



**TANZANIA BUREAU OF STANDARDS (TBS)**

## **IN CONTEXT**



*Analysts at work in the Food Laboratory*

**TANZANIA BUREAU OF STANDARDS**  
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## TBS IN CONTEXT

Tanzania Bureau of Standards (TBS) was established under the Ministry of Industry and Trade by an Act of Parliament, the Standards Act No.3 of 1975 as the National Standards Institute and became operational in April 1976. It was subsequently renamed Tanzania Bureau of Standards through an amendment to the Act by Act No.1 of 1977. The Standards Act No. 3 was later repealed and replaced by the Standards Act No. 2 of 2009, which gave the Bureau more powers in carrying out its mandate.

## FUNCTIONS

The main functions of TBS are:

- a) Formulation and promulgation of Tanzania standards in all sectors of the country's economy. Priorities have been established for national standards in the fields of textiles, leather, agriculture, food, chemicals, engineering and environment;
- b) Implementation of the promulgated standards through third party certification schemes;
- c) Improving the quality of industrial products both for export and local consumption through various certification schemes;
- d) Promotion of standardization and quality assurance services in industry and commerce through training of personnel in Company Standardization, Quality Assurance and Management Systems, Quality Improvement, Laboratory Techniques and Accreditation, Packaging Technology and Hazard Analysis and Critical Control Points (HACCP);
- e) Undertaking testing of product samples drawn by TBS inspectors in the course of implementing standards (certification samples), requested by manufacturers themselves (type-testing samples), brought by consumers (consumer complaints samples) or for checking laboratory proficiency (proficiency testing samples);
- f) Undertaking calibration of industrial and scientific measuring equipment and instruments in the areas of mass, length, volume, energy, temperature, etc.

## Human Resource

TBS has a total staff of over 200, most of whom are university graduates mainly in science disciplines. Most of the technical staff have been trained abroad by reputable organizations dealing with standardization and quality assurance activities such as

- The British Standards Institution (BSI)
- The Swedish Standards Institution (SIS)
- Bureau of Indian Standards (BIS)
- German Standards Institution (DIN)
- United Nations Industrial Development Organization (UNIDO)
- International Organization for Standardization (ISO).
- WHO/FAO Codex Alimentarius Commission

## Standards

Standards can be defined as consensus agreements between national delegations representing all the economic stake holders concerned, suppliers, users, government regulators and other interested groups, such as consumers. They agree on specifications and criteria to be applied consistently in classification of materials, in the manufacture and supply of products, in testing and analysis, in terminology and provision of services. In this way standards provide a reference frame work, or a common technological language between suppliers and their customers which facilitate trade and transfer of technology.

## Why standards matter?

If there were no standards we would soon notice. Standards make an enormous contribution in most aspects of our lives. It is when there is an absence of standards that their importance is brought home. For example as purchasers or users of products, we soon notice when they turn out to be of poor quality, do not fit, are incompatible with equipment we already have, are unreliable or dangerous. When products meet our expectations, we tend to take this for granted. We are usually unaware of the role played by standards in raising the level of quality, reliability, efficiency and interchangeability as well as in providing such benefits at an economical cost.

## Tanzania standards

TBS has an established National Standardization System through which national standards are formulated. This system is based on the worldwide 'consensus principle' which works through the use of technical committees. These committees draw members from all stakeholder groups including industries, government ministries and institutions, research institutions, institutions of higher learning, business organizations and consumers.

The finalized standards include product standards, test methods, codes of practice and codes of hygiene. The standards cover various sectors of the economy including food and agriculture, chemicals, textiles and leather, engineering, environment and general techniques.



*A Technical Committee deliberates on draft standards.*

*A Technical Committee deliberates on draft standards.*

### **Implementation of standards**

A number of industries and service organizations both in the public and private sectors have already adopted Tanzania standards in their manufacturing processes and purchasing programmes. Manufacturers producing products in conformity with Tanzania standards are granted licences to use the 'tbs' mark on their products. Nobody can ignore standards, as they affect every member of the society in whatever the activity is being done and wherever he/she is. By implementing standards, one is assured of better quality, safety, health and avoids unnecessary costs and wastages, hence increased productivity.

Also standards serve as guide for production of goods and services, provide basis for trade transactions, help technologists judge quality and performance and provide solutions to recurring problems.

### **The Standards Mark Scheme**

TBS operates a Standards Mark Certification Scheme, which allows manufacturers who have conformed with Tanzania standards to use the 'tbs' standards mark on their products.

The 'tbs' standards mark on a product indicates that samples of that product are independently and routinely tested and certified by TBS against relevant Tanzania standards. The 'tbs' mark is a registered trade mark owned by TBS. Licence to use the mark is granted only to manufacturers conforming to the rigorous quality requirements of the standards mark licencing procedures. The mark is a sign of product quality and gives assurance to both manufacturers and buyers that the product can be used safely and reliably.



TZS.....  
MARK APPLIED ON THE PRODUCT WITH A  
NUMBER FOR THE RELEVANT TANZANIA  
STANDARD (TZS.....)

### Batch Certification

As part of implementation of Government Notice No. 672 of 1998 (The Standards Compulsory Batch Certification of Imports) Regulations, TBS implements a Batch Certification Scheme for all imports covered by compulsory standards. This is to avoid Tanzania being turned into a dumping ground for substandard goods by unscrupulous traders.

Since the establishment of the Batch Certification Scheme, a number of imported consignments have been condemned as substandard. These include hand hoes, fertilizers, edible oils, cement, bicycle tyres and toothbrushes, just to mention a few.

### PVoC

Since February 2012, TBS has been implementing a new product conformity assessment program for the control of certain categories of imported consumer goods, known as Pre-shipment Verification of Conformity (PVoC) to standards. PVoC is a conformity assessment process used to verify that imported products are in conformity with the requirements of applicable standards before exporting to a destination country. This process is aimed at ensuring that products imported into the Tanzania market are of the required quality for health and safety of people and protection of the environment.

The program is carried out by authorized third-party agencies, consisting of physical inspection with combination of laboratory testing, documentary review and factory audits.



*Under PVoC consignments are inspected prior to shipment into Tanzania*

## Quality Management System Registration schemes

TBS operates Management System Registration schemes such as Quality Management System and Environmental Management System.

Companies registered to ISO 9001:2008 (Quality Management Systems) have realized that

- their market opportunities have increased;
- customer complaints have been reduced dramatically;
- operating costs have been significantly reduced;
- demand for their products and services has increased.

Further, companies having Environmental Management Systems (EMS) in place have realized cost savings as well as reduction of environmental liability. EMS standards stress the need for continuous improvement in striving to perfect the environment not only for ourselves but for future generations.

## Testing at TBS

The TBS Test House was established in 1982 to assist manufacturers to improve the quality of their products, provide facilities for the testing of products to ensure suitability for their intended use, and verify pre-export and pre-import product quality. The TBS Test House provides quick, accurate and confidential test facilities for type-testing, audit testing, technical guidance and advice on test methods and training of laboratory personnel.

The Test House covers the following testing facilities:

### 1. Chemistry Laboratory

The Chemistry Laboratory at the TBS Test House has been established to provide test facilities and services for all chemical and allied products, including petroleum products.



*Sample analysis in the Chemistry Laboratory*

## 2. Materials Testing Laboratories

Incorrectly designed or specified materials and equipment can cause serious injury and/or considerable damage to property. In order to minimize these hazards, TBS offers the facility of materials testing. Only through rigorous testing and competent assessment of components and equipment can the user be assured that they meet the relevant safety requirements. The laboratory covers testing facilities in the fields of electricity, mechanical and civil engineering.

### a) Building and Construction Laboratory



*Engineer conducting tests in the Building and Construction Laboratory*

The TBS Building and Construction Laboratory is designed for the testing of building materials as well as building components for properties such as strength and deformation properties, tightness, composition and dimensional changes. The Laboratory also performs field investigations for various load tests and drilling of concrete cores from completed constructions for testing of strength.

### b) Mechanical Engineering Laboratory

The Mechanical Engineering Laboratory is equipped with facilities for testing metallic materials with a wide range of tests being carried out to determine different properties of metals. The Laboratory also offers consultancy services such as suitability for use of products needing general mechanical tests using local, national and international standards.



*Testing of steel bars in the Mechanical Laboratory*

### c) Electrical Engineering Laboratory

Designed for testing households and similar electrical appliances as well as electrical materials and accessories, the Electrical Engineering Laboratory is equipped with electrical equipment catering for tests in various electrical fields.



*Engineer testing insulation thickness of a cable in the Electrical Laboratory*

### 3. The Food Laboratory

The Food Laboratory at the TBS Test House, provides test facilities for all food and agricultural products. Tests are carried out to detect contaminants of all types and prove food wholesomeness and safety.



*Analysts analyzing samples in the Food Laboratory*

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**Quality begins on the inside... and then works its way out.**

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#### 4. The Textile and Leather Laboratory

The Textile and Leather Laboratory was established to provide test facilities for both the textile and leather industries. It also trains textiles and leather analysts in good laboratory techniques. Physical testing is done at ISO recommended atmospheric conditions for tropical countries. This Laboratory is well equipped and accredited to test the quality of condoms.



*Condom testing in the Textile Laboratory*

#### 5. Metrology Laboratory

In Tanzania, the statutory responsibility of establishing custody and maintenance of the National Measurement Standards related to all physical parameters, at internationally accepted level of accuracy, is entrusted to the TBS Metrology Laboratory.

The laboratory undertakes apex level calibration of measurement standards and precision instruments in various fields of measurements such as length, mass, temperature, dimension, force, volume (including calibration of vertical and horizontal bulk storage tanks), pressure, D.C. and A.C. measurements.

TBS instruments used in calibrating other instruments and measuring equipment in the country are re-calibrated by the National Physical Laboratory (NPL) in South Africa to ensure that their accuracy is maintained. The NPL maintains traceability of its primary standards to international standards in Paris.

So far five Metrology fields have been accredited by the South African National Accreditation System (SANAS). The fields are mass, small volume, temperature, dimension and time and frequency. With this

accreditation, the laboratory became the 33<sup>rd</sup> laboratory in the list of accredited laboratories in the world and fourth only to South Africa, Egypt and Kenya in Africa.



*Metrology Laboratory's mobile calibration unit*

## 6. Packaging Technology Centre (PTC)

The Packaging Technology Centre was established to offer the following services: Training of industrialists in packaging technology, certification of packages, provision of testing facilities and supplying worldwide packaging information to exporters.

The Centre is already furnished with necessary equipment to enable it to implement its objectives, including supporting a coordinated development of the packaging industry by strengthening the existing standardization and testing capability in the area of packaging, offering training on structural and graphics design of packages, provision of third party certification for packaging materials and packages produced according to acceptable standards and provision of testing services for packages and packaging materials.



*An engineer examines packaging materials in PTC*

## 7. Cotton Laboratory

TBS houses the Regional Technical Centre for East/Southern Africa. The overall objectives of the centre is to assist the cotton producers to meet the emerging quality assessment demands of the global cotton market so as to maintain their competitive position in the world market. Through the centre, micronaire, strength, length (UHML), length uniformity (UI) and colour grades (Rd & +b) can be measured.

### Training

The Quality Control Section organizes in-plant and group training courses on implementation of ISO 9001 Quality Management Systems, ISO 14001- Environmental Management Systems, ISO 22000 Hazard Analysis and Critical Control Point (HACCP) and ISO 17025 Testing and Calibration. Tailor made courses on quality management are also organized according to customers' needs. These courses target industrial personnel covering shop floor workers, supervisors, managers and chief executives.

### Information dissemination

#### Information Centre

TBS has a well-equipped library to cater for standards and standards related information needs of industrialists, researchers, academicians, traders and consumers.

The library maintains and updates a full set of Tanzania standards, international standards such as ISO, IEC and WHO/FAO Codex Alimentarius standards, foreign standards issued by other countries all over the world, laws and regulations, standards catalogues, journals, news bulletins and other publications related to standardization and quality assurance.

The standards sales section of the library receives enquiries and orders for copies of Tanzania standards from local and foreign clients.

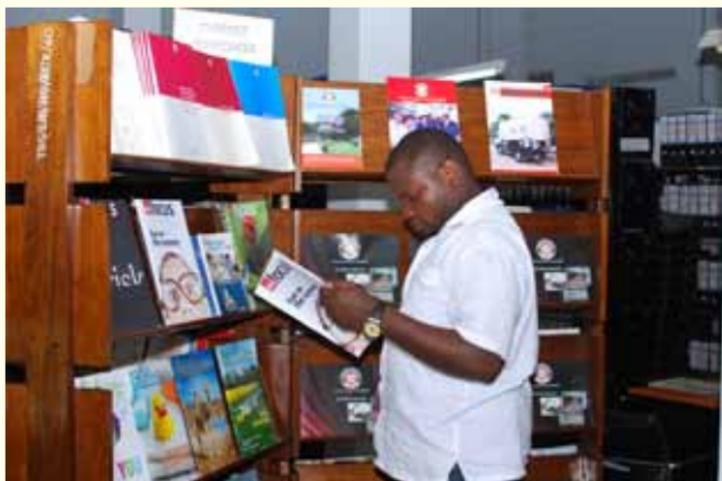
#### National Enquiry Point (NEP)

Tanzania Bureau of Standards is the National Enquiry Point for WTO - TBT/SPS Agreements in Tanzania. NEP handles information on technical regulations, standards and conformity assessment procedures adopted or proposed to be adopted.

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**Quality is not an act. It is a habit**

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*Information dissemination in the TBS Library*

### **The TBS Announcer**

The Bureau issues a biannual bulletin 'the Announcer' that gives details of standards published by TBS, International Organization for Standardization (ISO), Codex Alimentarius Commission (CAC) and other national standards bodies abroad.

### **Technical Assistance to Importers and Exporters**

The technical assistance to importers and exporters is a service which provides exporters and importers with essential information and advice on foreign technical requirements such as standards, regulations, codes of practice, testing and approval procedures in foreign markets. This is done through a variety of services and publications including technical enquiry, library, pre-shipment inspection, and technical research and consultancy.

### **National and international involvement**

TBS is a member of the International Organization for Standardization (ISO) and represents Tanzania in all international standards work. With the current global trade, Tanzania's active participation in international standards work is crucial. TBS also participates in regional standardization work within the East African Community and the South African Development Community. TBS is also a participating member to the FAO/WHO Codex Alimentarius Commission whose mandate is to ensure that worldwide food standards are available for protecting the health of consumers and ensuring fair practices in food chain. This has been done to ensure that Tanzania is fully represented on all technical issues concerning standards and quality.