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Research Article

LABORATORY ACCREDITATION-FOUNDATION FOR DEVELOPMENT

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ABSTRACT

In this article, a number of information about the important mechanism by which laboratory accreditation ensures the confidence of consumers in the quality and qualifications of work that the laboratory can perform has come. Also, the main purpose of Laboratory Accreditation is to ensure uniformity of measurements and information such as mutual recognition of the results of measurements, tests and studies is widely covered.

KEYWORDS

ILAC/IAF, ISO/IEC 17025, laboratory accreditation, measuring instruments, testing equipment, technical conditions, all-round Trade Organization.

INTRODUCTION

As a result of the reforms carried out in our republic, comprehensive measures have been implemented to ensure the comprehensive harmonization of testing and Calibration Laboratories with international talbas, increase the accuracy and reliability of measurement results, improve the functioning processes, and achieve certain results in this regard. In the new Uzbekistan development strategy for 2022-2026, including "...compliance assessment bodies to introduce a system of reimbursement by the Export Promotion Agency for the costs associated with accreditation by the Accreditation Office, which is considered a member of international ILAC/IAF organizations...", which defined important tasks. In the implementation of these tasks, it is important to ensure and improve the activities of test laboratories that meet the requirements of international standards [1]. However, in order to become a member of the All-Russian Trade Organization, more than 70% of the activities of all domestic producers and service entities must be in accordance with international standards. From this point of view, it is important to organize the competence of testing laboratories on the basis of the requirements of the international standard ISO 17025.

METHODS

The focus on product quality and safety in our country is now considered one of the most valuable and

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relevant tasks [1-5]. Ensuring that test laboratories operate in accordance with the requirements of international standards [6-10] increases the possibility of controlling the quality and safety of products produced by various enterprises and organizations.

Today, an analysis of the experiences of developed countries shows that the accreditation of test laboratories under the international standard ISO/IEC 17025 is an important decision to solve their emerging problems [10].

Laboratory accreditation can vary depending on what kind of work the laboratory does and for what purposes this laboratory was created. Not all laboratories require accreditation to solve their tasks. Basically, accreditation is necessary for Laboratories whose results must be recognized by other market participants or the professional community. Before making laboratory accreditation, we will determine the following goals for us.

Laboratory accreditation is one of the important mechanisms to ensure consumer confidence in the quality and competence of work that the laboratory can perform. Accreditation refers to the formal recognition of the laboratory's ability to meet customer requirements in the field of testing, measurement or research, as well as its technical competence in the implementation of certain types of tests and measurements [2].

The main purpose of laboratory accreditation is to ensure uniformity of measurements and to mutually recognize the results of measurements, tests and studies. If the laboratory is accredited in a particular field of activity, this means that the results of its work are accurate and reliable [3].

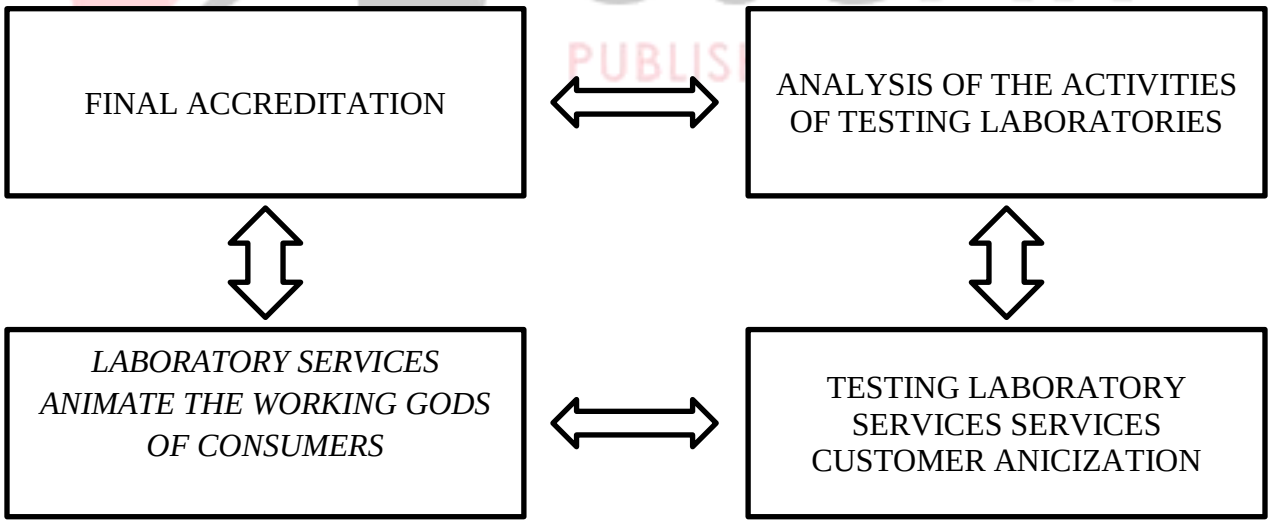

Figure 1. Procedure for determining the scope of accreditation of a test laboratory

RESULTS

Laboratory accreditation provides a number of benefits. These advantages are associated with the

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marketing positions of the laboratory, internal organization of work, interaction with customers and consumers of laboratory services.

The main advantages of laboratory accreditation include:

* guarantees of quality service to customers and consumers in the laboratory accredited area;

• continuous improvement of activities through regular inspections by the accreditation body;

* expanding market share by recognizing the results of laboratory work by market participants;

* reduce the time spent proving laboratory qualifications;

* improve the qualifications and qualifications of employees through regular inspections by the accreditation body.

Laboratory accreditation is important to the laboratory itself, as this procedure makes it possible to determine the degree of compliance with its established standards and accepted working norms[4]. This is especially important for the personal laboratories of enterprises created for the specific tasks of these enterprises. In general, the documentation for the accreditation of the test laboratory includes

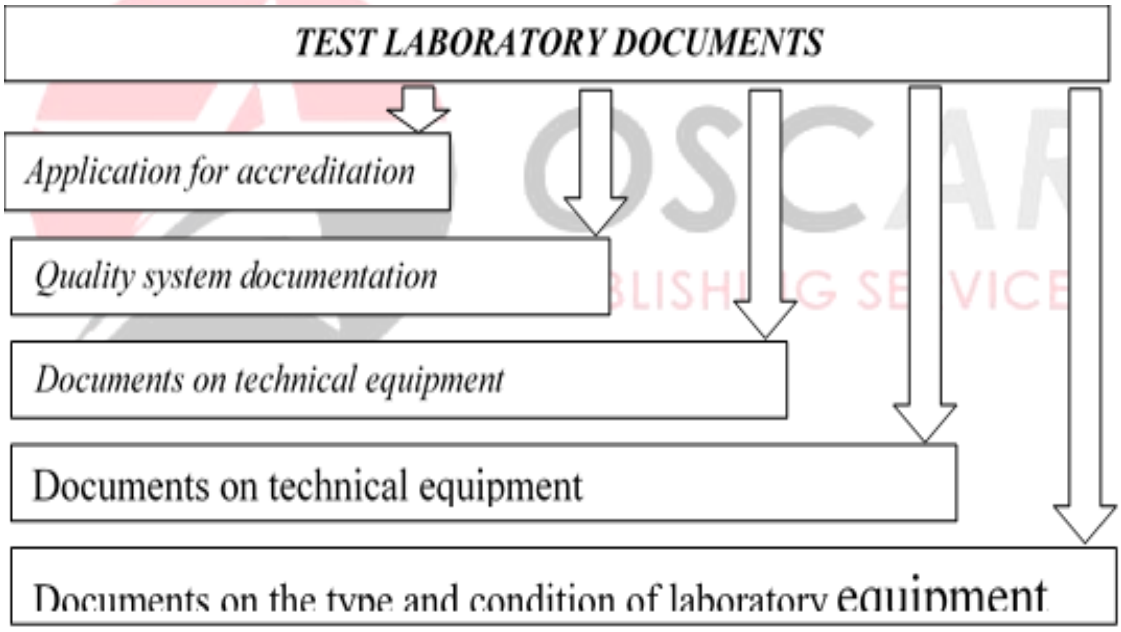

Figure 2. Documents for accreditation of the testing laboratory

Accreditation of testing laboratories is important in ensuring the reliability and correctness of the results obtained at these facilities. Laboratories play an important role in a wide range of industries including health, environmental protection, food safety, mechanical engineering and other industrial production. The international standard ISO / IEC 17025 serves as the basis for the competence, objectivity and consistency of test laboratories [5]. However, despite the availability of this standard, test laboratories still face difficulties in compliance and continuous improvement. The purpose of this work is to study

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various methods and strategies that can be used to ensure and improve the performance of test laboratories according to the ISO/IEC 17025 standard.

Test laboratories carry out monitoring and testing of compliance of various types of products and materials with the requirements of regulatory documents (standards, rules, technical conditions, etc.). The purpose of the test is to ensure that the product is marketed and used safely [6]. The accreditation of the testing laboratory makes it possible to carry out these works at the level of international standards, ensuring that the results obtained by all market participants are recognized.

Accreditation of the test laboratory can be carried out in various accreditation systems. The choice of the system depends on a number of factors related to the operation of the test laboratory. Accreditation of the test laboratory in the Republic of Uzbekistan is carried out in the National Accreditation System of the Dok "accreditation Center" under the agency for technical regulation of Uzbekistan on April 24, 2019, based on the decision of the Cabinet of Ministers of the Republic of Uzbekistan "on additional measures to improve work in the field of accreditation of conformity assessment bodies".

Test laboratories play an important role in ensuring the quality and safety of various products and services [7]. These laboratories are responsible for conducting tests, analyzing data, and providing accurate results that can be used to make informed decisions. Compliance with international standards such as ISO/IEC 17025 is essential for these laboratories to achieve reliability and reliability. Subject to these standards, testing laboratories can demonstrate their competence, objectivity and consistency in their tests. Such compliance also ensures the coherence and consistency of testing methods globally. International standards not only provide a common basis for laboratories, but also help to improve technical capabilities, ensure the correctness of the results and meet the needs of customers. Therefore, for the effective and correct operation of test laboratories, compliance with international standards is very important.

ISO / IEC 17025 is an international standard that defines the general requirements for the qualification of testing and Calibration Laboratories. This provides the basis for ensuring that laboratories continuously provide accurate test results and calibration measurements. The importance of ISO/IEC 17025 lies in its ability to instill confidence in the work of test laboratories. Compliance with this standard indicates the creation and implementation of a comprehensive system of Quality Management, which includes the necessary equipment, devices, personnel and procedures to ensure correct and reliable results in the laboratory. This standard is important not only for the laboratories themselves, but also for their customers, regulators and other stakeholders who rely on the quality and integrity of testing and calibration services.

In addition, ISO/IEC 17025 includes specifications and management control guidelines to ensure accuracy and reliability of laboratory test results. Technical requirements include factors such as employee qualifications, equipment calibration, and method verification. Laboratories must establish documented quality control procedures and ensure that employees are qualified and trained to perform tests correctly [8]. Proper storage and calibration of equipment is essential to prevent errors and ensure reliable results. In addition, testing methods is necessary to determine their intended feasibility. Following ISO/IEC 17025, testing laboratories can contribute to the overall improvement of global testing standards by ensuring

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the quality, consistency and comparison of their results.

CONCLUSION

In conclusion, accreditation, certification, declaration of conformity, inspection control, inspection (control) before load increase or unloading time, product testing, sanitary-epidemiological, veterinary, phytosanitary-legal or environmental examination, compliance assessment rules and procedures are carried out within the scope of organizational and technical requirements in the field of conformity assessment, the procedure for performing and formalizing work, methods. It is also important to apply accreditation rules to both imported goods and services and to exported goods and services.

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