4 ANALYSIS OF THE MAIN ASPECTS OF TESTING LABORATORIES IN TURKEY

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The World Trade Organization (WTO) wants Member States to ensure that their conformity assessment procedures are ensured, their technical competence and their transparency. Accreditation studies are being carried out to ensure conformity assessment procedures. Many countries around the world have identified the technical competence of laboratories with the help of accreditation systems. For laboratory accreditation, one or more organizations may work in a country.

The task of accrediting the laboratories in Turkey has been given to the Turkish Accreditation Agency (TURKAK) by Law No. 4457. A quality management system can be defi ned as "coordinated activities to direct and control an organization with regard to quality". This defi nition is used by the International Organization for Standardization (ISO) and by the Clinical and Laboratory Standards Institute (CLSI). Both groups are internationally recognized laboratory standards organizations, and will be discussed later in this handbook. In a quality management system, all aspects of the laboratory operation, including the organizational structure, processes and procedures, need to be addressed to assure quality As of today, TS EN ISO / IEC 17025 Standard for accreditation of laboratory and calibration laboratories and TS EN ISO 15189 Standard for accreditation of medical laboratories are taken as basis. These standards are accepted worldwide. The items of the standards set out demonstrate the general requirements of a laboratory's quality management system and technical competence. Laboratory quality can be defi ned as accuracy, reliability and timeliness of reported test results. The laboratory results must be as accurate as possible, all aspects of the laboratory operations must be reliable, and reporting must be timely in order to be useful in a clinical or public health setting [1].

TS EN ISO / IEC 17025 Standard deals with the general requirements for the competence of laboratories for testing and calibration, as well as the ability and technical competence of a laboratory to produce accurate and reliable results from a technical point of view. It is aimed at testing and calibration laboratories operating anywhere in the world to compete with each other at the same level by starting to use a single international standard as a demonstration of laboratory competence. Reducing or eliminating retesting of products in countries where they are exported is very beneficial to producers as it is both time and cost reduction. This results in a wider market, in other words a wider customer volume, as it is an accredited laboratory according to the ISO / IEC 17025 standard, the calibration certificates it has issued, or the international validity of the test reports[2].

There are many procedures and processes that are performed in the laboratory, and each of these must be carried out correctly in order to assure accuracy and reliability of testing. An error in any part of the cycle can produce a poor laboratory result. A method of detecting errors at each phase of testing is needed if quality is to be assured.

The complexity of the laboratory system requires that many factors must be addressed to assure quality in the laboratory. Some of these factors include:

- the laboratory environment
- quality control procedures
- communications
- record keeping
- competent and knowledgeable staff
- good-quality reagents and equipment.

Establishment, work permit, supervision and working procedures and principles of food control laboratories established or to be established by natural and legal persons in order to perform reliability, hygiene and quality analysis of all kinds of materials and materials in contact with food, food, covers the inspection, working procedures and principles of the Ministry's food control laboratories where the reliability, hygiene and quality analyzes of all kinds of materials and materials in contact with food and seed control services are carried out.

The basic characteristics of the laboratory building and its surroundings must be laid down in the laws of the country. The laboratory is established in places that are suitable for the legislation of development and are not exclusive to people's residence. This requirement does not apply to laboratories that operate outside combustible, burning, radioactive and explosive materials containing chemicals and gases and / or which are exposed to communicable and epidemic risks, and which do not pose a danger to humans. Piping systems, radiators, lighting, ventilation systems and connections and other service points are designed to be easy to clean and do not affect laboratory work. Walls, ceilings and floors can be easily cleaned and covered with materials that can be disinfected if necessary. In Turkey, workers should be allowed to work without personal protective equipment. At the same time, appropriate precautions must be taken such as emergency shock shower place, eye shower in places suitable for use in danger to the Laboratory.

Consequently, management systems in test laboratories according to the international standard ISO / IEC17025: 2005 require the competent laboratory not only to observe the methodology for obtaining reliable results, but also to improve management, increase the effectiveness of the quality management system, identify trends in the implementation of internal laboratory quality control.

The achievement of quality management system in test laboratories will be the development, based on the results of theoretical and practical studies, of regulatory documents, statistics, accreditation body guidelines, quality manuals and laboratory procedures, common criteria for assessing the extent to which quality management systems of testing laboratories meet the requirements of international standards.

References:

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