseases is played out in the developing world. Unsafe processing water, poor food-production processes and food handling, inappropriate use of agricultural chemicals, improper food storage and poorly enforced regulatory standards

contribute to a high risk food safety environment. The rise of cancer, liver and kidney diseases in recent years have also been attributed to the diet, specifically related to chemical contaminants in food.

Collaboration of all the actors in the food chain is therefore imperative to ensure food safety, including but not limited to primary producers (crop and livestock farmers), food manufacturers, manufacturers of food packaging material, transporters and distributors of food products, manufacturers of chemicals such as cleaning agents used in the food industry, manufacturers of food processing equipment and retailers such as supermarkets, who handle food and offer ready to eat food.

Considering the recent food safety incidences involving products processed in Kenya, such as presence of aflatoxin in peanut butter and maize flour and high levels of sodium metabisulphite in meat, it is imperative that the food industry implements a risk-based proactive and preventive approach, to give an assurance of food safety to consumers. These incidences led to the recall of products by the manufacturers and retailers from the market.

Implementation of a food safety management system based on Hazard Analysis and Critical Control Points (HACCP) principles, published by Codex Alimentarius Commission (the international body that develops food standards), is key for food practitioners to control hazards. These principles assist an organization in identifying significant food safety hazards in relation to their products and operations,

and provide guidance in putting in place control measures to prevent their occurrence or reduce them to acceptable levels in food.

Kenya Bureau of Standards (KEBS) develops food standards which provide guidelines on limits of food safety hazards allowed based on Codex guidelines, which food manufacturers must comply with. These guidelines are the basis for testing and certification of products through the product certification scheme run by KEBS, that allows manufacturers to offer these products for sale. The standards also guide the inspection and testing of imported products to ensure their quality and safety.

KEBS, through its Certification Body (CB) additionally offers voluntary management systems certification to various ISO and Kenya standards. KEBS CB is accredited to offer certification by the Dutch Accreditation body (RvA) of The Netherlands and Kenya Accreditation Service (KENAS) and is also licensed by the Food Safety System Certification (FSSC) Foundation. These bodies assess the certification processes, to give an assurance and confidence that the services meet international standards.

KEBS CB has certified over 50 companies under food safety management systems. Among the food safety certifications offered by KEBS CB are: FSSC 22000 – A private scheme owned by FSSC Foundation; ISO 22000 in line with ISO

22000: 2018; HACCP certification based on Codex HACCP principles; and Food Hygiene certification for Catering Establishments in line with the requirements of KS 2573 (Kenya Standard on Hygiene Requirements in food service establishments and catering operations). The CB collaborates with the KEBS National Quality Institute (NQI) who offer tailored training that suits the needs of any organization irrespective of size or products manufactured, to enhance knowledge in food safety systems in the food industry.

A major incentive to implementing a food safety management system for an organization is the ability to consistently provide safe products that meet customer requirements. This results in reduced customer complaints, increased trust of product brands and loyalty by consumers, leading to increased sales and higher profit margins. Additionally, organizations are able to identify and address food safety and business risks and meet the legal requirements applicable to their operations and products, hence reduced risks of litigation.

*The writer is a Principal Food Safety Systems Certification Officer at Kenya Bureau of Standards.*

For more information, please submit your System Certification Enquiries at: <https://www.iafcertsearch.org/certification-body/eb2c23bc-e1c0-5c33-9352-3c2e19e08f2d>

“ According to the World Health Organization (WHO), approximately 600 million people fall ill and 420,000 die annually globally, from consuming contaminated food.



# KEBS MOVES TO EASE THE PRODUCT CERTIFICATION PROCESS WITH REVISED STANDARDIZATION MARK SCHEME

Beginning 1st of July 2020, manufacturers applying for the Standardization Mark (S-Mark) will be issued with a permit that is valid for two years and is accessible electronically.

The revision of the S-Mark scheme is aimed at improving efficiency and enhancing the ease of doing business in Kenya by addressing logistical and administrative challenges, including delays in the processing of S-Mark permits that have often led to loss of business opportunities and undue shortages of respective goods.

“Under the revised S-Mark scheme, manufacturers will be issued with a permit that is valid for two years instead of one year as has been the case. Manufacturers will also be able to apply and make payment for the S-Mark Permit online. Additionally, the S-Mark Permit will also be prepared and transmitted electronically. This will save time and cut costs associated with manual applications,” says Lt Col (Rtd.) Bernard Njiraini, Managing Director, KEBS.

Launched in March 2008, the S-Mark is a mandatory product certification scheme for locally manufactured products provided for under section 10 of the Standards Act Cap 496, Laws of Kenya.

To acquire the S-Mark, manufactured goods are expected to meet quality requirements as specified in the various Kenya/Approved Standards. A permit to use a Standardization Mark is issued by KEBS to a firm to certify that a product conforms to requirements in a Standard.

“In the revised SM scheme, the issuance of Standardization Mark Permits will be based on factory

inspection and product sampling for laboratory tests. Throughout the two-year period, KEBS inspectors will carry out targeted and random market surveillance, factory inspection and sampling the products for testing,” he adds.

KEBS will also be issuing guidelines for accepting test reports which have been done in accredited laboratories for the purpose of product certification.

Additionally, firms will be required to maintain in-house testing and quality control records, as agreed in the respective schemes of supervision and control. These records shall constitute the basis for maintenance of the product certification and future permit renewal.

Further, KEBS has developed a guideline document for remote assessment activities to complement the traditional on-site assessment activities during extraordinary events or circumstances such as the coronavirus (COVID-19) pandemic as part of the business continuity strategy.

Currently, **14,400 valid SM permits** have been issued by KEBS to manufacturers.

Consumers, manufacturers, traders, and other stakeholders are encouraged to “**Wajibika Na KEBS**” and be on the lookout and report any products suspected to be substandard. **To Wajibika**, verify whether the **S-Mark permit** on your product is valid by sending the code underneath the **S-Mark to 20023 (SM#Code)** to get product validity status details. If the details are different, report to **KEBS Toll-Free 1545** during official working **hours of 8.00 AM to 1.00 PM and 2.00 PM to 5.00 PM, Monday to Friday**.

# GRACE ANUNDA

## IS THE SECRETARY GENERAL OF THE EASTERN AFRICA ASSOCIATION OF RADIATION

By Karen Muriuki  
[kmuriuki@ke.nationmedia.com](mailto:kmuriuki@ke.nationmedia.com)

Aged just 30, Grace Anunda Ateka, a radiation physicist working with the Kenya Bureau of Standards (KEBS), has grown remarkably within the field of science. She is the Secretary General of Eastern Africa Association of Radiation Protection, the assistant secretary of Women in Nuclear Kenya Chapter, and a member of the Eastern Africa Network for Women in Basic Science. Grace has represented Kenya at various international events and last year, she won an award for Best Presentation in Uncertainty of Measurements in an event held in Italy.



## **What did you study in college?**

I have a Bachelor of Science degree from the University of Nairobi (UoN) with a major in radiation, a master's degree in Business Administration from KCA University, and I am currently undertaking another master's degree in Nuclear Science at the UoN. I have also attended several training sessions in nuclear radiation both within and outside the country.

## **Tell us about your career journey?**

It started in 2008 when I was an undergraduate student. I used to take non-paying internship opportunities or volunteer in laboratories just to get a sense of the life I was about to get into. I hated being idle because I believe that time is the most expensive asset in the world. After my graduation in 2011, I continued volunteering in different places until I got a paying job one year later. In January 2015, I joined KEBS as radiation physicist in the Secondary Standards Dosimetry Laboratory, where I work to date.

## **The biggest highlight of your career so far?**

Being appointed the officer in charge of coordinating a team from Africa to do a presentation in an international conference on Young Generation in Nuclear march 2020 in Australia. The conference attracted more than 400 international participants. I was very honoured. I have also been privileged to represent Kenya Bureau of Standards at various international events, including

ICTP-IAEA (the International Centre for Theoretical Physics-International Atomic Energy Agency) workshop in Italy last December where I won an award. I am also grateful for the many leadership opportunities I have been given.

## **Congratulation on this award. What was it about?**

The workshop provided participants with practical information on how to prepare uncertainty estimations for the calibrations and measurements performed in Secondary Standard Dosimetry Laboratories (SSDLs) and for clinical dosimetry in hospitals. It was jointly organized by the International Centre for Theoretical Physics(ICTP) and the International Atomic Energy Agency(IAEA)

## **What did this win mean for you and your career?**

It greatly boosted my self-confidence but in the grand scheme of things, the award means that KEBS will have the best measurements results and will be able to get regional and international recognition. This also ensures that all the customers, including all the hospitals in Kenya and eastern Africa, will receive the correct measurements in cancer treatment and radiation protection.

## **How has it been to climb the professional ladder in such a male dominated industry?**

Honestly, quite challenging. First, you have to constantly prove to the world that you are

knowledgeable. This can be very exhausting. Few people believe that I can actually deliver. I have come to realise that because women are not known to take up science-related courses or careers, the few who do are treated suspiciously. However, these challenges have helped me improve my interpersonal skills, and boosted my confidence especially after I prove that I can get things done.

## **What challenges have you faced over the years?**

Getting a job in a male dominated field ranks high in that list. As much as the government has put in place the two thirds gender rule, not much has changed. I remember being asked in one job interview how I would deliver on my roles if I ever got pregnant. It is difficult to keep proving oneself all the time. Few acknowledge the hard work that we put in every day. Lack of mentorship is another challenge. There are very few mentorship programmes available in this field.

## **What advice would you give to men who work with empowered females?**

Every man should treat his female colleagues with respect.

## **Your future career plans?**

I would like to pursue a PhD in Nuclear Physics and seek better opportunities at KEBS or even outside the country.

*This article was first published in the Daily Nation Newspaper*

**“I remember being asked in one job interview how I would deliver on my roles if I ever got pregnant”**

# Pictorials



▶ Cake cutting with Samaj Cutchi Leva School - Kenya's winners at the 14th Standards Olympiad in Korea



▶ Eddy Njoroge, ISO President receives the leadership baton from John Walter at the 42nd ISO General Assembly in Cape Town South Africa



▶ Eng. Bernard Ngore - Chair NSC, Dr. Francis Owino - PS Industrialization and Lt. Col (Rtd) Bernard Njiraini during the Wajibika Na KEBS launch



▶ KEBS Director of Metrology and Testing, Dr. Henry Rotich (black suit) presents a certificate of approval to Kenyatta University's students after successfully developing the "Tiba Vent" prototype ventilator



▶ Lt. Col (Rtd) Bernard Njiraini, MD KEBS and Director Metrology & Testing Dr. Henry Rotich addressing media on seized substandard cosmetics



▶ KEBS analysts conducting some tests to ascertain quality of PPE's at KEBS Textile lab

# Pictorials



► KEBS and Apex Porter Noveli teams in a past training



► KEBS staff following keenly preceedings of a KEBS staff baraza



► Lt. Col (Rtd) Bernard Njiraini, KEBS MD (right) presents an award to a KEBS retiree during the World Metrology Day Celebrations



► Mr. Clarkson Agumbo, Manager Microbiology Laboratory (Extreme right) takes through PS industrialization on KEBS Testing Services



► Kenyan delegation at the 42nd ISO General Assembly in Cape Town South Africa



► Mr. Cyrus Wambari, KEBS Coast Region Manager (3rd right) presents the Diamond Mark of Quality to Salwa Kenya Limited

## CHEMICAL DIVISION

1. KS ISO 10545-15:1995 Kenya Standard — Ceramic tiles — Part 15: Determination of lead and cadmium given off by glazed tiles, **First Edition**
2. KS ISO 10545-16:2010 Kenya Standard — Ceramic tiles — Part 16: Determination of small colour differences, **First Edition**
3. KS ISO 10545-14:2015 Kenya Standard — Ceramic tiles — Part 14: Determination of resistance to stains, **Second Edition**
4. KS ISO 10545-13:2016 Kenya Standard — Ceramic tiles — Part 13: Determination of chemical resistance, **Second Edition**
5. KS ISO 10545-8:2014 Kenya Standard — Ceramic tiles — Part 8: Determination of linear thermal expansion, **Second Edition**
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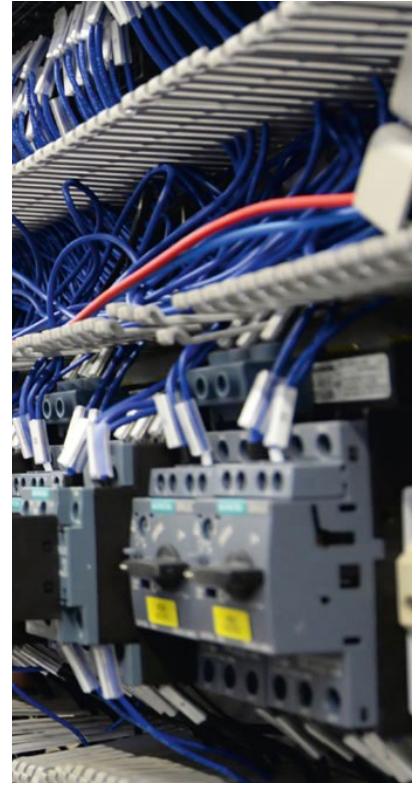
12. KS ISO 4796-1:2016 Laboratory glassware — Bottles — Part 1: Screw-neck bottles, **Second Edition**

## ELECTROTECHNICAL DIVISION

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26. KS IEC 62321-3-1:2013 Kenya Standard — Determination of certain substances in electrotechnical products — Part 3-1: Screening — Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry, **First Edition**
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31. KS IEC 60335-2-80:2015 Kenya Standard — Household and similar electrical appliances — Safety — Part 2-80: Particular requirements for fans, **First Edition**
32. KS IEC 60335-2-13:2016 Kenya Standard — Household and similar electrical appliances — Safety — Part 2-13: Particular requirements for deep fat fryers, frying pans and similar appliances, **First Edition**
33. KS IEC 60335-2-28:2008 Kenya Standard — Household and similar electrical ap-

## Standards Approved by the 126<sup>th</sup> Standards Approval Committee

- pliances — Safety — Part 2-28: Particular requirements for sewing machines, **First Edition**
34. **KS IEC 60335-2-38:2017** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-38: Particular requirements for commercial electric griddles and griddle grills, **First Edition**
35. **KS IEC 60335-2-42:2017** Kenya Standard — Household and similar electrical appliances — Safety - Part 2-42: Particular requirements for commercial electric forced convection ovens, steam cookers and steam-convection ovens, **First Edition**
36. **KS IEC 60335-2-2:2019** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances, **First Edition**
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46. **KS IEC 60335-2-89:2019** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-89: Particular requirements for commercial refrigerating appliances and ice-makers with an incorporated or remote refrigerant unit or motor-compressor, **First Edition**
47. **KS IEC 60335-2-31:2018** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-31: Particular requirements for range hoods and other cooking fume extractors, **First Edition**
48. **KS IEC 60335-2-15:2016** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-15: Particular requirements for appliances for heating liquids, **First Edition**
49. **KS IEC 60335-2-47:2017** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-47: Particular requirements for commercial electric boiling pans, **First Edition**
50. **KS IEC 60335-2-49:2017** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-49: Particular requirements for commercial electric appliances for keeping food and crockery warm, **First Edition**
51. **KS IEC 60335-2-53:2017** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-53: Particular requirements for sauna heating appliances and infrared cabins, **First Edition**
52. **KS IEC 60335-2-56:2014** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-56: Particular requirements for projectors and similar appliances, **First Edition**
53. **KS IEC 60335-2-59:2009** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-59: Particular requirements for insect killers, **First Edition**
54. **KS IEC 60335-2-67:2016** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-67: Particular requirements for floor treatment machines, for commercial use, **First Edition**
55. **KS IEC 60335-2-74:2009** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-74: Particular requirements for portable immersion heaters, **First Edition**
56. **KS IEC 60335-2-85:2017** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-85: Particular requirements for fabric steamers, **First Edition**
57. **KS IEC 60335-2-91:2008** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-91: Particular requirements for walk-behind and hand-held lawn trimmers and lawn edge trimmers, **First Edition**
58. **KS IEC 60335-2-94:2008** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-94: Particular requirements for scissors type grass shears, **First Edition**
59. **KS IEC 60335-2-95:2019** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-95: Particular requirements for drives for vertically moving garage doors for residential use, **First Edition**
60. **KS IEC 60335-2-98:2008** Kenya Standard — Household and similar electrical appliances — Safety — Part 2-98: Particular requirements for humidifiers, **First Edition**
61. **KS ISO 20785-4:2019** Kenya Standard — Dosimetry for exposures to cosmic radiation in civilian aircraft — Part 4: Validation of codes, **First Edition**
62. **KS ISO 16637:2016** Kenya Standard — Radiological protection — Monitoring



## Standards Approved by the 126<sup>th</sup> Standards Approval Committee

- and internal dosimetry for staff members exposed to medical radionuclides as unsealed sources, **First Edition**
63. **KS ISO 16645:2016** Kenya Standard — Radiological protection — Medical electron accelerators — Requirements and recommendations for shielding design and evaluation, **First Edition**
64. **KS ISO 20553:2006** Kenya Standard — Radiation protection — Monitoring of workers, occupationally exposed to a risk of internal contamination with radioactive material, **First Edition**
65. **KS ISO 18310-1: 2017** Kenya Standard — Measurement and prediction of the ambient dose equivalent from patients receiving iodine 131 administration after thyroid ablation — Part 1: During the hospitalization, **First Edition**
66. **KS 1954:2019** Kenya Standard — Medical research — Administration of ionizing radiation to human subjects — Requirements, **Second Edition**
67. **KS 2029:2019** Kenya Standard — Corpses containing radioactive materials — Safe handling — Code of practice, **Second Edition**
68. **KS 2030:2019** Kenya Standard — Discharge of patients undergoing treatment with radioactive substances — Code of practice, **Second Edition**
69. **KS ISO 7944:1998 Cor 1:2009** Kenya Standard — Optics and optical instruments — Reference wavelengths, **First Edition**
70. **KS ISO 9334:2012** Kenya Standard — Optics and optical instruments — Optical transfer function — Definitions and mathematical relationships, **Second Edition**
71. **KS ISO 15529:2010** Kenya Standard — Optics and optical instruments — Optical transfer function — Principles of measurement of modulation transfer function (MTF) of sampled imaging systems, **Second Edition**
72. **KS ISO 13653:2019** Kenya Standard — Optics and optical instruments — General optical test methods — Measurement of relative irradiance in the image field, **First Edition**
73. **KS ISO 9849:2017** Kenya Standard — Optics and optical instruments — Geodetic and surveying instruments — Vocabulary, **Second Edition**
74. **KS ISO 12858-1:2014** Kenya Standard — Optics and optical instruments — Ancillary devices for geodetic instruments — Part 1: Invar levelling staffs, **Second Edition**
75. **KS ISO 12858-3:2005** Kenya Standard — Optics and optical instruments — Ancillary devices for geodetic instruments — Part 3: Tribrachs, **First Edition**
76. **KS ISO 17123-1:2014** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 1: Theory, **Second Edition**
77. **KS ISO 17123-4:2012** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 4: Electro-optical distance meters (EDM measurements to reflectors), **Second Edition**
78. **KS ISO 17123-5:2018** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 5: Total stations, **First Edition**
79. **KS ISO 17123-6:2012** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 6: Rotating lasers, **First Edition**
80. **KS ISO 17123-7:2005** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 7: Optical plumbing instruments, **First Edition**
81. **KS ISO 17123-8:2015**, Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 8: GNSS field measurement systems in real-time kinematic (RTK), **First Edition**
82. **KS ISO 17123-9:2018** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 9: Terrestrial laser scanners, **First Edition**
83. **KS ISO/CIE 11664-1:2019** Kenya Standard — Colorimetry — Part 1: CIE standard colorimetric observers, **Second Edition**
84. **KS ISO 11664-2:2007** Kenya Standard — CIE standard illuminants for colorimetry, **First Edition**
85. **KS ISO/CIE 11664-3:2019** Kenya Standard — Colorimetry — Part 3: CIE tristimulus values, **First Edition**
86. **KS ISO/CIE 11664-4:201** Kenya Standard — Colorimetry — Part 4: CIE 1976 L\*a\*b\* colour space, **First Edition**
87. **KS ISO/CIE 11664-5:2016** Kenya Standard — Colorimetry — Part 5: CIE 1976 L\*u\*v\* colour space and u', v' uniform chromaticity scale diagram, **First Edition**
88. **KS 2896-1:2020** Kenya Standard — Software and Systems Engineering Processes — Requirements and Evaluation — Part 1: Agreement processes — Acquisition and supply, **First Edition**
89. **KS 2896-2-1:2020** Kenya Standard — Software and Systems Engineering Processes — Requirements and Evaluation — Part 2-1: Technical processes, **First Edition**
90. **KS 2896-2-2:2020** Kenya Standard — Software and Systems Engineering Processes — Requirements and Evaluation — Part 2 - 2: Technical evaluation, **First Edition**
91. **KS 2896-3-1:2020** Kenya Standard — Software Engineering processes — Software product quality — Part 3-1: Re-



# Standards Approved by the 126<sup>th</sup> Standards Approval Committee

- uirements, **First Edition**
92. **KS 2896-3-2:2020** Kenya Standard — Software Engineering processes — Software product quality — Part 3-2: Requirements, **First Edition**
93. **KS ISO/IEC TR 25021:2012** Kenya Standard — Systems and software engineering -- Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality measure elements, **First Edition**
94. **KS ISO/IEC 25022: 2016** Kenya Standard — Software engineering — Software Product Quality Requirements and Evaluation (SQuaRE) — Measurement of quality in use, **First Edition**
95. **KS ISO/IEC 25023:2016** Kenya Standard — Systems and Software Quality Requirements and Evaluation (SQuaRE) — Measurement of system and software product quality, **First Edition**
96. **KS ISO/IEC 25024:2016** Kenya Standard — Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Measurement of data quality, **First Edition**
97. **KS ISO/IEC/IEEE 29119-4:2015** Kenya Standard — Software and systems engineering — Software testing — Part 4: Test techniques, **First Edition**
98. **KS ISO/IEC 38505-1:2017** Kenya Standard — Information technology — Governance of IT — Governance of data — Part 1: Application of ISO/IEC 38500 to the governance of data, **First Edition**
99. **KS ISO/IEC TR 38505-2:2018** Kenya Standard — Information technology — Governance of IT — Governance of data — Part 2: Implications of ISO/IEC 38505-1 for data management, **First Edition**
100. **KS ISO/IEC/IEEE 15288:2015** Kenya Standard — Systems and Software engineering — Systems and software engineering — System life cycle processes, **First Edition**
101. **KS ISO/IEC/IEEE 12207:2017** Kenya Standard — Systems and software engineering — Software life cycle processes, **First Edition**
- cer method, **Second Edition**
111. **KS ISO 12966-4:2015** Kenya Standard — Animal and vegetable fats and oils — Gas chromatography of fatty acid methyl esters — Part 4: Determination by capillary gas chromatography, **First Edition**
112. **KS ISO 7305:2019** Kenya Standard — Specification for milled cereal products — Determination of fat acidity, **Second Edition**
113. **KS ISO 5530-1:2013** Kenya Standard — Wheat flour — Physical characteristics of doughs — Part 1: Determination of water absorption and rheological properties using a farinograph, **Second Edition**



matter content, **Second Edition**

104. **KS ISO 15774:2017** Kenya Standard — Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry, **Second Edition**
105. **KS ISO 3961:2018** Kenya Standard — Animal and vegetable fats and oils — Determination of iodine value, **Second Edition**
106. **KS ISO 6320:2017** Kenya Standard — Animal and vegetable fats and oils — Determination of refractive index, **Second Edition**
107. **KS ISO 6883:2017** Kenya Standard — Animal and vegetable fats and oils — Determination of conventional mass per volume (litre weight in air), **Second Edition**
108. **KS ISO 6884:2008** Kenya Standard — Animal and vegetable fats and oils — Determination of ash, **Second Edition**
109. **KS ISO 6885:2016** Kenya Standard — Animal and vegetable fats and oils — Determination of anisidine value, **Second Edition**
110. **KS ISO 8534:2017** Kenya Standard — Animal and vegetable fats and oils — Determination of water content — Karl Fiss-

## AGRICULTURE DIVISION

114. **KS 2077:2020** Kenya Standard — Seed potato — Specification, **Second Edition**
115. **KS 2422:2020** Kenya Standard — Potassium sulphate fertilizer, technical grade — Specification, **Second Edition**
116. **KS 2423:2020** Kenya Standard — Magnesium nitrate fertilizer, technical grade — Specification, **Second Edition**
117. **KS 2897:2020** Kenya Standard — Propolis — Code of practice, **First Edition**
118. **KS 2898:2020** Kenya Standard — Pollen — Code of practice, **First Edition**
119. **KS 2424:2020** Kenya Standard — Monoammonium Phosphate (MAP) and Diammonium Phosphate (DAP) fertilizer, technical grade — Specification, **Second Edition**
120. **KS 2426:2020** Kenya Standard — Mono-potassium phosphate fertilizer, technical grade — Specification, **Second Edition**
121. **KS 2427:2020** Kenya Standard — Soluble compound fertilizer — Specification, **Second Edition**
122. **KS 157:2020** Kenya Standard — Monoammonium Phosphate (MAP) and Diammonium Phosphate (DAP) fertilizers — Specification, **Sixth Edition**



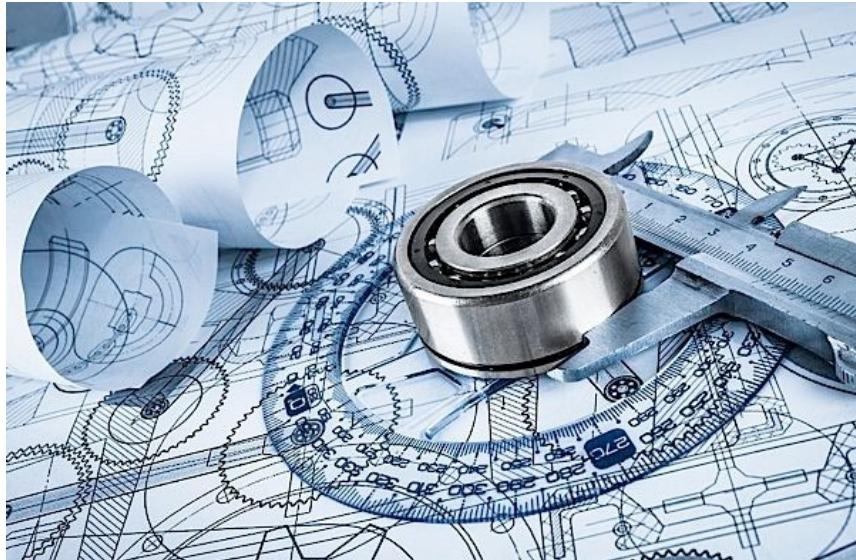
## FOOD DIVISION

102. **KS ISO 9936:2016** Kenya Standard — Animal and vegetable fats and oils — Determination of tocopherol and tocotrienol contents by high-performance liquid chromatography, **Second Edition**
103. **KS ISO 662:2016** Kenya Standard — Animal and vegetable fats and oils — Determination of moisture and volatile

## Standards Approved by the 126<sup>th</sup> Standards Approval Committee

### ENGINEERING DIVISION

123. KS ISO 13061-1:2014 Kenya Standard — Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 1: determination of moisture content for physical and mechanical tests, **First Edition**
124. KS ISO 13061-2:2014 Kenya Standard — Physical and mechanical properties of wood — test methods for small clear wood specimens — Part 2: determination of density for physical and mechanical tests, **First Edition**
125. KS ISO 13061-3:2014 Kenya Standard — Physical and mechanical properties of wood — test methods for small clear wood specimens — Part 3: determination of ultimate strength in static bending, **First Edition**
126. KS ISO 30500:2018 Kenya Standard — Non-sewered sanitation systems — Prefabricated integrated treatment units — General safety and performance requirements for design and testing, **First Edition**
127. KS ISO 630-1:2011 Kenya Standard — Structural steels — Part 1: General technical delivery conditions for hot-rolled products, **First Edition**
128. KS ISO 630-2:2011 Kenya Standard — Structural steels — Part 2: Technical delivery conditions for structural steels for general purposes, **First Edition**
129. KS ISO 630-3: 2012 Kenya Standard — Structural steels — Part 3: Technical delivery conditions for fine-grain structural steels, **First Edition**
130. KS 2464-2:2020 Kenya Standard — Performance of household electrical appliances — Refrigerating appliances — Part 2: Minimum energy performance standard requirements, **Second Edition**



### LEATHER AND TEXTILE DIVISION

131. KS 2901:2020 Kenya Standard — Sports balls — Netballs — Specification, **First Edition**
132. KS 2883-1:2020 Kenya Standard — Leather — Code of practice — Grading of fish skin on basis of defects and size — Part 1: Nile perch **First Edition**
133. KS 2888:2020 Kenya Standard — Fleece jacket — Specification. **First Edition**
134. KS ISO 20471:2013 Kenya Standard — High visibility clothing — Test methods and requirements. **First Edition**

### TRADE DIVISION

144. KS EAS 786:2013 Kenya Standard — Skin care creams, lotions and gels — Specification, **First Edition**

### SERVICES DIVISION

135. KS ISO 1419:2019 Kenya Standard — Rubber- or plastics-coated fabrics — Accelerated-ageing tests, **First Edition**
136. KS ISO 1420:2016 Kenya Standard — Rubber- or plastics-coated fabrics — Determination of resistance to penetration by water. **First Edition**
137. KS ISO 1421:2016 Kenya Standard — Rubber- or plastics-coated fabrics — Determination of tensile strength and elongation at break, **First Edition**
138. KS ISO 2411:2017 Rubber- or plastics-coated fabrics — Determination of coating adhesion. **First Edition**
139. KS ISO 3011:1997 Kenya Standard — Rubber- or plastics-coated fabrics — Determination of resistance to ozone cracking under static conditions, **First Edition**
140. KS ISO 5470-1:2016 Kenya Standard — Rubber- or plastics-coated fabrics — Determination of abrasion resistance — Part 1: Taber abrader. **First Edition**
141. KS ISO 5470-2:2003 Kenya Standard — Rubber- or plastics-coated fabrics — Determination of abrasion resistance — Part 2: Martindale Abrader. **First Edition**
142. KS 2625:2016 Amd 1:2020 Kenya Standard — Footballs — Specification AMENDMENT 1, **First Edition**
143. KS 2662:2016 Amd 2:2020 Kenya Standard — Disposable adult diapers — Specification AMENDMENT 2, **First Edition**
149. KS ISO 8637-1:2017 Kenya Standard — Extracorporeal systems for blood purification — Part 1: Haemodialysers, haemodiafilters, haemofilters and haemoconcentrators, **Second Edition**
150. KS ISO 80601-2-74:2017 Kenya Standard — Medical electrical equipment — Part 2-74: Particular requirements for basic safety and essential performance of respiratory humidifying equipment, **Second Edition**
151. KS ISO 80369-7:2016 Kenya Standard — Small-bore connectors for liquids and gases in healthcare applications — Part 7: Connectors for intravascular or hypodermic applications, **Second Edition**

# Standards Approved by the 126<sup>th</sup> Standards Approval Committee

152. KS ISO 8362-1:2018 Kenya Standard — Injection containers and accessories — Part 1: Injection vials made of glass tubing, **Second Edition**
153. KS ISO 8362-2:2015 Kenya Standard — Injection containers and accessories — Part 2: Closures for injection vials, **Second Edition**
154. KS ISO 8362-5:2016 Kenya Standard — Injection containers and accessories — Part 5: Freeze drying closures for injection vials, **Second Edition**
155. KS ISO 10651-5:2006 Kenya Standard — Lung ventilators for medical use — Particular requirements for basic safety and essential performance — Part 5: Gas-powered emergency resuscitators, **Second Edition**
156. KS ISO 7864:2016 Kenya Standard — Sterile hypodermic needles for single use — Requirements and test methods, **Second Edition**
157. KS ISO 5832-11:2014 Kenya Standard — Implants for surgery — Metallic materials — Part 11: Wrought titanium 6-aluminum 7-niobium alloy, **Second Edition**
158. KS ISO 5832-7:2016 Kenya Standard — Implants for surgery — Metallic materials — Part 7: Forgeable and cold-formed cobalt-chromium-nickel-molybdenum-iron alloy, **Second Edition**
159. KS ISO 11737-1:2018 Kenya Standard — Sterilization of health care products — Microbiological methods — Part 1: Determination of a population of microorganisms on products, **Second Edition**
160. KS ISO 11737-2:2019 Kenya Standard — Sterilization of health care products — Microbiological methods — Part 2: Tests of sterility performed in the definition, validation and maintenance of a sterilization process, **Second Edition**
161. KS ISO 10555-4:2013 Kenya Standard — Intravascular catheters — Sterile and single-use catheters — Part 4: Balloon dilatation catheters, **Second Edition**
162. KS ISO 15223-2:2010 Kenya Standard — Medical devices — Symbols to be used with medical device labels, labelling, and information to be supplied — Part 2: Symbol development, selection and validation, **Second Edition**
163. KS ISO 6710:2017 Kenya Standard — Single-use containers for human venous blood specimen collection, **Second Edition**
164. KS ISO 11193-1:2008 Kenya Standard — Single-use medical examination gloves — Part 1: Specification for gloves made from rubber latex or rubber solution, **Second Edition**
165. KS ISO 11193-1:2008 Amd 1:2012 Kenya Standard — Single-use medical examination gloves — Part 1: Specification for gloves made from rubber latex or rubber solution, AMENDMENT 1, **First Edition**
166. KS ISO 10282:2014 Kenya Standard — Single-use sterile rubber surgical gloves — Specification, **Second Edition**
167. KS ISO 14155:2011 Kenya Standard — Clinical investigation of medical devices for human subjects — Good clinical practice, **Second Edition**
168. KS ISO 14155:2011 Cor 1:2011 Kenya Standard — Clinical investigation of medical devices for human subjects — Good clinical practice, TECHNICAL CORRIGENDUM 1, **First Edition**
169. KS ISO 22882:2016 Kenya Standard — Castors and wheels — Requirements for castors for hospital beds, **Second Edition**
170. KS IEC 60601-2-44:2016 Kenya Standard — Medical electrical equipment — Part 2-44: Particular requirements for the basic safety and essential performance of X-ray equipment for computed tomography, **Second Edition**
171. KS ISO 16069:2017 Kenya Standard — Graphical symbols — Safety signs — Safety way guidance systems (SWGS), **Second Edition**
172. KS ISO 9241-220:2019 Kenya Standard — Ergonomics of human-system interaction — Part 220: Processes for enabling, executing and assessing human-centered design within organizations, **Second Edition**
173. KS ISO 21127:2014 Kenya Standard — Information and documentation — A reference ontology for the interchange of cultural heritage information, **Second Edition**
174. KS 1054-1:2019 Cor 1:2020 Kenya Standard — Energy drinks — Specification TECHNICAL CORRIGENDUM 1, **First Edition**
175. KFSS 01:2020 High ankle boots for use by Kenya Forest Service — Specification, **First Edition**
176. KFSS 02:2020 Suede boots for use by Kenya Forest Service — Specification, **First Edition**
177. KFSS 03:2020 Camouflage fabric for use by Kenya Forest Service — Specification, **First Edition**
178. KFSS 04:2020 Berets for use by Kenya Forest Service — Specification, **First Edition**
179. KFSS 05:2020 Woolen socks for use by Kenya Forest Service — Specification, **First Edition**
180. KFSS 06:2020 Wool ribbed jersey for use by Kenya Forest Service — Specification, **First Edition**
181. KFSS 07:2020 Service flag for use by Kenya Forest Service — Specification, **First Edition**
182. KFSS 08:2020 Jungle green T shirt for use by Kenya Forest Service — Specification, **First Edition**
183. KFSS 09:2020 Raincoats for use by Kenya Forest Service — Specification, **First Edition**
184. KFSS 10:2020 Cape poncho for use by Kenya Forest Service — Specification, **First Edition**
185. KFSS 11:2020 Webbing belts for use by Kenya Forest Service — Specification, **First Edition**
186. KFSS 12:2020 Lanyards for use by Kenya Forest Service — Specification, **First Edition**
187. KFSS 13:2020 Shirting fabric for use by Kenya Forest Service — Specification, **First Edition**
188. KFSS 14:2020 Swagger canes for use by Kenya Forest Service — Specification, **First Edition**

## EAC/COMESA DIVISION

174. KS 1054-1:2019 Cor 1:2020 Kenya Standard — Energy drinks — Specification TECHNICAL CORRIGENDUM 1, **First Edition**

## COMPANY STANDARDS - KENYA FOREST SERVICE

175. KFSS 01:2020 High ankle boots for use by Kenya Forest Service — Specification, **First Edition**
176. KFSS 02:2020 Suede boots for use by Kenya Forest Service — Specification, **First Edition**



## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee

### CHEMICAL DIVISION

#### CONFIRMATIONS

1. **KS 1293:2013** Kenya Standard — Isobutyl acetate (methyl propyl acetate) for industrial use — Specification
2. **KS 1180:2012** Kenya Standard — Ethyl methyl ketone (butanone for industrial use) — Specification
3. **KS 2436:2013** Kenya Standard — Formaldehyde Solution for Industrial use — Specification
4. **KS 2041:2008** Kenya Standard — Ethanol for industrial use — Specification
5. **KS 2040:2008** Kenya Standard — Calcium chloride — Specification
6. **KS 2472:2013** Kenya Standard — Food grade hexane — Specification
7. **KS 2470:2013** Kenya Standard — Hexane for industrial use — Specification
8. **KS 1922:2007** Kenya Standard — Liquid iron-based coagulants — Test methods
9. **KS ISO 2481:1973** Kenya Standard — Sodium chloride for industrial use — Determination of halogens, expressed as chlorine — Mercurimetric method
10. **KS ISO 2480:1972** Kenya Standard — Sodium chloride for industrial use — Determination of sulphate content — Barium sulphate gravimetric method
11. **KS ISO 2479:1972** Kenya Standard — Sodium chloride for industrial use — Determination of matter insoluble in water or in acid and preparation of principal solutions for other determinations
12. **KS ISO 6353-2:1983** Kenya Standard — Reagents for chemical analysis — Part 2: Specifications — First series
13. **KS ISO 2211:1973** Kenya Standard — Liquid chemical products — Measurement of colour in hazen units (platinum-cobalt scale)
14. **KS 914:2013** Kenya Standard — Acetone

for industrial use — Specification

15. **KS ISO 5280:1979** Kenya Standard — Xylene for industrial use — Specification
16. **KS 1180:1994** Kenya Standard — Specification for ethyl methyl ketone (Butanone for industrial use)
17. **KS 1291:2013** Kenya Standard — Specification for butyl acetate for industrial use
18. **KS ISO 805:1976** Kenya Standard — Aluminium oxide primarily used for the production of aluminium — Determination of iron content — 1, 10-Phenanthroline photometric method
19. **KPAS 2355:2011** Kenya Standard — Powdered diatomaceous earth(diatomite) — Specification
20. **KS ISO 6353-1:1982** Kenya Standard — Reagents for chemical analysis — Part 1: Methods of test
21. **KS ISO 2227:1972** Kenya Standard — Formaldehyde solutions for industrial use — Determination of formaldehyde content
22. **KS 2492:2013** Kenya Standard — Spatula — Specification
23. **KS 2450:2013** Kenya Standard — Tripod Stand — Specification
24. **KS ISO 641:1975** Kenya Standard — Laboratory glassware — Interchangeable spherical ground joints
25. **KS ISO 4142:2002** Kenya Standard — Laboratory glassware — Test tubes
26. **KS 924:2012** Kenya Standard — Specification for motor vehicle chevrons, decals and strips
27. **KS 1815-1:2005** Kenya Standard — Symbolic safety signs — Part 1: Standard signs and general requirements
28. **KS 240:1997** Kenya Standard — Specification for glazed earthenware tiles
29. **KS 84:1978** Kenya Standard — Glossary of terms relating to ceramic ware industry and trade

#### WITHDRAWALS

30. **KS ISO 10545-14:1995** Kenya Standard — Ceramic tiles — Part 14: Determination of resistance to stains to be replaced by KS ISO 10545-14:2015
31. **KS ISO 10545-13:1995** Kenya Standard — Ceramic tiles — Part 13: Determination of chemical resistance to be replaced by KS ISO 10545-13:2016
32. **KS ISO 10545-8:1994** Kenya Standard — Ceramic tiles — Part 8: Determination of linear thermal expansion to be replaced by KS ISO 10545-8:2014
33. **KS ISO 10545-9:1994** Kenya Standard — Ceramic tiles — Part 9: Determination of resistance to thermal shock to be replaced by KS ISO 10545-9:2013
34. **KS ISO 3819:1985** Kenya Standard — Laboratory glassware — Part 1: Beakers to be replaced by KS ISO 3819:2015
35. **KS ISO 385-2:1984** Kenya Standard — Laboratory glassware — Burettes — Part 2: Burettes for which no waiting time is specified to be replaced by KS ISO 385:2005
36. **KS ISO 385-1:1984** Kenya Standard — Laboratory glassware — Burettes — Part 1: General requirements to be replaced by KS ISO 385:2005
37. **KS ISO 385-3:1984** Kenya Standard — Laboratory glassware — Burettes — Part 3: Burettes for which a waiting time of 30 s is specified to be replaced by KS ISO 385:2005
38. **KS ISO 7086-1:2000** Kenya Standard — Glass hollowware in contact with food — Release of lead and cadmium — Part 1: Test method to be replaced by KS ISO 7086-1:2019
39. **KS ISO 4796-1:2000** Kenya Standard — Laboratory glassware — Bottles — Part 1: Screw-neck bottles to be replaced by KS ISO 4796-1:2016
40. **KS 2491:2013** Kenya Standard — Base oil — Specification, to be replaced by KS 2491:2020
41. **KS 1310:1996** Kenya Standard — Specification for fuel oils to be replaced by KS 1310:2020

### ELECTROTECHNICAL DIVISION

#### CONFIRMATIONS

42. **KS IEC 60598-2-1:1997** Kenya Standard — Luminaires — Part 2: Particular requirements - Section 1: Fixed general purpose luminaires
43. **KS IEC 60598-2-10:2003** Kenya Standard



## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee

- Luminaires — Part 2: Particular requirements. Section 10: Portable child-appealing luminaires
- 44. **KS IEC 60598-2-18:1993** Kenya Standard
  - Luminaires — Part 2: Particular requirements - Section 18: Luminaires for swimming pools and similar applications.
- 45. **KS IEC 60598-2-19:1997** Kenya Standard
  - Luminaires — Part 2: Particular requirements. Section 19: Air-handling luminaires (safety requirements)
- 46. **KS IEC 60598-2-23:2001** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 23: Extra low voltage lighting systems for filament lamps
- 47. **KS IEC 60598-2-25:1994** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 25: Luminaires for use in clinical areas of hospitals and health care buildings
- 48. **KS IEC 60598-2-9:1993** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 9: Photo and film luminaires (non-professional)
- 49. **KS 2262:2010** Kenya Standard
  - Fluorescent lamps and other lamps containing mercury — Specifications and disposal requirements



- 50. **KS 2447-1:2013** Kenya Standard
  - Performance of electrical lighting equipment- Ballasts for fluorescent lamps — Part 1: Energy labeling and minimum energy performance standards requirements.
- 51. **KS 2447-2:2013** Kenya Standard
  - Performance of electrical lighting equipment- Ballasts for fluorescent lamps — Part 2: Method of measurement to determine energy consumption and performance of ballast-lamp circuits
- 52. **KS 2448-1:2013** Kenya Standard
  - Double-capped fluorescent lamps — Performance specifications — Part 1: Minimum Energy Performance Standards (MEPS)
- 53. **KS 1111-39:2005** Kenya Standard
  - Safety of household and similar electrical appliances — Part 39: Particular



requirements for humidifiers intended for use with heating, ventilation, or air-conditioning systems

- 54. **KS 1111-42:2005** Kenya Standard
  - Safety of household and similar electrical appliances — Part 42: Particular requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators
- 55. **KS ISO 9039:2008** Kenya Standard
  - Optics and photonics — Quality evaluation of optical systems — Determination of distortion
- 56. **KS ISO 11421:1997** Kenya Standard
  - Optics and optical instruments — Accuracy of optical transfer function (OTF) measurement
- 57. **KS ISO 12858-2:1999** Kenya Standard
  - Optics and optical instruments — Ancillary devices for geodetic instruments — Part 2: Tripods
- 58. **KS ISO 17123-2:2001** Kenya Standard
  - Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 2: Levels
- 59. **KS ISO 17123-3:2001** Kenya Standard
  - Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 3: Theodolites
- WITHDRAWALS**
- 60. **KS IEC 60598-2-6:1996** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 6: Luminaires with built-in transformers for filament lamps, Withdrawn without replacement as the products are deemed obsolete as luminaires are no longer manufactured with inbuilt transformers
- 61. **KS IEC 60598-2-7:1994** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 7: Portable luminaires for garden use, withdrawn without replacement as the requirements are now covered by the newly adopted KS
- 62. **KS IEC 60598-2-17:1990** Kenya Standard
  - Luminaires — Part 2-17: Particular requirements — Luminaires for stage lighting, television and film studios (outdoor and indoor), to be replaced by KS IEC 60598-2-17:2017
- 63. **KS IEC 60598-2-20:2002** Kenya Standard
  - Luminaires — Part 2-20: Particular requirements — Lighting chains, to be replaced by KS IEC 60598-2-20:2014
- 64. **KS IEC 60598-2-2:1997** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 2: Recessed luminaires, to be replaced by KS IEC 60598-2-2:2011
- 65. **KS IEC 60598-2-3:2002** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 3: Luminaires for road and street lighting, to be replaced by KS IEC 60598-2-3:2011
- 66. **KS IEC 60598-2-22:1997** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 22: Luminaires for emergency lighting, to be replaced by KS IEC 60598-2-22: 2017
- 67. **KS IEC 60598-2-4:1997** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 4: Portable general purpose luminaires, to be replaced by KS IEC 60598-2-4:2017
- 68. **KS IEC 60598-2-5:1998** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 5: Floodlights, to be replaced by KS IEC 60598-2-5:2015
- 69. **KS IEC 60598-2-8:2001** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 8: Handlamps, to be replaced by KS IEC 60598-2-8:2013
- 70. **KS IEC 60598-2-24:1997** Kenya Standard
  - Luminaires — Part 2: Particular requirements — Section 24: Luminaires with limited surface temperatures, to be replaced by KS IEC 60598-2-24:2013
- 71. **KS IEC/PAS 62612:2009** Kenya Standard
  - Self-ballasted LED-lamps for general lighting services — Performance requirements, to be replaced by KS IEC 62612:2018

IEC 60598-2-4:2017

- Luminaires — Part 2-17: Particular requirements — Luminaires for stage lighting, television and film studios (outdoor and indoor), to be replaced by KS IEC 60598-2-17:2017
- Luminaires — Part 2-20: Particular requirements — Lighting chains, to be replaced by KS IEC 60598-2-20:2014
- Luminaires — Part 2: Particular requirements — Section 2: Recessed luminaires, to be replaced by KS IEC 60598-2-2:2011
- Luminaires — Part 2: Particular requirements — Section 3: Luminaires for road and street lighting, to be replaced by KS IEC 60598-2-3:2011
- Luminaires — Part 2: Particular requirements — Section 22: Luminaires for emergency lighting, to be replaced by KS IEC 60598-2-22: 2017
- Luminaires — Part 2: Particular requirements — Section 4: Portable general purpose luminaires, to be replaced by KS IEC 60598-2-4:2017
- Luminaires — Part 2: Particular requirements — Section 5: Floodlights, to be replaced by KS IEC 60598-2-5:2015
- Luminaires — Part 2: Particular requirements — Section 8: Handlamps, to be replaced by KS IEC 60598-2-8:2013
- Luminaires — Part 2: Particular requirements — Section 24: Luminaires with limited surface temperatures, to be replaced by KS IEC 60598-2-24:2013
- Self-ballasted LED-lamps for general lighting services — Performance requirements, to be replaced by KS IEC 62612:2018



**List for Confirmations and Withdrawals Approved  
by the 126<sup>th</sup> Standards Approval Committee**



- 72. **KS 239:1996** Kenya Standard — Specification for safety requirements for domestic and similar electrical appliances, to be replaced by KS IEC 60335-1:2016
- 73. **KS 1111-9:1993** Kenya Standard — Specification for safety requirements for household electrical appliances — Part 9: Requirements for a.c. electric shavers, hair clippers and similar appliances, to be replaced by KS IEC 60335-2-8:2018
- 74. **KS 1111-5:1991** Kenya Standard — Specification for safety requirements for household electrical appliances — Part 5: Particular requirements for battery powered shavers, hair clippers and similar appliances and their charging and battery assemblies, to be replaced by KS IEC 60335-2-8:2018
- 75. **KS 1111-11:1995** Kenya Standard — Specification for household and similar electrical appliances — Part 11 Particular requirements for electrical clocks, to be replaced by KS IEC 60335-2-26:2008
- 76. **KS 1111-20:1997** Kenya Standard — Specification for household electrical appliances — Part 20: Particular Requirements for electric kitchen machines, to be replaced by KS IEC 60335-2-14: 2019
- 77. **KS 1111-22:1997** Kenya Standard — Specification for household electrical appliances — Part 22: Particular Requirements for electric fans and regulators, to be replaced by KS IEC 60335-2-80:2015
- 78. **KS 1111-8:1993** Kenya Standard — Specification for safety requirements for household and similar electrical appliances — Part 8: Particular requirements for frying pans, deep fat fryers and similar appliances, to be replaced by KS IEC 60335-2-13:2016
- 79. **KS 1111-12:1993** Kenya Standard — Specification for household and similar electrical appliances — Part 12: Particular requirements for sewing machines, to be replaced by KS IEC 60335-2-28:2008
- 80. **KS 1111-17:1998** Kenya Standard — Specification for household and similar electrical appliances — Part 17: Particular

requirements for commercial electric griddles and griddle grills, to be replaced by KS IEC 60335-2-38:2017

- 81. **KS 1111-19:1998** Kenya Standard — Specification for household and similar electrical appliances — Part 19: Particular Requirements for commercial electric forced convection ovens, to be replaced by KS IEC 60335-2-42:2017
- 82. **KS 1111-19:1998** Kenya Standard — Specification for household and similar electrical appliances — Part 19: Particular Requirements for commercial electric forced convection ovens, to be replaced by KS IEC 60335-2-2:2019
- 83. **KS 1111-13:1993** Kenya Standard — Specification for household and similar electrical appliances — Part 13: Particular requirements for room heaters, to be replaced by KS IEC 60335-2-30:2016
- 84. **KS 1111-3:1994** Kenya Standard — Specification for safety requirements for household electrical appliances — Part 3: Particular requirements for dishwashers, to be replaced by KS IEC 60335-2-5:2018
- 85. **KS 1111-4:1993** Kenya Standard — Specification for safety requirements for household electrical appliances — Part 4: Particular requirements for washing machines, to be replaced by KS IEC

replaced by KS IEC 60335-2-36:2017

- 88. **KS 1111-18:1991** Kenya Standard — Specification for household and similar electrical appliances — Part 18: Particular requirements for commercial electric multi-purpose cooking pans, to be replaced by KS IEC 60335-2-39:2017
- 89. **KS 1111-6:2000** Kenya Standard — Specification for safety requirements for household and similar electrical appliances — Part 6: Particular requirements for toasters, grills, roasters and similar appliances, to be replaced by KS IEC 60335-2-9:2019
- 90. **KS 1111-23:2002** Kenya Standard — Safety of household and similar electrical appliances — Part 23: Particular requirements for instantaneous water heaters, to be replaced by KS IEC 60335-2-35:2016



60335-2-7:2019

- 86. **KS 1111-7:1997** Kenya Standard — Specification for safety requirements for domestic and similar electrical appliances — Part 7: Particular requirements for tumbler dryers, to be replaced by KS IEC 60335-2-11:2019
- 87. **KS 1111-15:1993** Kenya Standard — Specification for household and similar electrical appliances — Part 15: Particular requirements for commercial electric ranges, ovens and hob elements, to be replaced by KS IEC 60335-2-47:2017
- 91. **KS 1111-24:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 24: Particular requirements for spin extractors, to be replaced by KS IEC 60335-2-4:2017
- 92. **KS 1111-25:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 25: Particular requirements for refrigerating appliances, ice-cream appliances and ice-makers, to be replaced by KS IEC 60335-2-24:2017
- 93. **KS 1111-28:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 26: Particular requirements for ranges hoods, to be replaced by KS IEC 60335-2-31: 2018
- 94. **KS 1111-27:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 27: Particular requirements for appliances for heating liquids, to be replaced by KS IEC 60335-2-15:2018
- 95. **KS 1111-30:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 30: Particular requirements for commercial electric boiling pans, to be replaced by KS IEC 60335-2-47:2017
- 96. **KS 1111-32:2005** Kenya Standard — Safety of household and similar

## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee



- electrical appliances — Part 32: Particular requirements for commercial electric hot cupboards, to be replaced by KS IEC 60335-2-49:2017
97. **KS 1111-33:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 33: Particular requirements for sauna heating appliances, to be replaced by KS IEC 60335-2-53:2017
98. **KS 1111-34:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 34: Particular requirements for projectors and similar appliances, to be replaced by KS IEC 60335-2-56:2014
99. **KS 1111-35:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 35: Particular requirements for insect killers, to be replaced by KS IEC 60335-2-59:2009
100. **KS 1111-36:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 36: Particular requirements for floor-treatment and floor-cleaning machines, for industrial and commercial use, to be replaced by KS IEC 60335-2-67:2016
101. **KS 1111-37:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 37: Particular requirements for portable immersion heaters, to be replaced by KS IEC 60335-2-74:2009
102. **KS 1111-38:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 38: Particular requirements for fabric steamers, to be replaced by KS IEC 60335-2-85:2017
103. **KS 1111-41:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 41: Particular requirements for walk-behind and hand-held lawn trimmers and lawn edge trimmers, to be replaced by KS IEC 60335-2-91:2008
104. **KS 1111-43:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 43: Particular requirements for scissors type grass shears, to be replaced by KS IEC 60335-2-94:2008
105. **KS 1111-44:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 44: Particular requirements for drives for vertically moving garage doors for residential use, to be replaced by KS IEC 60335-2-95:2019
106. **KS 1111-39:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 39: Particular requirements for humidifiers intended for use with heating, ventilation, or air-conditioning systems, to be replaced by KS IEC 60335-2-88:2002
107. **KS 1111-42:2005** Kenya Standard — Safety of household and similar electrical appliances — Part 42: Particular requirements for pedestrian-controlled mains-operated lawn scarifiers and aerators, to be replaced by KS IEC 60335-2-92:2002
108. **KS ISO 7944:1998** Kenya Standard — Optics and optical instruments — Reference wavelengths, to be replaced by KS ISO 7944:1998/COR 1:2009
109. **KS ISO 9334:2007** Kenya Standard — Optics and optical instruments — Optical transfer function — Definitions and mathematical relationships, to be replaced by KS ISO 9334:2012
110. **KS ISO 15529:2007** Kenya Standard — Optics and optical instruments — Optical transfer function — Principles of measurement of modulation transfer function (MTF) of sampled imaging systems, to be replaced by KS ISO 15529:2010
111. **KS ISO 10526:2007** Kenya Standard — standard illuminants for colorimetry, to be replaced by KS ISO/CIE 11664-2:2007
112. **KS ISO 9849:2000** Kenya Standard — Optics and optical instruments — Geodetic and surveying instruments — Vocabulary, to be replaced by KS ISO 9849:2017
113. **KS ISO 12858-1:1999** Kenya Standard — Optics and optical instruments — Ancillary devices for geodetic instruments — Part 1: Invar levelling staffs, to be replaced by KS ISO 12858-1:2014
114. **KS ISO 17123-1:2001** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 1: Theory, to be replaced by KS ISO 17123-1:2014
115. **KS ISO 17123-4:2001** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 4: Electro-optical distance meters (EDM measurements to reflectors), to be replaced by KS ISO 17123-4:2012
116. **KS ISO 17123-6:2003** Kenya Standard — Optics and optical instruments — Field procedures for testing geodetic and surveying instruments — Part 6: Rotating lasers, to be replaced by KS ISO 17123-6:2012
117. **KS ISO/IEC 12207:2008** Kenya Standard — Systems and software engineering — Software life cycle processes, to be replaced by KS ISO/IEC/IEEE 12207:2017



## FOOD DIVISION

### CONFIRMATION

118. **KS ISO 935:1998** Kenya Standard — Animal and vegetable fats and oils — Determination of titre

### WITHDRAWALS

119. **KS ISO 9936:2006** Kenya Standard — Animal and vegetable fats and oils — Determination of tocopherol and tocotrienol contents by high-performance liquid chromatography, to be replaced by KS ISO 9936:2016
120. **KS ISO 662:1998** Kenya Standard — Animal and Vegetable fats and oils — Determination of moisture and volatile matter content, to be replaced by KS ISO 662:2016
121. **KS ISO 15774:2000** Kenya Standard — Animal and vegetable fats and oils — Determination of cadmium content by direct graphite furnace atomic absorption spectrometry, to be replaced by KS ISO 15774:2017
122. **KS ISO 3961:1996** Kenya Standard — Animal and vegetable fats and oils — Determination of iodine value, To be replaced by KS ISO 3961:2018
123. **KS ISO 6320:1995** Kenya Standard — Animal and vegetable fats and oils — Determination of refractive index, to be replaced by KS ISO 6320:2017
124. **KS ISO 6883:2007** Kenya Standard — Animal and vegetable fats and oils — Determination of conventional mass per volume (litre weight in air), to be replaced by KS ISO 6883:2017
125. **KS ISO 6884:1985** Kenya Standard —

## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee



- Animal and vegetable fats and oils — Determination of ash, to be replaced by KS ISO 6884:2008
- 126.** **KS ISO 6885:1998** Kenya Standard — Animal and vegetable fats and oils — Determination of anisidine value, to be replaced by KS ISO 6885:2016
- 127.** **KS ISO 8534:1996** Kenya Standard — Animal and vegetable fats and oils — Determination of water content — Karl Fisscer method, to be replaced by KS ISO 8534:2017
- 128.** **KS ISO 5530-1:1997** Kenya Standard — Wheat flour - Physical characteristics of doughs Part 1: Determination of water absorption and rheological properties using a farinograph, to be replaced by KS ISO 5530-1:2013
- 129.** **KS ISO 7305:1998** Kenya Standard — Milled cereal products — Determination of fat acidity, to be replaced by KS ISO 7305:2019
- 130.** **KS EAS 351:2004** Kenya Standard — Toffee — Specification, to be replaced by KS EAS 351:2019
- 131.** **KS EAS 352:2014** Kenya Standard — Chewing gum and bubble gum — Specification, to be replaced by KS EAS 352:2019
- Guideline for the conduct of food safety assessment of foods derived from recombinant — DNA plants
- 135.** **KS CAC/GL 46:2003** Kenya Standard — Guideline for the conduct of food safety assessment of foods produced using recombinant — DNA microorganisms.
- 136.** **KS ISO 21569-2:2012** Kenya Standard — Horizontal methods for molecular biomarker analysis-Methods of analysis for the detection of genetically modified organisms and derived products — Part 2: Construct-specific real-time PCR method for detection of GMO
- 137.** **KS ISO 16578:2013** Kenya Standard — Molecular biomarker analysis — General definitions and requirements for microarray detection of specific nucleic acid sequences
- 138.** **KS ISO 13495:2013** Kenya Standard — Foodstuffs — Principles of selection and criteria of validation for varietal identification methods using specific nucleic acid
- 139.** **KS 2422:2012** Kenya Standard — Potassium sulphate fertilizer, technical grade, to be replaced by KS 2422:2020
- 140.** **KS 2423:2012** Kenya Standard — Magnesium nitrate fertilizer, technical grade, Specification, to be replaced by KS 2423:2020
- 141.** **KS 2077:2007** Kenya Standard — Seed potato — Specification, to be replaced by KS 2077:2020
- 142.** **KS 157:2018** Kenya Standard — Monoammonium and diammonium phosphate fertilizer — Specification, to be replaced by KS 157:2020
- 143.** **KS 2424:2012** Kenya Standard — Monoammonium and diammonium phosphate fertilizer, technical grade — Specification, to be replaced by KS 2424:2020
- 144.** **KS 2426:2012** Kenya Standard — Monopotassium phosphate fertilizer, technical grade — Specification, to be replaced by KS 2426:2020
- 145.** **KS 2427:2012** Kenya Standard — Soluble compound fertilizer — Specification, to be replaced by KS 2427:2020.

## ENGINEERING DIVISION

### CONFIRMATIONS

- 146.** **KS 2476:2013** Kenya Standard — Edge straightness of wooden board products — Test method
- 147.** **KS 2477:2013** Kenya Standard — Flatness of wooden board products — Test method
- 148.** **KS 2475:2013** Kenya Standard — Fiberboard — Measurement for dimensions of test specimens —Test methods
- 149.** **KS ISO 13059:2011** Kenya Standard —

### WITHDRAWALS



## AGRICULTURE DIVISION

### CONFIRMATIONS

- 132.** **KS ISO 21569:2005** Amd1:2013 Kenya Standard — Foodstuffs-Methods of analysis for the detection of genetically modified organisms and derived products — Qualitative nucleic acid based methods AMENDMENT 1
- 133.** **KS CAC/GL 68:2008** Kenya Standard — Guideline for the conduct of food safety assessment of foods derived from recombinant — DNA animals
- 134.** **KS CAC/GL 45:2003** Kenya Standard

## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee

Round timber — Requirements for the measurement of dimensions and methods for the determination of volume

150. **KS ISO 9086-1:1987** Kenya Standard — Wood — Methods of physical and mechanical testing — Vocabulary — Part 1: General concepts and macrostructure

151. **KS ISO 8906:1988** Kenya Standard — Sawn timber — Test methods — Determination of resistance to local transverse compression

152. **KS ISO 4470:1981** Kenya Standard — Sawn timber — Determination of the average moisture content of a lot

153. **KS 2513:2014** Kenya Standard — Composite pole for telephone, power and lighting purposes — Specification

### **WITHDRAWALS**

154. **KS ISO 3133:1975** Kenya Standard — Wood — Determination of ultimate strength in static bending, to be replaced by KS ISO 13061-3:2014

155. **KS ISO 3131:1975** Kenya Standard — Wood — Determination of density for physical and mechanical tests, to be replaced by KS ISO 13061-2:2014

156. **KS ISO 4859:1982** Kenya Standard — Wood — Determination of radial and tangential swelling, to be replaced by KS ISO 13061-15:2017

157. **KS 4469:1981** Kenya Standard — Wood — Determination of radial and tangential shrinkage, to be replaced by KS ISO 13061-13:2016

158. **KS ISO 8966:1987** Kenya Standard — Logging industry — Products — Terms and definitions, to be replaced by KS ISO 24294:2013

159. **KS 2464-2:2013** Kenya Standard — Performance of household electrical appliances — Refrigerating appliances — Part 2: Minimum energy performance standard requirements, to be replaced by KS 2464-2:2020

160. **KS 1557:2005** Kenya Standard — Pre-painted metal coated steel sheets and coils — Specification, to be replaced by KS EAS 468:2019

## **TRADE DIVISION**

### **CONFIRMATIONS**

161. **KS ISO 1004-1:2013** Kenya Standard — Information processing — Magnetic ink character recognition — Part 1: Print specifications for E13 B

162. **KS ISO 1004-2:2013** Kenya Standard —



Information processing — Magnetic ink character recognition Part 2: Print specifications for CMC7

163. **KS ISO 9564-1:2011** Kenya Standard — Financial services — Personal Identification Number (PIN) management and security — Part 1: Basic principles and requirements for PINs in card-based systems

164. **KS ISO IEC 31010:2009** Kenya Standard — Risk management — Risk assessment techniques

Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration

169. **KS ISO 105 A01:2010** Kenya Standard — Textiles — Tests for colour fastness — Part A01: General principles of testing

170. **KS ISO 105 B08:1995** Kenya Standard — Textiles — Tests for colour fastness — Part B08: Quality control of blue wool reference materials 1 to 7

171. **KS ISO 105 E07:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E07: Colour fastness to spotting: Water

172. **KS ISO 105 E06:2006** Kenya Standard — Textiles — Tests for colour fastness — Part E06: Colour fastness to spotting: Alkali

173. **KS ISO 105 E03:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E03: Colour fastness to chlorinated water (swimming pool –water)

174. **KS ISO 105 E05:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E05: Colour fastness to spotting: Acid

175. **KS ISO 105 E08:1994** Kenya Standard — Textiles — Tests for colour fastness — Part E08: Colour fastness to hot water

176. **KS ISO 105 E16:2006** Kenya Standard — Textiles — Tests for color fastness — Part E16: Colour fastness to water spotting on upholstery fabrics



### **WITHDRAWALS**

165. **KS 580:2014** Kenya Standard — Cosmetic creams, lotions and gels for skin care — Specification, to be replaced by KS EAS 786:2013

## **LEATHER AND TEXTILE DIVISION**

### **CONFIRMATIONS**

166. **KS ISO 105 E02:2013** Kenya Standard — Tests for colour fastness — Part E02: Colour fastness to sea water

167. **KS ISO 105 J03:2009** Kenya Standard — Textiles — Tests for colourfastness — Part J03: Calculation of colour differences

168. **KS ISO 105 E04:2013** Kenya Standard —

Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration

169. **KS ISO 105 A01:2010** Kenya Standard — Textiles — Tests for colour fastness — Part A01: General principles of testing

170. **KS ISO 105 B08:1995** Kenya Standard — Textiles — Tests for colour fastness — Part B08: Quality control of blue wool reference materials 1 to 7

171. **KS ISO 105 E07:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E07: Colour fastness to spotting: Water

172. **KS ISO 105 E06:2006** Kenya Standard — Textiles — Tests for colour fastness — Part E06: Colour fastness to spotting: Alkali

173. **KS ISO 105 E03:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E03: Colour fastness to chlorinated water (swimming pool –water)

174. **KS ISO 105 E05:2010** Kenya Standard — Textiles — Tests for colour fastness — Part E05: Colour fastness to spotting: Acid

175. **KS ISO 105 E08:1994** Kenya Standard — Textiles — Tests for colour fastness — Part E08: Colour fastness to hot water

176. **KS ISO 105 E16:2006** Kenya Standard — Textiles — Tests for color fastness — Part E16: Colour fastness to water spotting on upholstery fabrics

### **WITHDRAWALS**

177. **KS 1532-1:1999** Kenya Standard — Code of practice for inspection and acceptance criteria for used textile products (Mitumba) — Part 1: Garments, to be replaced by KS EAS 356:2019

178. **KS 1739-2:2013** Kenya Standard — Mosquito nets — Part 2: Long lasting insecticidal nets, to be replaced by KS EAS 455:2019

## **SERVICES DIVISION**

### **WITHDRAWALS**

179. **KS ISO 8185:2007** Kenya Standard — Respiratory tract humidifiers for medical use — Particular requirements for respiratory humidification systems, to be replaced by KS ISO 80601-2-74:2017

180. **KS ISO 8637:2010** Kenya Standard — Cardiovascular implants and extracorporeal systems — Haemodialysers, haemodiafilters, haemofilters and haemoconcentrators, to be replaced by KS ISO 8637-1:2017

181. **KS ISO 8637:2010/ Amd 1:2013** Kenya Standard — Cardiovascular

## List for Confirmations and Withdrawals Approved by the 126<sup>th</sup> Standards Approval Committee

- implants and extracorporeal systems — Haemodialysers, haemodiafilters, haemofilters and haemoconcentrators AMENDMENT 1, to be replaced by KS ISO 8637-1:2017 which has now incorporated it
- 182.** **KS ISO/TR 18529:2000** Kenya Standard — Ergonomics of the human-system interaction — Human-centred lifecycle processes descriptions, to be replaced by KS ISO 9241-220:2019
- 183.** **KS ISO 3864-1:2002** Kenya Standard — Graphical symbols — Safety colours and signs — Design principles for safety signs in work places and public areas, to be replaced by KS ISO 3864-1:2011 and KS ISO 3864-4:2011.
- 184.** **KS ISO 16069:2004** Kenya Standard — Graphical symbols — Safety signs — Safety way guidance systems (SWGS), to be replaced by KS ISO 16069:2017
- 185.** **KS ISO 21127:2006** Kenya Standard — Information and documentation — A reference ontology for the interchange of cultural heritage information, to be replaced by KS ISO 21127:2014
- 186.** **KS ISO 8382:1988** Kenya Standard — Resuscitators intended for use with humans, to be replaced by KS ISO 10651-5:2006
- 187.** **KS ISO 15223:2000** Kenya Standard — Medical devices — Symbols to be used with medical device labels, labelling and information to be supplied, to be replaced by KS ISO 15223-2:2010
- 188.** **KS ISO 8362-2:2008** Kenya Standard — Injection containers for injectables and accessories — Part 2: Closures for injection vials, withdrawn, to be replaced by ISO 8362-2:2015
- 189.** **KS ISO 8362-1:2009** Kenya Standard — Injection containers for injectables and accessories — Part 1: Injection vials made of glass tubing, to be replaced by KS ISO 8362-1:2018
- 190.** **KS ISO 7864:1993** Kenya Standard — Sterile hypodermic needles for single-use, to be replaced by KS ISO 7864:2016
- 191.** **KS ISO 5832-11:1994** Kenya Standard — Implants for surgery — Metallic materials Part 11: Wrought titanium 6-aluminium 7-nobium alloy, to be replaced by KS ISO 5832-11:2014
- 192.** **KS ISO 5832-7:1994** Kenya Standard — Implants for surgery - Metallic materials Part 7: Forgeable and cold-formed cobalt-chromium-nickel-molybdenum-iron alloy, to be replaced by KS ISO 5832-7:2016
- 193.** **KS ISO 8362-5:2008** Kenya Standard — Injection containers for injectable and accessories — Part 5: Freeze drying closures for injection vials, to be replaced by KS ISO 8362-5:2016
- 194.** **KS ISO 11737-1:1995** Kenya Standard — Sterilization of medical devices — Microbiological methods — Part 1: Estimation of population of microorganisms on products, to be replaced by KS ISO 11737-1:2018
- 195.** **KS ISO 10555-2:1996** Kenya Standard — Sterile, single-use intravascular catheters — Part 2: Angiographic catheters, to be replaced by KS ISO 10555-1:2013
- 196.** **KS ISO 10555-4:1996** Kenya Standard — Sterile, single-use intravascular catheters — Part 4: Ballon dilation catheters, to be replaced by KS ISO 10555-4: 2013
- 197.** **KS ISO 594-1:1986** Kenya Standard — Conical fitting with a 6 percent (luer) taper for syringes, needles and other medical equipments — Part 1: General requirements, to be replaced by KS ISO 80369-7:2016
- 198.** **KS ISO 594-2:1998** Kenya Standard — Conical fitting with a 6 percent (Luer) taper for syringes, needles and other medical equipments — Part 2: Lock fitting, to be replaced by KS ISO 80369-7:2016
- 199.** **KS ISO 595-1:1986** Kenya Standard — Reusable all-glass or metal-and-glass syringes for medical use — Part 1: Dimensions, withdrawn and not replaced as the content are taken care of in the product standards
- 200.** **KS ISO 595-2:1987** Kenya Standard — Reusable all-glass or metal-and-glass syringes for medical use — Part 2: Design, performance requirements and tests, technologically superseded withdrawn and not replaced
- 201.** **KS ISO 11737-2:2009** Kenya Standard — Sterilization of medical devices — Microbiological methods — Part 2: Test of sterility performed in the validation of a sterilization process, to be replaced by KS ISO 11737-2: 2019
- 202.** **KS ISO 1135-1:1987** Kenya Standard — Transfusion equipment for medical use — Part 1: Glass transfusion bottles, closures and caps, withdrawn without replacement
- 203.** **KS IEC 60601-1-1:2000** Kenya Standard — Medical electrical equipment — Part 1-1: General requirements for safety — Collateral standard: Safety requirements for medical electrical systems, to be replaced by KS IEC 60601-1-1:2007
- 204.** **KS ISO 6710:2000** Kenya Standard — Single-use containers for venous blood specimen collection, to be replaced by KS ISO 6710:2017
- 205.** **KS IEC 60601-2-45:2001** Kenya Standard — Medical electrical equipment — Part 2-45: Particular requirements for the safety of mammographic X-ray equipment and mammographic stereotactic devices, withdrawn without replacement
- 206.** **KS ISO 11193-1:2002** Kenya Standard — Single-use medical examination gloves — Part 1: Specification for gloves made from rubber latex or rubber solution, to be replaced by KS ISO 11193-1:2008
- 207.** **KS ISO 10282:2002** Kenya Standard — Single-use sterile rubber surgical gloves — Specification, to be replaced by KS ISO 10282:2014
- 208.** **KS ISO 14155-1:2003** Kenya Standard — Clinical investigation of medical devices for human subjects — Part 1: General requirements, to be replaced by KS ISO 14155-1:2011
- 209.** **KS ISO 22882:2004** Kenya Standard — Castors and wheels Requirements for castors for hospital beds, to be replaced by KS ISO 22882:2016
- 210.** **KS IEC 60601-2-44:2002** Medical electrical equipment — Part 2-44: Particular requirements for the safety of X-ray equipment for computed tomography, to be replaced by KS IEC 60601-2-44:2016







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