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Improving the Palestinian Standard (PS-15) for the Requirements of Quality System Needed to Hold Palestinian Quality Mark

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Declaration

I declare that I have developed and written this Master Thesis completely, and it has been generated by me as a result of my own original thesis, and has not been submitted elsewhere for any other degree or qualification. Moreover, I have not used sources or means without declaring them in the text, otherwise they are referenced.

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Date: 16.9.2019

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Abstract

Quality Mark is an effective tool for organizations to improve customer satisfaction, deliver a product that meets standards, improve sales and exports of products, and encourage organizations to continuously improve and develop their processes and products. One of the conditions for obtaining the Palestinian quality mark, certified by the Palestinian Standards and Metrology Institutions, is that organizations should adopt a quality management system based on the Palestinian standard PS-15.

According to Palestinian Standards and Metrology Institution, any Palestinian standard must be reviewed or upgraded every five years. Whereas the Palestinian Standard PS-15 was built and adopted by the Palestinian Standards and Metrology Institution as a basic requirement for obtaining the Palestinian Quality Mark in 1997, no review or upgrade has been done for the Palestinian Standard PS-15 until today. Furthermore, there are no previous studies related to improving the Palestinian standard PS-15. There are improvement opportunities in the PS-15which include improving product quality and building an effective system that reflects positively on the organization and customer's satisfaction. This research aims to study, identify improvement opportunities in the Palestinian standard, and fill the gap in the literature.

Three research methodologies have been adopted to achieve the research objectives. The first methodology was conducting via interviews and SWOT analysis to study the current version of the Palestinian standard PS-15 from the Palestinian Standards and Metrology Institution's perspective. The second methodology was studying the current version of the Palestinian standard PS-15 from market perspective through surveying the

extent of fulfilling the quality management principles through applying the Palestinian standard PS-15. The third methodology was a comparison study between the ISO 9001:2015 requirements and the Palestinian standard PS-15 requirements to determine the gap in the Palestinian standard.

The research summarizes the most important conclusions and recommendations such as the necessity of developing the Palestinian standard taking into account that it should be easy to apply by the organizations, built in a consistent and well-divided structure, and being drafted in a good way. The study also proved that the current Palestinian standard PS-15 does not achieve any of the ISO 9001:2015 Quality Management Principles and stressed to add the missing requirements in the Palestinian standard PS-15related to Leadership, Support, Operation, Planning, and Improvement compared with ISO 9001:2015 requirements.

Keywords: Quality, Quality Mark, PSI, QMS, Improvement, PS-15, ISO 9001:2015.

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List of Abbreviations

- ISO : International Organization for Standardization.
- ISO 9001:2015: Quality management system requirements of ISO.
- PSI: Palestinian Standard and Metrology Institution.
- PS: Label on product of the Palestinian Quality Mark.
- PS-15: Requirements for marking products with PS Quality Mark (Quality Mark).
- QMP's: Quality Management Principles.
- OP: Organizational Performance.
- TQM: Total Quality Management.
- QM: Quality Mark.
- SWOT: Strengths, Weaknesses, Opportunities, and Threats.

Chapter 1

Introduction

1.1 Background

The Palestinian Quality mark (PS) is awarded by the Palestinian Standards and Metrology Institution (PSI), which audits the system and procedures adopted within the organizations in order to guarantee the quality of the products. The Palestinian quality certificate is an evidence of the quality of the products and the system required to ensure high customer satisfaction.

In order to obtain the quality mark, organizations must meet two conditions. The first one, the product itself should conform to its technical standard. The second one, the organization must have a quality system that fulfills the requirements listed in the Palestinian standard (PS-15). Organizations interested in applying for the (PS) certificate are left alone to struggle in building their own quality system.

PSI auditing on the Quality System includes the procedures of management responsibilities, the product itself, production processes, purchasing, quality control and other matters. These procedures are built in the quality system based on the guidelines listed in the Palestinian Standard.

The need to develop and improve businesses, growing customer attention to quality, customers new view of quality, the growth of competition in the markets, and the emergence of new improvement tools and techniques, all drive organizations to revise and improve their quality systems in order to achieve the quality standards .

In order to improve quality systems of the organizations holding PS, the standard (PS-15) itself must be improved to ensure high quality and consistency in performance.

The International Organization for Standardization (ISO) is one of the most important international references for building quality systems. This organization has issued a series of standards over many years; ended with ISO 9001-2015.The ISO series is defined as an integrated system consisting of a set of global standards, developed by ISO to certify these institutions in light of the availability of these standards in their quality system.

1.2 Brief Profile of the Palestinian Standards and Metrology Institution (PSI) and PS-15

Palestinian Standards and Metrology Institution (PSI) was established in 1994, and began its work in 1997 with financial and administrative autonomy. It represents the national body for standardization in Palestine and the local point of contact with the global infrastructure for quality. The role of PSI in the quest to secure highly competitive Palestinian product and facilitate trade and contribute to protecting the health and safety of consumers environment and Palestinian representation in ISO through the preparation of Palestinian standards internationally harmonized and also represent testing and inspection services, measurement (Metrology) and certification and conformity marks(ISO, 2019).

1.2.1 Role of PSI

The role of PSI can be summarized in the following points:

- Preparation of mandatory technical instructions.
- Preparation of Palestinian standards through permanent technical committees.

- Granting the Palestinian quality mark (PS) and Halal certificates.
- Calibration tools, legal and industrial gauges, to verify the accuracy of the measurement.
- Testing services for local products (food, chemicals, construction and engineering) and verification of conformity of the goods imported for technical specifications through sampling and examination, professional service for this task.
- Operational testing of elevators, gas stations, central gas systems, and children's toys.
- Services to provide information and answer questions about specifications and mandatory technical instructions and Palestinian reconciliation procedures, regional, international and foreign and Arabic, and selling documents (PSI, 2019).

1.2.2 Palestinian Quality Mark (PS)

The Palestinian Quality mark (PS) is awarded by PSI, which audit the system and procedures adopted within the organizations in order to guarantee the quality of the products. The Palestinian quality certificate is an evidence of the quality of the products and the system required to ensure high customer satisfaction.

In order to obtain the quality mark, organizations must meet two conditions. The first one, the product itself should conform to its technical standard. The second one, the organization must have quality system that fulfills the requirements listed in the Palestinian standard (PS-15). Organizations interested in applying for the (PS) certificate are left alone to struggle in building their own quality system (PSI, 2019).

1.2.3 PS-15 Standard:

Appendix A represents the requirements of the quality system of producers who have obtained a permit from PSI to mark their products with the quality mark. These requirements shall apply to producers in addition to their other obligations to the corporation as provided for in the Standards Act - the agreement between the producer and the enterprise - and the management procedures. The effective implementation of the requirements of these instructions can ensure that the products comply with the technical specification for a long period of time, reduce the possibility of producing non-conforming products, and prevent taking steps against producers who produce non-conforming products. The requirements of these instructions are the minimum requirements. With regard to special products, it is necessary to specify other requirements specified by the competent technical committee.

The use of the quality mark on the product by the producers is a declaration by the producers that the product conforms to the technical specifications. For this reason it is necessary that the producers can inspect its own production and identify the non-conforming products and seek to repair the detected defect and identify the reasons that led to the imbalance and take the necessary steps to remove these reasons so as not to recur the occurrence of the imbalance. The function of the foundation's representatives shall ensure that the requirements detailed in these instructions are effectively implemented. Failure to implement these requirements, regardless of whether or not the product meets the technical standard, can result in the revocation of the product specification badge(PSI, 1997).

1.3 Problem Statement

PS-15 is a Palestinian standard of the requirements of quality management system needed to hold the Palestinian quality mark which was built in 1997. According to concerned personnel in the PSI, the current version of PS-15 was built based on ISO 9001:1994 and has not been modified or revised so far. According to PSI director, any change in the primary reference of any standard requires changing or revising the standard itself, and since ISO 9001:1994 is the primary reference and has been modified three times, this mandates revising or updating PS-15.

Moreover, the Palestinian standardization law states that any standard should be revised or modified every five years, while the current PS-15 has not been revised or modified since 1997 which violates this law.

Lack of revising or updating the current PS-15 has led to high gap with the primary reference (ISO 9001) and absence of some main principles of quality management such as leadership, customer focus, process approach, risk management, continuous improvement, and employee engagement.

The genuineness of this research emerged from the absence of any researches regarding improving the Palestinian standard PS-15.

1.4 Objectives of the Study

The study aims to achieving the following objectives:

- Studying the current status of PS-15 through identifying strengths, weaknesses, threats, and opportunities for improvement.

- Studying the extent of fulfilling the principles of quality management in Palestinian organizations through applying PS-15.
- Identifying the requirements to be added to PS-15 for the improvement process through gap analysis.
- Providing PSI with the recommended improvements of PS-15.

1.5 Thesis Structure

This thesis consists of seven chapters as follows:

The first chapter is an introduction for the research, which presents an overview of PSI and PS-15, problem statement, and study objectives.

The second chapter is literature review, which introduces an overview of topics and terms related to this research and previous studies on ISO 9001 implementation.

The third chapter is the research methodology, which introduces a description of the adopted research methodology in order to improve PS-15. Three phases were conducted in this chapter, the first one is an evaluation of the current status of PS-15, the second one is a survey study for measuring the extent of fulfilling quality management principles in the Palestinian organizations that apply PS-15, and the third one is the improve phase.

The fourth chapter introduces the evaluation of the current status of PS-15 from PSI perspective using SWOT analysis and personal interview.

The fifth chapter introduces the development of a questionnaire to measure the fulfillment of ISO 9001:2015 principles through applying PS-15. Questionnaire was developed and hypotheses were tested using one sample t-test.

The sixth chapter introduces the comparison study between PS-15 and ISO 9001:2015 through a comparison matrix prepared for this purpose.

The seventh chapter introduces extracted conclusions from the three phases of study, recommendations for improving PS-15, and proposed future researches.

Chapter 2

Literature Review

2.1 Overview

This chapter provides an overview of topics and terms related to this research including quality management system, organizational performance, ISO 9001, quality mark, and PS-15. In addition to some articles those have been published regarding the effect of implementing ISO 9001. This will provide enough knowledge to help improve the Palestinian standard PS-15.

2.2 Quality Management System (QMS)

Ensuring quality does not only mean producing a product in a standardized manner; it also requires continuously meeting customer expectations in variable conditions. Thus, quality must be considered in a systematic way and quality of the system should be emphasized rather than quality of the product. When a system is implemented that depends on processes that provide good quality goods and services and that continuously improves under changing conditions the output of the system also results in improved consistent quality (Ilkay and Aslan,2012).

Quality Management System (QMS) is an organizational structure that dictates how the organization should do business and manages the quality in order to satisfy customer requirements through various quality procedures and techniques (Gordon et al., 2009). Deming (1986) stated that only organizations which would be able to adapt a modern quality management philosophy will survive in today's constantly growing world economic competition.

QMS is a systematic approach to proactively managing quality based on documented standards and operating procedures. The best known QMSs are those based on the ISO 9000 series of quality standards. A QMS can be expressed as the organizational structure, procedures, processes and resources needed to implement quality management (Matata and Wafula, 2015).

Yeung and Chan (1998) reported that a well-designed QMS with proper management participation and a training system would lead to beneficial results in internal and external improvements of the whole organization. While Koc (2007) reported that a QMS is an essential component ensuring the productivity and quality of the outputs of the company. It is a widely applied method in large and small enterprises with the expectation of the improvement of production process, quality of the product, and the enhancement of the strength in the relationships with suppliers and customers.

QMS would help the organization in critical areas such as the reduction of defective products, the improvement of internal communication, the increase of customer's satisfaction, the increase of share market, the opportunities for infiltration in new markets and global deployment. Moreover, implementation of the QMS gives additional benefits to winery such as decrease of the cost of quality and mistakes; higher quality of the wine, waste reduced, late delivery reduced, productivity improved, returns down and advertising potential. The understanding of these benefits will be the motivation force for the winery to continue its journey towards quality improvement (Aggelogiannopoulos et al., 2007)

2.3 QMS and Organizational Performance

Performance is defined as the potential for future successful implementation of actions in order to reach the objectives and targets. Powerful performance management system is one that is built on and supports measures that:

• Give autonomy to individuals within their span of control.

• Reflect cause and effect relationships;

• Empower and involve individuals;

• Create a basis for discussion, and thus support continuous improvement, and

• Support decision making (Lebas, 1995)

Companies use performance measures for evaluating, controlling and improving their processes, as they move toward realizing their goals and targets (Ghalayini and Noble, 1996). A performance measurement system is a set of performance measures that provides useful information to help managing, controlling, planning and realizing the company's operations. Information gathered from a performance measurement system must be complete, relevant, timely and easily accessible by users. Moreover, these measures must be designated so that they reflect the important factors affecting the productivity of different processes (Tangen, 2005).

A QMS improves organization's performance through quality service delivery and production thus enabling organizations to have a competitive edge over its competitors. In order to be successful, Quality Management (QM) practices ought to be an integral part of any organization's strategic management. Without proper monitoring of projects, poor quality of material use, and lack of proper site supervision due to inconsistent supervision may lead to poor performance in an organization. Communication is a vital tool in

managing any form of business as it helps the organization in achieving its objectives. Documentation is also a limitation in the organization which deals with many stakeholders. Poorly kept records results into non-conformity due to delays caused by searching work records which are not well kept. It was evident that QMS has a great positive impact on the performance of an organization through service delivery and quality production, thus giving an organization a competitive edge in the market (Matata and Wafula, 2015).

Garvin (1987), Lee et al. (2001), Sousa and Voss (2002) and Lakhal et al. (2006) deem quality, operating and financial performance of the companies to be the performance dimensions on which quality and productivity improvement approaches have an impact.

2.4 International Organization for Standardization (ISO)

The ISO began at the Institute of Civil Engineers in London in 1946 when delegates from 25 countries met and decided to create a new international organization to facilitate the international coordination and unification of industrial standards. On 1947 the new organization, ISO, officially began operations. Since then, ISO had published over 2200 International Standards and related documents covering almost all aspects of technology and manufacturing (ISO, 2019).

Today, ISO has members from 161 countries, and 783 technical committees and subcommittees to take care of standards development and improvement. More than 135 people working in full time for ISO in Geneva, Switzerland.

ISO believes that International Standards make things work. To ensure quality, safety and efficiency, ISO give world-class specifications for products, services and systems.

While ISO illustrate the standards development process like a symphony, it takes a lot of people working together to develop a standard. ISO's role is similar to that of a conductor, while the orchestra is made up of independent technical experts nominated by our members. The experts form a technical committee that is responsible for a specific subject area. The process starts with the development of a draft that meets a specific market expectations and needs. This is then the drafted standard shared for commenting and further discussion (ISO, 2019).

The voting process is the key to consensus. If that's achieved then the draft is on its way to becoming an ISO standard. If agreement isn't reached then the draft will be modified further, and voted on again. Developing the standards starting from the first proposal and ending with ISO standard usually takes about 3 years (ISO, 2019).

2.5 The ISO 9001 Quality Management System

Since ISO 9000 series of standards first emerged in 1987, many authors found that ISO offered a reasonable first step toward implementing quality (Bradley, 1994**).**

This initial version of ISO addressed quality issues in categories such as quality policy, quality documentation and quality planning. However, many authors also contended that the quality issues in ISO 9000 were addressed in a disjointed way scattered throughout the ISO document. The general impression at the time was that there did not seem to be an overarching Total Quality Management (TQM) framework that guided the implementation of ISO requirements (Costa et al., 2009).

Since ISO 9000 began, many versions have been issued (1994, 2000, 2008 and 2015); each version came to fill the gap in the version that precedes it.

Next section provides a brief comparison between different ISO 9001 versions to find out the main differences between them and the evolution of these versions.

2.6 Evolution of ISO 9001

ISO 9000:1994 included 20 points that described categories ranging from management responsibility to statistical techniques. Contract reviews, design control, document and data control and purchasing were other categories. Under each of these 20 categories, there were more detailed descriptions of issues to be addressed. For instance, within the category of management responsibility, the issues of quality policy, organization, and management review were addressed (Costa et al., 2009).

By comparison, the ISO 9001:2000 version has four major sections that replace 20 points from the 1994 version. Each of these four sections is represented by four constructs and they are organized into one coherent framework. The constructs represented in the framework are (1) management responsibility, (2) resource management, (3) product and service realization, and (4) measurement, analysis and improvement. Further, they are organized in a way that one leads to another, as in a wheel, which ultimately improves customer satisfaction. Overall, the framework shows a dynamic model of a systems perspective, the bedrock of TQM philosophy. Indeed, this approach marks a radical departure from the previous version where the 20 categories were listed separately with no apparent link between them. Finally, in supplanting the prevailing criticisms of the 1994 version as having an incomplete and disjointed quality management system, the new ISO 9001/2000 is poised to fill this gap and ultimately serve as a definitive step toward a higher level of quality management and performance. However, how much of what had been

intended in the 2000 version would actually affect the quality management practices in the companies that adopt it still remains to be seen (Costa et al. , 2009).

While the updating of ISO9001:2000 to ISO9001:2008 has maintained the basic clauses of the standard and the change was limited to certain terms to make the requirements more clear and easy to understand.

Fonseca (2015) present a comparison between ISO 9001:2008 and ISO 9001:2015 versions. Eight principles of quality management (QMP's) for ISO 9001:2008 presented are:

- QMP1 Customer focus.
- QMP2 Leadership.
- QMP3 Involvement of people.
- QMP4 Process approach.
- QMP5 System approach to management.
- QMP6 Continual improvement.
- QMP7 Factual approach to decision making.
- QMP8 Mutually beneficial supplier relationship.

And seven principles of quality management (QMP's) for ISO9001:2015 presented are:

- QMP1 Customer focus.
- QMP2 Leadership.
- QMP3 Engagement of people.
- QMP4 Process approach.

- QMP5 Improvement.
- QMP6 Evidence-based decision making.
- QMP7 Relationship management.

Table 2-1 presents the principles of both the ISO 9001:2008 and ISO 9001:2015.

Table 2-1 ISO 9001:2008 and ISO 9001:2015 QMP's

ISO 9001:2008	ISO 9001:2015
QMP1 Customer focus.	QMP1 Customer focus.
QMP2 Leadership.	QMP2 Leadership.
QMP3 Involvement of people.	QMP3 Engagement of people.
QMP4 Process approach.	QMP4 Process approach.
QMP5 System approach to management.	QMP5 Improvement.
QMP6 Continual improvement.	QMP6 Evidence-based decision making.
QMP7 Factual approach to decision making.	QMP7 Relationship management.
QMP8 Mutually beneficial supplier relationship.	

According to ISO directives, standards should be reviewed every 5 years, and the design and development of the new ISO 9001:2015 started in November 2012 by ISO/TC 176, with the aim of achieving an edition that remains stable for the next 10 years (Croft, 2012).

Fonseca (2015) presented the major changes in the ISO 9001:2015 released in the following points:

- A high-level structure with identical text, terms, and definitions has been adopted.

- Replacing the concept of the previous edition of management responsibility with the concept of leadership requiring top management to engage and support the QMS.
- External and internal issues that may impact the organization QMS ability to deliver its intended results, and the needs and expectations of relevant stakeholders, must be identified, understood and monitored;
- Internal and external issues that may affect the quality management capability of the organization, and the needs and expectation of stakeholders must be identified, understood and monitored.
- According to risk- based thinking that requires at organizational and process level, risks and opportunities, that affect the QMS and its intended results, must be identified and managed;
- Emphasizing on process approach and intended results with less emphasis on prescriptive requirements and on documentation.
- The consideration of knowledge management, and change management have been introduced.
- Replaced the continual improvement concept with improvement concept, allowing also for periodic breakthroughs, reactive change, or other sorts of improvements.

2.7 Quality Management Principles (QMP's)

QMP's are a comprehensive and fundamental set of rules or beliefs for leading and operating an organization aimed at continually improving performance over the long term by focusing on customers while addressing the needs of all stakeholders (Ludwig-Becker,1999).

According to ISO (ISO, 2015) the QMPs can be defined as a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management. Seven Principles are presented which are customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making and relationship management. A detailed explanation of each principle is provided in the next subsections.

2.7.1 Customer Focus

The primary focus of quality management is to meet customer needs and strive to exceed their expectations. This can be achieved by attracting the organization and retaining the trust of customers and other stakeholders. Understanding current and future customer needs and other stakeholders contributes to the organization's continued success. Customer Focus achieves a combination of benefits: increased customer value, increased customer satisfaction, improved customer loyalty, reinforced repeat business, enhanced organizations reputation, and extended customer base (ISO, 2015).

2.7.2 Leadership

The unity of purpose and direction and the creation of the right conditions for people to participate in achieving the quality goals in the organization are among the most important responsibilities of leaders in organizations. The main focuses of this principle are the creation of unity of purpose, direction and participation of people, which enables the organization to adapt its strategies, policies, processes and resources to achieve its objectives (ISO, 2015).

2.7.3 Engagement of People

For enhancing capability of organizations to create and deliver services, there must be empowered, competent and engaged people at all levels. It is important to involve all people at all levels and to respect them as individuals to manage the organization effectively and efficiently. To achieve quality objectives in the organization, recognition, empowerment and promotion of individual participation should be facilitated (ISO, 2015).

2.7.4 Process Approach

When activities are understood and managed as interrelated processes acting as a coherent system, then consistent and predictable results can be achieved more effectively and efficiently. The quality management system consists of interrelated processes. System optimization and performance, results from an understanding of how results are produced through this system (ISO, 2015).

2.7.5 Improvement

Successful organizations have a continuous focus on improvement. Improvement is necessary to maintain current levels of performance, and it is essential to respond to changes in the internal and external conditions and create new opportunities. Improvement is also important to improved process performance, enhanced focus on root-cause investigation, enhanced ability to anticipate and react to internal and external risks and opportunities, enhanced consideration of both incremental and breakthrough improvement, and improved use of learning for improvement (ISO, 2015).

2.7.6 Evidence-Based Decision Making

Decisions based on the analysis and evaluation of data and information produce the desired results. Decision-making is often a complex process and always requires some uncertainty. The decision-making process involves various types of sources and inputs, as well as their interpretation. It is important to understand the relationships between cause and effect and unintended consequences. Objectivity and confidence in decision-making are needed for facts, evidence and analysis of data (ISO, 2015).

2.7.7 Relationship Management

To achieve continued success, the organization must manage its relationships with interested parties, such as suppliers. Success is achieved when the organization manages relations with all interested parties to improve its impact on its performance. The organization should give relationship management with its suppliers and partner networks special importance because of the impact of this relationship on the performance of the organization directly (ISO, 2015).

2.8 Risk-Based Thinking

ISO 9001:2015 incorporates the term “risk-based thinking" into its requirements to establish, implement, maintain, and continuously improve the quality management system.

According to ISO 9000: 2015 (ISO, 2015), risks are defined as "the impact of uncertainty”. The term "uncertainty" is defined as a lack of information or knowledge about the event that can be expressed, and that it is usually expressed as a result of the likelihood and outcome of this event. ISO 9000: 2015 also states that risks are associated with

potential events and are usually expressed as a result of the likelihood and outcome of this event.

It seems that risks in accordance with ISO 9001:2015 requirements are more bound to product and service conformity than to customer requirements and customer satisfaction. Actually, according to ISO 9001:2015 clause 6.1.2, “actions taken to address risks and opportunities shall be proportionate to the potential impact on the conformity of products and services”. Furthermore, clause 5.1.2 states, “top management shall demonstrate leadership and commitment (Aladwan and Forrester, 2016).

2.9 Quality Mark

QM can be defined as a mark on product label which guarantee minimal level of quality for one or more product characteristics controlled by an independent institution. QMs are very suitable in judging products (Box, 1979).

According to (SASO, 2015)the Saudi Standards, Metrology and Quality Organization presented the following benefits of getting quality mark:

1. It is an important way to guide consumers to products that comply with standards.
2. Gaining customer satisfaction.
3. Increase sales.
4. Improving export opportunities.
5. Encourages continuous, development, product improvement and competitiveness in local and international markets.
6. Reinforces the reputation of institutions.

2.10 Effective Quality Mark

In order to reach an effective QM policy, two related questions must be answered:

1- What are the quality mark requirements from the customer's perspective, in order to facilitate the evaluation of the service quality?

2- What are the demands of the service provider in order to be able to provide the service at the required level?

To answer these questions, a distinction must be made between quality dimensions. The quality dimensions vary significantly not only in ease of judgment by the customer, but also in the ability of control by service organizations and quality mark institution. Using input and output continuum, the quality dimensions can be highlighted. Input factors in perspective dimensions are easy to manage because they are more or less objective and customer independent. Output factors are more difficult dimensions to control. They are interested in interactive communication between the provider and the customers, and therefore they are more difficult to manage. (Roest and Verhallen, 1995)

2.11 PSI/PS-15

According to (Palestinian Economic Policy Institute, 2008), the Palestine Standards and Metrology Institution (PSI) is the only body in Palestine charged with developing and issuing Palestinian standards. Standards are developed by standardization committees, composed of specialists from the public and private sectors, academic institutions, Palestinian industries association, and consumer protection association.

PSI started its operations in 1997. The institution now employs more than 100 people spread over its core functions. PSI is governed by an independent board of directors

chaired by the Minister of National Economy, comprising representatives of industry, academic institutions and relevant Palestinian National Authority ministries.

The most active technical committees include those working in food, environment, chemicals, plastics, petroleum products, construction and cosmetics. On average, PSI adopts about 80 standards every year. Most of the standards adopted by PSI are internationally harmonized (Palestinian Economic Policy Institute, 2008).

The PSI quality mark is the seal of confidence that local customers are looking for in the Palestinian market. The PSI Quality Mark of products is awarded with two conditions:

1. The product meets the requirements of applicable Palestinian standards (technical standards)
2. The organization shall provide the quality management system as required by the PSI according to PS-15.

However, quality management system required for the Palestinian Quality Mark PS-15 was built in 1997, which means that the standard is consistent with ISO 9001/1995. Hence, this research is important in order to develop and improve the standard to make it compatible with ISO 9001/2015 to improve the product's quality, organizations performance and raise customer's satisfaction.

2.12 Previous Studies

Qandeel (2008) study the impact of applying TQM principles on competitive policies in the industrial facilities in the Gaza Strip. The researcher targeted the ISO 9001- certified companies.

To achieve the objectives of the study a questionnaire was designed to study the variables of the study problem in order to test hypotheses.

The study concluded that there is a great interest by the industrial establishments targeted by TQM variables and the application of these principles. Whereas the overall mean of all total quality management principles are 4.12.

In another study, Al-Wardiyan (2007) investigated the effect of applying TQM system variables on the competitive advantages of the Palestinian industrial establishments, in addition to the reality of the principles of TQM in the Palestinian industrial establishments, and to identify the policies followed by the establishments to reach the competitive advantage.

To achieve the objectives of the study, a questionnaire was designed to study the research problem. The population and sample of the study were managers and heads of quality departments in the Palestinian industrial establishments in the West Bank, having international ISO certificate.

This study found that there is a great interest by the industrial establishments in the principles of TQM and the commitment of these companies to apply these principles to a great extent. Whereas the overall mean of the application of principles is 4.19.

The study of Kakouris and Sfakianaki (2018) aimed to explore the relationship between obtaining the ISO 9000 certification and business performance of Greek SME's.

The research used a qualitative approach based on a case study to investigate how companies perceive ISO 9001. Four companies were examined, and a total of 26 semi-structured interviews were conducted with companies. Personal surveillance and informal consultation with staff were also used to assess potential impacts and results.

The results showed that the certified companies have gained a number of internal and external benefits, including: awareness of quality, increased productivity, increased employee participation and efficiency, image enhancement and penetration in new markets. As for the financial benefits of certification, the results are not convincing. Indisputably, it can be said that SMEs that wish to obtain certification must certainly expect benefits.

Javorcik and Sawada (2018) study focused on analyzing the impact of ISO 9000 on the organization performance. ISO 9000 evaluates international best practice of management standards and emphasizes quality assurance through preventive measures, continuous improvement process, and customer satisfaction tracking. While ISO 9000 certification is costly in terms of financial and administrative effort, it can help organizations to improve their performance, enhance their reputation and join global supply chains.

The study was based on empirical analysis depends on propensity-score-matching combined with a difference-in-differences approach.

The study concluded that the best performing companies are self-selected to obtain the ISO certificate. The study also showed that ISO 9000 certification enhances the performance of organizations in terms of sales, exports, labor productivity, profits, profitability, employment and wages. While most of these effects are felt almost

immediately, the increase in workers' productivity, profitability and wages occurs only after a few years.

Zahra et al. (2018) study focused on the importance of quality management system ISO 9001: 2015 and its impact on machinery breakdowns in the general company for the manufacture of wool and carpets in Hama to reduce the machines stops and thus increase production quantities in the company.

A field study was conducted in the company, in which a random sample of workers was interviewed, taking into consideration the characteristics of the categories of workers. Data obtained from the workers were analyzed using SPSS.

The statistical results of the study showed that there is a strong correlation between the quality management system ISO 9001: 2015 and machinery breakdowns, which necessitates giving greater attention to the ISO 9001 standard by the company's management and seeking ISO 9001 certification to achieve high performance of the company.

Medić et al. (2016) presented a paper to explain the basic updates in the new standard: 9001: 2015. The paper focused on fundamental changes in quality understanding in terms of context of the organization, risk-based thinking, knowledge as resource and leadership.

The changes introduced in the 2015 version aim to ensure that ISO 9001 continues to adapt to the changing environments in which organizations operate. Changes include some key updates in the ISO 9001: 2015 context of the organization, the restructuring of

some information, emphasize on risk-based thinking to enhance the application of process approaches, increase leadership requirements, and improve applicability on service.

Changes in the structure of ISO 9001: 2015 sections increased from 8 to 10 in addition to clause of performance management and evaluation. These 10 sections are:

1- Scope.
2- Normative References.
3- Terms and Definitions.
4- Context of the Organization.
5- Leadership.
6- Planning.
7- Support.
8- Operation.
9- Performance evaluation.
10- Improvement.

The paper also indicated that some requirements such as management review in planned time periods or internal audit in the planned time periods are still not well defined.

It is left to the organization to define the period of management review or internal audit, which should be considered in the next revision of ISO 9001.

Fonseca and Domingues (2017) evaluated ISO 9001: 2015 after six months of issuance, in order to study whether it has achieved its objectives of being in line with modern concepts of management and quality management and if additional value for organizations in all fields of industry and services worldwide had been achieved. A survey and statistical analysis of results were conducted to support the assumption that ISO 9001:

2015 is in line with modern business management concepts and quality and will be a useful tool for companies.

The study concluded that the results of descriptive statistics support that ISO 9001:2015 is in line with modern concepts of business management and quality management; ISO is a useful tool and has added value to the organizations; top management must demonstrate their ability to lead in addition to managing the quality management system in their organizations; the context of the organization, and the needs and expectations of stakeholders should be defined; the adoption of risk-based thinking requires that risks and opportunities are defined and managed by the organization; and finally, the adoption of the revised seven quality management principles has strengthened the compatibility of ISO with the concepts of modern business management and quality management.

Smith et al. (2018) in their research study "*ISO 9001:2015 Introduction of Explicit Risk-Based Thinking -Benefit or Limitation?*" presents the results of evaluating the impact of applying the quality management standard ISO9001: 2015, by introducing an explicit risk-based thinking approach. Using interviews, the following four keys were identified: impact, benefits, constraints, and training and change management.

The results showed that the introduction of ISO9001: 2015 for explicit risk-based thinking will have an important beneficial impact on the organization and customers. This paper provides additional early knowledge of the risk-based thinking approach and the revised ISO9001: 2015 quality management standard. It also points to the need for further review after the revised standard has become fully integrated and ISO 9001:2008 has

become quite old. The organizational value is also considered for organizations looking to introduce an ISO quality management system or modify the existing quality management system to be able to meet revised requirements.

According to the literature of TQM and ISO9000 quality management system, the importance of applying TQM and ISO 9001:2015 quality management systems and its impact on improving organizations' performance in terms of productivity, customer satisfaction, continuous improvement and the people engagement has become clear, and thus the good effect for improving the Palestinian standard PS-15 according to ISO 9001:2015.

Chapter 3

Research Methodology

3.1 Overview:

This chapter includes a description of the research methodology followed in order to improve the Palestinian Standard (PS-15). The work was carried out over three phases. In phase 1, an evaluation of the status of the Palestinian Standard (PS-15) was conducted. In phase 2, a questionnaire was developed in order to measure the extent of fulfilling the quality management principles (QMPs) in the organizations that applied the Palestinian Standard (PS-15). Finally phase 3 was the improving phase.

3.2 Phase 1: Status of PS-15

An evaluation of the status of the Palestinian standard (PS-15) was conducted**.** A number of interviews held with the director of the PSI, Eng. *Haidar Hajji* and the Director of Quality Department at the institution, Eng. *Mohamed Zekri*. SWOT analysis was carried out by collecting information from specialized employees in the institution and those who have direct contact with the market such as auditors in order to highlight the strengths, weaknesses, opportunities and the threats of maintaining the standard on its current status. Finally, one of the most important goals of this phase is to agree on an acceptable reference to improve the Palestinian standard (PS-15).

3.3 Phase 2: Measuring the QMP's

ISO 9001:2015 was unanimously identified as a reference to improve the Palestinian standard (PS-15). This was achievable through interviews and SWOT analysis.

Before addressing the requirements of both standards (PS-15, and ISO 9001:2015), it was necessary to examine the extent to which the quality management principles of ISO 9001:2015 were achieved by applying the Palestinian standard (PS-15) (phase 2). To achieve this, a questionnaire was designed and the key hypothesis is "*There is statistical indication that applying the Palestinian Standard (PS-15) does not lead to fulfilling the principles of quality management for ISO9001:2015"*.

According to ISO 9001:2015, the principles of quality management are:

- QMP1 Customers focus.
- QMP2 Leadership.
- QMP3 Engagement of people.
- QMP4 Process approach.
- QMP5 Improvement.
- QMP6 Evidence-based decision making.
- QMP7 Relationship management

Based on these principles and the key hypothesis, 7 hypotheses could be formulated as follows:

Hypothesis 1: There is statistical indication that applying Palestinian standard (PS – 15) does not lead to fulfilling the principle of customer focus at a significance level α=0.05.

Hypothesis2: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of leadership at a significance level α=0.05.

Hypothesis 3: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of engagement of people at a significance level α=0.05.

Hypothesis 4: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of process approach at a significance level α=0.05.

Hypothesis 5: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of improvement at a significance level α=0.05.

Hypothesis 6: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of evidence-based decision-making at a significance level α=0.05.

Hypothesis 7: There is statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of relationship management at a significance level α=0.05.

To study the extent to which the quality principles of ISO 9001:2015 applied by the Palestinian standard (PS-15), a data collection and analysis were carried out through questionnaires distributed to the organizations applying the Palestinian standard (PS-15). To complete this process it was necessary to go through the following three steps:

1- Questionnaire Development

The questionnaire was divided to 7 sections (Appendix B) according to the principles of quality management (ISO, 2015) as follows:

- Section 1: Customer focus, which includes 13 items(practices);
- Section 2: Leadership, which includes 7 items(practices);
- Section 3: Engagement of people, which includes 7 items(practices);
- Section 4: Process approach, which includes 7 items(practices);
- Section 5: Improvement, which includes 7 items(practices);
- Section 6: Evidence-based decision making, which includes 6 items(practices); and
- Section 7: Relationship management, which includes 6 items (practices).

The Likert scale adopted in this questionnaire has five levels as follows: strongly agree, agree, neutral, disagree, and strongly disagree. Certain value for each level has been adopted:

Table 3-1: Likert Scale Level

Likert scale level	strongly agree	agree	neutral	disagree	strongly disagree
Value	5	4	3	2	1

To measure the extent to which the principles have been achieved by those organizations applying the PS-15, their practices and applications of these principles have been studied.

2- Population and Sample size

Based on information obtained from the Palestinian standard and metrology institution, there are 65 organizations that are applying the PS-15 to hold quality mark. All

65 organizations were contacted to fill the questionnaire. However, only 45 of them have responded and filled the questionnaire.

3- Analysis

- **Descriptive Analysis**

  The statistical averages and standard deviations of fulfilling each principle of quality management principles (QMPs) in the targeted organizations were extracted.

- **Statistical Analysis**

To test the hypotheses, the following statistical approaches were used:

1- Chronbach alpha to test reliability.

2- T-test for testing the research hypotheses. Confidence interval equal 95% (α=0.05), sample size (n) is 45 and degree of freedom (df = n-1)) equal 44.

The null hypotheses assume that there is statistical indication that applying the Palestinian Standard PS-15 leads to fulfilling the principles of quality management for ISO 9001:2015, while the alternative hypotheses assume that there is no statistical indication that applying the Palestinian Standard PS-15 leads to fulfilling the principles of quality management for ISO 9001:2015. To find out if there is statistical indication to fulfill the principles or not, two approaches can be used:

Approach 1

There is no statistical indication if $\boldsymbol{\mu \geq 2.6}$, where $\boldsymbol{\mu}$ is the calculated average of the responses for each principle and **2.6**is obtained from Likert scale used in the questionnaire. Based on what has been suggested, the hypotheses can be formulated as follows:

Hypothesis 1:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of customer focus at $\alpha = 0.05$.

Hypothesis2:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of leadership at $\alpha = 0.05$.

Hypothesis 3:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of engagement of people at $\alpha = 0.05$.

Hypothesis 4:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of process approach at $\alpha = 0.05$.

Hypothesis 5:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of improvement at $\alpha = 0.05$.

Hypothesis 6:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of evidence-based decision-making at $\alpha = 0.05$.

Hypothesis 7:

H0 ($\mu \geq 2.6$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of Relationship management at $\alpha = 0.05$.

Approach 2:

In this approach, the hypotheses of the study were tested by comparing the responses averages of the fulfilling the quality management principles in the organizations adopting the Palestinian standard PS-15 with the responses averages to the extent of fulfilling the quality management principles in the Palestinian organizations adopting the ISO standard.

Previous studies were used to obtain the responses averages to the extent of fulfilling the quality management principles in the Palestinian organizations that adopting the ISO standard.

Al-Wardiyan (2007) studied the relationship between the application of TQM and the competitive advantage of the Palestinian industrial establishments with a quality certificate, and measured the extent of fulfilling the quality management principles of ISO in the Palestinian organizations. The responses mean for each Quality Management principles according to the Likert scale is shown in Table 3.2.

Table 3-2: Al-Wardyain Study's Results

Principle	Mean	Standard Deviation
Customer Focus	4.14	0.69
Improvement	4.26	0.79

Management System	**4.04**	**0.84**
Operational Procedure	**4.32**	**0.95**

While Qandeel (2008) in his master thesis "The impact of applying the TQM system to the competitive policies of the ISO 9001-certified industrial establishments in the Gaza Strip" get another results of the extent of fulfilling the principles of TQM which are illustrating in Table 3-3:

Table 3-3: Qandeel Study's Results

principle	mean
customer focus	**4.33**
improvement	**4.25**
management system	**3.70**
Top management commitment	**4.33**
Operational procedure	**4.01**

Through the averages taken from previous studies, the following information was concluded that the studies did not cover the entire quality management principles Discrepancy in the averages derived.

Therefore, the lowest values calculated in these studies (3.70) will be considered to be a reference value for comparison. The lowest value was taken as a reference to ensure the accuracy of the study results.

Based on what has been suggested, the hypotheses can be formulated as follows:

Hypothesis 1:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of customer focus at $\alpha = 0.05$.

Hypothesis2:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of leadership at $\alpha = 0.05$.

Hypothesis 3:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of engagement of people at $\alpha = 0.05$.

Hypothesis 4:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of process approach at $\alpha = 0.05$.

Hypothesis 5:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of improvement at $\alpha = 0.05$.

Hypothesis 6:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of evidence-based decision-making at $\alpha = 0.05$.

Hypothesis 7:

H0 ($\mu \geq 3.70$): There is no statistical indication that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of relationship management at $\alpha = 0.05$.

The test will be one tail t-test and the critical area will be on the left side (negative). Thus, $\alpha = 0.05$ and df = 44.

3.4 Phase 3: Improvement

In this phase, gaps between the requirements of the Palestinian standard (PS-15) and the requirements of ISO 9001:2015 were studied in order to determine the shortcomings in the Palestinian Standards. By applying the SWOT analysis results and distribution of the questionnaire; conclusion, suggestions and recommendations will be presented to improve the Palestinian standards. In addition to that, a workshop was held with the experts of the PSI to provide them with guidelines and recommendations for any development of standards according to the valid protocols in the Palestinian Institutions.

Chapter 4

PS-15 Evaluation from PSI Perspective

4.1 Overview

An evaluation of the status of the Palestinian standard (PS-15) was conducted. A number of interviews held with the director of the PSI, Eng. *Haidar Hajji* and the Director of Quality Department at the institution, Eng. *Mohamed Zekri*. SWOT analysis was carried out by collecting information from specialized employees in the institution and those who have direct contact with the market such as auditors in order to highlight the strengths, weaknesses, opportunities and the risks of maintaining the standard on its current status. Finally, one of the most important goals of this phase is to agree on an acceptable reference to improve the Palestinian standard (PS-15).

4.2 Interviews with the PSI Employees

Interviews were held with the Director of the PSI and the Director of the Quality Department in the PSI, in order to collect information's on the current status of the Palestinian standards PS-15, the possibilities available of improving the standard, and the influence of developing the standard on the Palestinian products and the organizations performance.

The Findings from these interviews were as follows:

1-There is a dire need of developing Palestinian standard (PS-15) in order to control the quality of products and improve the efficiency of the Palestinian organizations performance.

2 - Since it was adopted in 1997, the Palestinian standard has not been subjected to any amendments or development, which led to a loss of many modern concepts and principles of quality management.

3 - Some Palestinian organizations are reluctant to obtain the quality mark because that the Palestinian standard (PS-15) is not aligned with the related international standards.

4-Improvement of the Palestinian standard (PS-15) will guarantee enhancement of the quality of products and hence increasing of the exports of Palestinian products.

5- ISO 9001:2015 certificates should be considered as a basic reference for improving the Palestinian standard (PS-15).

6. Making the requirement of the (PS-15) easy to apply will encourage organizations to adopt it.

4.3 SWOT Analysis

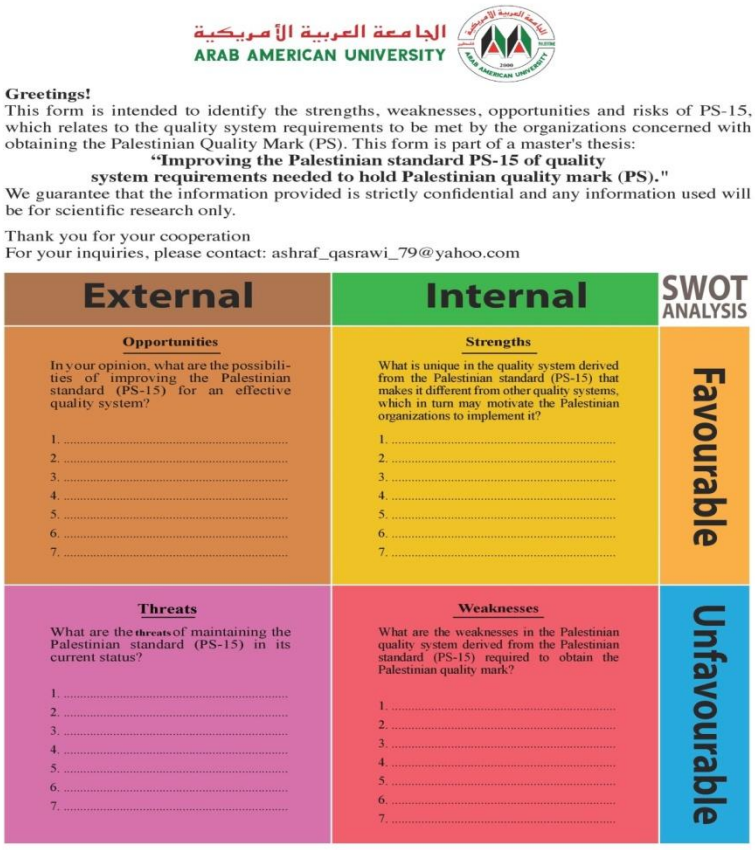
Acknowledgement of strengths is vital element that should have been studied in order to maintain the strengths of the standards. Whereas weaknesses were identified in order to avoid them in the process of improving the standards, opportunities were developed, and threats of maintaining the standard in its current status are things that have been studied in this analysis.

4.3.1 SWOT Analysis Form:

A SWOT analysis form includes an introduction to the participants to clarify the purpose of this study and to ensure the confidentiality of the information taken, to ensure

the highest possible participation. The form design was to be attractive, comfortable for the reader and is well divided so that the participants can express their views.

The SWOT analysis form used is attached in Appendix C and the English edition is shown in Figure (4-1):



الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY

Greetings!
This form is intended to identify the strengths, weaknesses, opportunities and risks of PS-15, which relates to the quality system requirements to be met by the organizations concerned with obtaining the Palestinian Quality Mark (PS). This form is part of a master's thesis:

"Improving the Palestinian standard PS-15 of quality system requirements needed to hold Palestinian quality mark (PS)."

We guarantee that the information provided is strictly confidential and any information used will be for scientific research only.

Thank you for your cooperation
For your inquiries, please contact: ashraf_qasrawi_79@yahoo.com

External	Internal	SWOT ANALYSIS
Opportunities In your opinion, what are the possibilities of improving the Palestinian standard (PS-15) for an effective quality system? 1. ..... 2. ..... 3. ..... 4. ..... 5. ..... 6. ..... 7.	**Strengths** What is unique in the quality system derived from the Palestinian standard (PS-15) that makes it different from other quality systems, which in turn may motivate the Palestinian organizations to implement it? 1. ..... 2. ..... 3. ..... 4. ..... 5. ..... 6. ..... 7.	Favourable
Threats What are the threats of maintaining the Palestinian standard (PS-15) in its current status? 1. ..... 2. ..... 3. ..... 4. ..... 5. ..... 6. ..... 7.	**Weaknesses** What are the weaknesses in the Palestinian quality system derived from the Palestinian standard (PS-15) required to obtain the Palestinian quality mark? 1. ..... 2. ..... 3. ..... 4. ..... 5. ..... 6. ..... 7.	Unfavourable

Figure 4-1: SWOT Analysis Form

The SWOT was divided into four sections; each section contains a question to determine the opinions on the point concerned.

The questions in the SWOT model translated into English are listed below:

1 - Strengths: What is unique in the quality system derived from the Palestinian standard (PS-15) that makes it different from other quality systems, which in turn may motivate the Palestinian organizations to implement it?

2. Weaknesses: What are the weaknesses in the Palestinian quality system derived from the Palestinian standard (PS-15) required to obtain the Palestinian quality mark?

3- Opportunities: In your opinion, what are the possibilities of improving the Palestinian standard (PS-15) for an effective quality system?

4 –Threats: What are the threats of maintaining the Palestinian standard (PS-15) in its current status?

4.3.2 Targeted Group

In coordination with the Director of the Quality Department in the PSI, the SWOT analysis form was distributed to the employees in the institution who are knowledgeable of the PS-15. Among them are auditors and quality department's employees in Ramallah, Hebron and Nablus directorates, where 12 responses were received from them.

4.3.3 SWOT Analysis Responses

Responses to the SWOT analysis are presented as follows:

1. **Strengths**: What is unique in the quality system derived from the Palestinian standard (PS-15) that makes it different from other quality systems, which in turn may motivate the Palestinian organizations to implement it?

   • Easy to apply. (Repeated 7 times)

   • Has Simple requirements.

   • Flexible.

   • Suitable for different sectors.

   • Meets minimum quality limits.

   • serve all industrial sectors.

   • Facilitates the export of products.

   • Gives a good reputation to organizations which own quality mark.

   • Organizations which own quality mark have priority in government tenders and bids.

   • Helps to organize production according to the principles of total quality.

   • Provides quality for the product.

   • Provides procedures to control nonconformities.

   • It is a comprehensive system taken from ISO 9001.

   • Includes all products.

   • It has simple composition.

   • Easy to understand.

• Only few requirements are needed, compared to global systems such as ISO.

• Covers all stages of production.

• Simple configuration.

• Includes all productive companies.

• Medium cost.

• It has priority in bidding.

2. **Weaknesses**: What are the weaknesses in the PS-15 standard of the quality system requirements required to obtain the quality mark?

• It is out of date (repeated 6 times).

• Some requirements must be mandatory.

• There is no risk analysis. (Repeated twice)

• There is no planning process.

• Not equivalent to ISO 9001: 2015.

• Non-coherence in procedures

• Poor formulation.

• Concepts are weak some concepts ambiguous.

• Does not meet the requirements of international standards.

• Industrial sectors have no clear boundaries.

• The reference of the Palestinian standard (ISO 9001) has been modified several times while there has been no update on the PS-15.

• There is incompatibility.

• Weak drafting.

• Some concepts are unclear.

3. **Opportunities**: In your opinion, what are the possibilities of improving the Palestinian standard (PS-15) for an effective quality system?

   • Continuously updating the Palestinian standard.

   • Dividing sectors according to the standard.

   • Updating the Palestinian standard (PS-15) according to ISO 9001: 2015. (Repeated 6 times)

   • Updating the standard continuously.

   • Updating the standard so that it can be linked with other quality systems.

   • Updating some of the most influential factors on industrial sustainability and on health and safety.

   • The quality specifications are modified to include critical control points.

   • Updating the quality specifications to include risk analysis.

   • Highlighting the importance of quality assurance concept and clarify purpose of applying it in different sectors.

4. **Threats:** What are the threats of maintaining the standard in its current status?

   • It lacks legal basis and can be challenged. (Repeated twice)

   • There is an increasing gap between the current standard and the requirements of the international standard and thus affecting the sustainability of organizations. (Repeated 3 times)

   • It is not compatible with the updates on quality systems and methods of work.

   • There is an increasing gap between the current standard and ISO 9001: 2015 requirements.

   • Lack of applying the quality management system in organizations.

• The standard is not applied effectively.

• Private sector is reluctant to implement quality specifications..

• Failure to reach the expected target of application.

• Number of organizations wishing to obtain quality assurance certificate is decreasing.

• PS-15 does not cover requirements for the current status.

• The standard should be developed to ensure the sustainability of the organizations who own quality mark.

• Sectors have no clear limits.

•Does not cover food safety requirements.

• Causes inefficiency and weakness in current quality system.

• It does not achieve the desired goal.

4.3.4 Analysis

The number of times a factor is repeated was adopted as the weight to reflect what most of the participants focused on as the most influencing factor on the improvement process. Noting that, responses with the same meaning have been collected under a single factor name. The list of factors and their weights are shown in the following tables:

Table 4-1: Strengths and cumulative weights

Factor	Number of times a factor is repeated	%	Cumulative %
Easy to apply	8	27.6	27.6
Comprehensive and appropriate for all sectors	5	17.2	44.8
Production process is organized	4	13.8	58.6
Configuration is simple	2	6.9	65.5
Not expensive	2	6.9	72.4
Government Bid is given priority	2	6.9	79.3
Flexible	1	3.4	82.8
Easy to export	1	3.4	86.2
Easy to understand	1	3.4	89.7
Provides procedures to control nonconformities	1	3.4	93.1
Improve the reputation of companies who own a quality mark	1	3.4	96.6
Meets minimum requirements for quality system	1	3.4	100.0
Total responses	29		

Table 4-2: Weaknesses and cumulative weights

Factor	Number of times factor is repeated	%	Cumulative %
The Palestinian standard PS-15 is old and outdated	6	30	30
Problems in drafting and ambiguity in concepts	4	20	50

Not equivalent to ISO 9001: 2015	3	15	65
Lack of risk analysis	2	10	75
There is no connection with each other	2	10	85
Some procedures must be mandatory	1	5	90
There is no planning process	1	5	95
No clear limits between industrial sectors	1	5	100
Total responses	20		

Table 4-3: Opportunities and cumulative weights

Factor	Number of times factor is repeated	%	Cumulative %
Ability to update the standard based on ISO 9001: 2015	6	42.9	42.9
Ability to Continuously update specification	2	14.3	57.1
Update the standard to include improvements continuously	1	7.1	64.3
Update the standard so that it can be linked with other quality systems	1	7.1	71.4
Update the standard to include critical control points	1	7.1	78.6
Update the standard to include risk analysis	1	7.1	85.7
Highlight the importance of quality assurance concept and clarify the objectives of applying the standard	1	7.1	92.9

Divide sectors according within standard	1	7.1	100.0
Total responses	14		

Table 4-4: Threats and cumulative weights

Factor	Number of times factor is repeated	%	Cumulative %
There is an increasing gap between PS-15 and other global quality systems such as ISO	6	33.3	33.3
Quality systems are poorly developed in organizations	3	16.7	50.0
Lack of legal regulations and the possibilities of appeal in courts in such cases	2	11.1	61.1
Private sector is reluctant to implement the standard	2	11.1	72.2
Failure to achieve the objectives of applying the standard	2	11.1	83.3
Failure to apply Palestinian standard effectively	1	5.6	88.9
sectors are not divided correctly	1	5.6	94.4
Existing standard does not cover food safety requirements	1	5.6	100.0
Total responses	18		

4.4 Results

In this unit, an evaluation of the Palestinian standard PS-15 was carried out from the perspective of the PSI through personal interviews and SWOT analysis. A series of

important findings have been drawn which can be considered as an input to improve the Palestinian standard.

The main findings from the interviews were:

1- There is a dire need of developing Palestinian standard (PS-15).
2- The Palestinian standard has not been amended or developed since 1997.
3- The Palestinian standard (PS-15) is not aligned with the related international standards.
4- Improving the Palestinian Standard will enhance product's quality and increase their exports.
5- ISO 9001:2015 certificates should be considered as a basic reference for improving the Palestinian standard (PS-15).
6- Encouraging organizations to adopt PS-15 through making it easy to apply.

To derive the most important results from SWOT analysis, Pareto analysis was used as a tool to determine the most important factors, where the factors in which the cumulative weights reach approximately 80% are considered as the most important ones. Therefore, the most important results (vital few) drawn from SWOT analysis of current Palestinian standard PS-15 are:

1. Easy to apply.
2. Comprehensive and appropriate for all sectors.
3. Production process is organized.
4. Configuration is simple.

5. Not expensive.
6. Government bid is given priority.
7. The Palestinian standard PS-15 is old and outdated.
8. Problems in drafting and ambiguity in concepts.
9. Not equivalent to ISO 9001: 2015.
10. Lack of risk analysis.
11. Ability to update the standard based on ISO 9001: 2015.
12. Ability to continuously update the standard.
13. There is an increasing gap between PS-15 and other global quality systems such as ISO.
14. Quality systems are poorly developed in organizations.
15. Lack of legal regulations and the possibilities of appeal in courts in such cases.
16. Private sector is reluctant to implement the standard.
17. Failure to achieve the objectives of applying the standard.

Chapter 5

Fulfillment of ISO 9001:2015 Principles through PS-15

5.1 Overview

A different method does not necessarily lead to different results. This was the most important goal that needs to be ascertained in this chapter. There are certainly significant differences between the requirements of the Palestinian standard for the quality system required to obtain the Palestinian quality mark and the requirement of ISO 9001:2015. The most important reason for this difference is that the ISO passed several stages of development and improvement during the previous years taking into consideration the most important contemporary concepts of management and quality, while the Palestinian standard remained unchanged since its adoption in 1997.

The questionnaire that was distributed to a sample of Palestinian organizations that hold the Palestinian quality mark is intended to prove that applying the Palestinian Standard PS-15 led to the failure in fulfilling the quality management principles of ISO 9001: 2015, by investigating what QMP's practices of ISO 9001:2015 are applied at those Palestinian organizations.

In addition, it was necessary to measure the extent of fulfilling the QMPs of ISO 9001:2015 through applying the current Palestinian standard, in order to identify what principles to focus on during the improvement of Palestinian Standard.

5.2 Questionnaire Development

According to the seven principles of the ISO quality management systems, the questionnaire shown in Appendix (B) was divided into seven sections. Each section contains one principle with a set of practices to achieve that principle.

The practices of each principle which are recommended by the ISO (ISO, 2015) are summarized in Table 5-1:

Table 5-1: Quality Management Principles and their Practices

Principles	Pij	Practices
Customer focus	P11	Identifying direct and indirect customers who receive the value
	P12	Identifying current and future customer needs and expectations
	P13	Communicating the objectives of the organization to the needs and expectations of customers
	P14	Communicating customers' needs and expectations throughout the organization.
	P15	Meeting customer needs and expectations through planning of goods and services provided
	P16	Meet customer needs and expectations through the development of goods and services provided
	P17	Meeting customer needs and expectations through the design of goods and services provided
	P18	Meeting customers' needs and expectations through the production of appropriate goods and services
	P19	Meeting customers' needs and expectations by delivering

		goods and services properly
	P110	Meeting customers' needs and expectations by supporting goods and services delivered after sales
	P111	Measuring and controlling customer satisfaction and take appropriate actions.
	P112	Identifying and take action on the needs and expectations of parties that can affect customer satisfaction.
	P113	Apply customer relationship management (CRM) actively to achieve continuous success
Leadership	P21	Connecting organization mission, strategic vision, policies and processes throughout the organization.
	P22	Creating and sustaining shared values, fairness and ethical models.
	P23	Establishing a culture of trust and integrity.
	P24	Encouraging organizational commitment to quality.
	P25	Making sure leaders at all levels are a positive example of people
	P26	Providing people with the required resources, training and authority to enable accountability.
	P27	Inspiring and encouraging people and organize their contributions to the organization.
	P31	Communicating with employees to promote understanding of the importance of their individual contributions.
	P32	Strengthening cooperation

Engagement of people		throughout the Organization.
	P33	Facilitating open discussion and share knowledge and experience
	P34	Empowering workers to define constraints and determinants of performance and take initiatives without fear.
	P35	Recognizing and understanding the contributions and knowledge of employees and the level of self-development.
	P36	Enabling self-evaluation of performance
	P37	Conducting questionnaires to assess employee satisfaction, inform them of results, and take appropriate action
Process approach	P41	Identifying the system objectives and the processes needed to achieve them.
	P42	Identifying the authorities, responsibilities and accountability mechanisms for operations management.
	P43	Understanding the capabilities of the organization and identify resource constraints before taking action.
	P44	Identifying the interdependence in the process and analyze the impact of adjustments on individual processes on the system as a whole.
	P45	Process management and mutual relations as a system to achieve the quality objectives of the organization effectively and efficiently.
	P46	Ensuring the availability of information needed to operate and improve processes, monitor, analyze and evaluate

		system performance.
	P47	Managing risks that can affect process outputs and overall results of QMS.
Improvement	P51	Creating goals of improvement at all levels of the organization.
	P52	Educating and training people at all levels on how to apply basic tools and methodologies to achieve improvement goals.
	P53	Ensuring that people are qualified to successfully promote and complete improvement projects.
	P54	Developing and deploying processes to implement improvement projects throughout the organization.
	P55	Tracking, reviewing and auditing the planning, implementation, completion and results of improvement projects
	P56	Integrating the considerations of improvement into the development of new or modified goods, services and processes.
	P57	Recognition of improvement.
Evidence-based decision making	P61	Identifying, measuring and monitoring the key indicators to demonstrate the performance of the organization.
	P62	Making all required data available to the people concerned.
	P63	Ensuring that data and information are accurate, reliable and safe enough.
	P64	Analyzing and evaluating data and information using appropriate methods.
	P65	Ensuring that people are qualified to analyze and

		evaluate data as needed.
	P66	Decisions and actions taken are based on evidence, balanced with experience and intuition
Relationship management	P71	Identifying relevant stakeholders (suppliers, partners, customers, investors, employees, the community as a whole) and their relationship with the organization.
	P72	Identifying and prioritizing relationships with stakeholders that needs to be managed.
	P73	Creating relationships so that the balance between short-term gains and long-term considerations.
	P74	Collecting and sharing information, experiences and resources with relevant stakeholders.
	P75	Measuring performance and providing feedback to interested parties to enhance improvement initiatives.
	P76	Establishing cooperative and collaborative development activities with suppliers, partners and other stakeholders.
	P77	Encouraging and recognizing the improvements and achievements of suppliers and partners.

Response Scale

A 5 points Likert scale format was adopted and the questions were written in Arabic language according to the literacy of the targeted sample.

5.3 Questionnaire Evaluation

A pilot test was conducted to evaluate the questionnaire. 25 questionnaires were randomly distributed for the purpose of final review of the questionnaire and also testing the questionnaire reliability using SPSS.

Reliability is tested for each principle separately where Item total correlation in reliability testing helps in identifying unimportant items to check better reliability if items deleted in case of low reliability.

Reliability Testing:

Internal consistency as an estimate of reliability was conducted through Cronbach's Alpha which indicates how highly the questions in the questionnaire are interrelated for each principle.

Correlation analysis was conducted using SPSS software for each principle and the results are shown below:

Cronbach's Alpha is recommended to be equal to or greater than 0.7(Rootman et al., 2008).

1- Customer Focus

Table 5-2: Reliability & Item-Total Statistics of Customer Focus

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.778	.779	13

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P11	27.20	35.436	.543	.625	.749
P12	27.42	37.113	.461	.460	.758
P13	27.38	35.468	.579	.617	.746
P14	27.56	38.434	.406	.393	.764
P15	27.78	39.677	.226	.616	.779
P16	27.80	38.709	.353	.547	.768
P17	27.84	38.225	.387	.559	.765
P18	26.87	35.527	.437	.685	.761
P19	26.91	35.310	.408	.724	.765
P110	27.49	36.483	.481	.640	.756
P111	27.33	36.045	.449	.538	.759
P112	27.64	39.189	.287	.489	.774
P113	27.84	39.589	.241	.372	.778

Cronbach's Alpha is 0.778 which is greater than 0.7 and accepted.

2- Leadership

Table 5-3: Reliability & Item-Total of Leadership

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.704	.676	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P21	13.53	12.255	.247	.108	.707
P22	13.18	9.468	.622	.545	.610
P23	13.24	9.098	.689	.655	.589
P24	13.24	9.962	.537	.417	.636
P25	13.27	9.791	.534	.375	.636
P26	13.11	11.510	.257	.170	.712
P27	13.49	13.619	-.013	.041	.752

Cronbach's Alpha is 0.704 which is greater than 0.7 and accepted.

3- Engagement of People

Table 5-4: Reliability & Item-Total Statistic of Engagement of People

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.813	.815	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P31	12.64	14.507	.594	.544	.782
P32	12.69	15.128	.591	.697	.781
P33	13.07	15.291	.561	.642	.787
P34	13.18	16.104	.637	.436	.777
P35	13.20	16.073	.531	.550	.792
P36	13.22	15.631	.610	.576	.779
P37	13.33	17.636	.356	.368	.818

Cronbach's Alpha is 0.813 which is greater than 0.7 and accepted.

4- Process Approach

Table 5-5: Reliability & Item-Total Statistics of Process Approach

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.861	.862	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P41	16.33	25.955	.660	.832	.838
P42	16.58	25.522	.697	.825	.832
P43	16.93	24.473	.773	.740	.821
P44	16.78	26.040	.752	.743	.827
P45	16.80	26.118	.649	.699	.839
P46	16.96	24.634	.723	.631	.828
P47	17.36	31.007	.207	.383	.896

Cronbach's Alpha is 0.861 which is greater than 0.7 and accepted.

5- Improvement

Table 5-6: Reliability & Item-Total Statistics of Improvement

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.881	.886	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P51	12.60	20.791	.560	.533	.879
P52	12.82	19.286	.715	.610	.858
P53	12.82	20.240	.714	.582	.858
P54	13.04	21.089	.692	.628	.862
P55	13.13	21.436	.734	.661	.859
P56	12.98	20.386	.684	.546	.862
P57	12.87	20.755	.620	.449	.870

Cronbach's Alpha is 0.881 which is greater than 0.7 and accepted.

6- Evidence-based Decision Making

Table 5-7: Reliability & Item-Total Statistics of Evidence-Based Decision Making

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.877	.880	6

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P61	12.51	19.437	.647	.491	.862
P62	12.49	18.756	.685	.647	.856
P63	12.67	18.227	.734	.659	.846
P64	13.22	20.722	.655	.618	.861
P65	13.09	20.719	.691	.724	.856
P66	13.13	19.255	.704	.645	.852

Cronbach's Alpha is 0.877 which is greater than 0.7 and accepted.

7- Relationship Management

Table 5-8: Reliability & Item-Total Statistics of Relationship Management

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.784	.784	7

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P71	13.18	14.468	.532	.606	.752
P72	13.60	14.064	.633	.681	.730
P73	13.56	15.253	.587	.374	.743
P74	13.73	15.609	.439	.281	.770
P75	13.56	15.980	.432	.244	.771
P76	13.76	15.098	.538	.462	.750
P77	13.82	16.240	.408	.391	.774

Cronbach's Alpha is 0.784 which is greater than 0.7 and accepted.

5.4 Analyzing the Data Obtained from Survey:

5.4.1 Descriptive Analysis

Mean, standard deviation, and answers percentages were presented for each question. In order to identify the scale of calculated overall mean of each section of questionnaire, the intervals of 5 points likert scale was adopted as a reference for that purpose. These intervals are (Khalil, 2018):

- Strongly disagree (1-1.79)
- Disagree (1.8-2.59)
- Neutral (2.6-3.39)
- Agree (3.4-4.19)
- Strongly agree (4.2-5)

- **Customer Focus**

By reviewing the results of Customer Focus shown in Table 5-9, it is noted that the answers of the respondents to the questionnaire were concentrated in disagree in most answers. The overall response mean is 2.29, and the standard deviation is 0.96. Therefore, we can conclude that applying the Palestinian standard does not fulfill the principle of customer focus.

Table 5-9: Descriptive Analysis of Customer Focus

Customer Focus	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Identifying direct and indirect customers who receive the value	P11	2.56	1.013	6.7	57.8	13.3	17.8	4.4
Identifying current and future customer needs and expectations	P12	2.33	.905	13.3	55.6	15.6	15.6	0

Communicating the objectives of the organization to the needs and expectations of customers	P13	2.38	.960	15.6	48.9	17.8	17.8	0
Communicating customers' needs and expectations throughout the organization.	P14	2.20	.786	13.3	60.0	22.2	2.2	2.2
Meeting customer needs and expectations through planning of goods and services provided	P15	1.98	.892	35.6	35.6	24.4	4.4	0
Meet customer needs and expectations through the development of goods and services provided	P16	1.96	.824	28.9	53.3	11.1	6.7	0
Meeting customer needs and expectations through the design of goods and services provided	P17	1.91	.848	33.3	48.9	11.1	6.7	0
Meeting customers' needs and expectations through the production of appropriate goods and services	P18	2.89	1.172	13.3	28.9	17.8	35.6	4.4
Meeting customers' needs and expectations by delivering goods and services properly	P19	2.84	1.261	20.0	22.2	15.6	37.8	4.4
Meeting customer needs and expectations by supporting goods and services delivered after sales	P10	2.27	.963	22.2	42.2	22.2	13.3	0
Measuring and control customer satisfaction and take appropriate action.	P111	2.42	1.076	22.2	35.6	20.0	22.2	0
Identifying and take action on the needs and expectations of parties that can affect customer satisfaction.	P112	2.11	.859	22.2	53.3	15.6	8.9	0
CRM actively to achieve continuous success	P113	1.91	.874	33.3	51.1	6.7	8.9	0

- **Leadership**

Leadership principle results shown in Table 5-10, it was found that the percentages of answers were all concentrated at disagree. This reflects a clear weakness in Palestinian

standard PS-15 to present requirements that fulfill this principle. The overall response mean is 2.22 and the standard deviation is 0.88.

Table 5-10: Descriptive Analysis of Leadership

Leadership	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Connecting organization mission, strategic vision, policies and processes throughout the organization.	P21	1.98	.723	22.2	62.2	11.1	4.4	0
Creating and sustaining shared values, fairness and ethical models.	P22	2.33	.953	15.6	53.3	13.3	17.8	0
Establishing a culture of trust and integrity.	P23	2.27	.963	22.22	42.2	22.2	13.3	0
Encouraging organizational commitment to quality.	P24	2.27	.939	20.0	46.7	20.0	13.3	0
Making sure leaders at all levels are a positive example of people	P25	2.24	.981	24.4	40.0	22.2	13.3	0
Providing people with the required resources, training and authority to enable accountability.	P26	2.40	.939	13.3	51.1	17.8	17.8	0
Inspiring and encouraging people and organize their contributions to the organization.	P27	2.02	.690	17.8	66.7	11.1	4.4	0

- **Engagement of People**

The answers in this principle (Engagement of People shown in Table 5-11) are concentrated in disagree, but the percentages of the strongly disagree has risen significantly here, which demonstrates the significant failure to present the standard any requirements to fulfill this principle. The overall mean is 2.17 and the standard deviation is 0.94.

Table 5-11: Descriptive Analysis of Engagement of People

Engagement of people	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Communicating with employees to promote understanding of the importance of their individual contributions.	P31	2.58	1.118	15.6	42.2	13.3	26.7	2.2
Strengthening cooperation throughout the Organization.	P32	2.53	1.014	13.3	44.4	17.8	24.4	0
Facilitating open discussion and share knowledge and experience	P33	2.16	1.021	28.89	42.2	13.3	15.6	0
Empowering workers to define constraints and determinants of performance and take initiatives without fear.	P34	2.04	.796	26.7	44.4	26.7	2.2	0
Recognizing and understanding the contributions and knowledge of employees and the level of self-development.	P35	2.02	.917	33.33	37.8	22.2	6.7	0
Enabling self-evaluation of performance	P36	2.00	.905	33.3	40.0	20.0	6.7	0
Conducting questionnaires to assess employee satisfaction, inform them of results, and take appropriate action	P37	1.89	.832	35.56	44.4	15.6	4.4	0

- **Process Approach**

A slight difference is found in the principle of process approach (Table 5-12), where the percentages of agree answers have increased with the overall mean remains low. This demonstrates that the standard present requirements that help in understanding the system and processes, identifying the inputs and output for each process and to determine responsibilities and authorities. The overall mean is 2.8 and the standard deviation is 1.14.

Table 5-12: Descriptive Analysis of Process Approach

Process Approach	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Identifying the system objectives and the processes needed to achieve them.	P41	3.29	1.141	4.4	31.1	4.4	51.1	8.9
Identifying the authorities, responsibilities and accountability mechanisms for operations management.	P42	3.04	1.147	13.3	22.2	11.1	53.3	0
Understanding the capabilities of the organization and identify resource constraints before taking action.	P43	2.69	1.184	20.0	28.9	13.3	37.8	0
Identifying the interdependence in the process and analyze the impact of adjustments on individual processes on the system as a whole.	P44	2.84	1.021	4.4	42.2	22.2	26.7	4.4
Process management and mutual relations as a system to achieve the quality objectives of the organization effectively and efficiently.	P45	2.82	1.134	13.33	28.9	24.4	28.9	4.4
Ensuring the availability of information needed to operate and improve processes, monitor, analyzing and evaluate system performance.	P46	2.67	1.225	20.0	31.1	15.6	28.9	4.4
Managing risks that can affect process outputs and overall results of QMS.	P47	2.27	1.136	31.1	33.3	13.3	22.2	0

- **Improvement**

The answers are concentrated in the principle of improvement as illustrated in Table 5-13 on (disagree) and (strongly disagree). This means that the standard did not provide any

requirements to fulfill the continuous improvement. The overall mean is 2.15 and the standard deviation is 0.97.

Table 5-13: Descriptive Analysis of Improvement

Improvement	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Creating goals of improvement at all levels of the organization.	P51	2.44	1.078	20.0	37.8	22.2	17.8	2.2
Educating and training people at all levels on how to apply basic tools and methodologies to achieve improvement goals.	P52	2.22	1.106	33.3	28.9	20.0	17.8	0
Ensuring that people are qualified to successfully promote and complete improvement projects.	P53	2.22	.974	22.2	46.7	20.0	8.9	2.2
Developing and deploying processes to implement improvement projects throughout the organization.	P54	2.00	.879	28.9	51.1	11.1	8.9	0
Tracking, reviewing and auditing the planning, implementation, completion and results of improvement projects	P55	1.91	.793	28.89	57.8	6.7	6.7	0
Integrating the considerations of improvement into the development of new or modified goods, services and processes.	P56	2.07	.986	33.33	37.8	17.8	11.1	0
Recognition of improvement.	P57	2.18	1.007	26.67	42.2	20.0	8.9	2.222

- **Evidence-based Decision Making**

In the evidence-based decision making principle (Table 5-14), the answers were concentrated on (agree) for identifying the measuring and monitoring the organization performance, making all the data required available to people and ensuring that the data and the information are accurate and reliable. But the answers were concentrated for the others

practices on (disagree), which means that the standard present some helpful requirements to fulfill this principle. The overall mean is 2.57 and the standard deviation is 1.10.

Table 5-14: Descriptive Analysis of Evidence-Based Decision Making

Evidence-based Decision Making	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Identifying, measuring and monitoring the key indicators to demonstrate the performance of the organization.	P61	2.9	1.2	11.1	35.6	6.7	44.4	2.2
Making all required data available to the people concerned.	P62	2.9	1.2	17.8	20.0	15.6	44.4	2.2
Ensuring that data and information are accurate, reliable and safe enough.	P63	2.8	1.2	20.0	24.4	20.0	31.1	4.4
Analyzing and evaluating data and information using appropriate methods.	P64	2.2	1.0	24.4	42.2	24.4	6.7	2.2
Ensuring that people are qualified to analyze and evaluate data as needed.	P65	2.3	.9	13.3	55.6	17.8	11.1	2.2
Decisions and actions taken are based on evidence, balanced with experience and intuition	P66	2.3	1.1	24.4	44.4	13.3	13.3	4.4

- **Relationship Management**

All answers in the principle of relationship management “as shown in table 5-15” were concentrated on (disagree), which means that a significant failure of standard to fulfill this principle. The overall mean is 2.27 and the standard deviation is 0.97.

Table 5-15: Descriptive Analysis of Relationship Management

Relationship Management	Pij	μ	σ	%of 1	%of 2	%of 3	%of 4	%of 5
Identifying relevant stakeholders (suppliers, partners, customers, investors, employees, the	P71	2.69	1.08	6.7	53.3	8.9	26.7	4.44

community as a whole) and their relationship with the organization.								
Identifying and prioritizing relationships with stakeholders that needs to be managed.	P72	2.27	1.03	24.4	42.2	15.6	17.8	0
Creating relationships so that the balance between short-term gains and long-term considerations.	P73	2.31	.87	13.3	55.6	17.8	13.3	0
Collecting and sharing information, experiences and resources with relevant stakeholders.	P74	2.13	.99	26.7	48.9	8.9	15.6	0
Measuring performance and providing feedback to interested parties to enhance improvement initiatives.	P75	2.31	.92	17.8	46.7	22.2	13.3	0
Establishing cooperative and collaborative development activities with suppliers, partners and other stakeholders.	P76	2.11	.96	28.9	42.2	17.8	11.1	0
Encouraging and recognizing the improvements and achievements of suppliers and partners.	P77	2.04	.90	28.9	46.7	15.6	8.9	0

The overall means and the standard deviations of all principles are illustrated in Table 5-16 and Figure 5-1:

Table 5-16: Overall Means & Standard Deviations for all Principles

QMPs	μ	σ
customer focus	2.29	0.96
Leadership	2.22	0.88
Engagement of people	2.17	0.94
Process Approach	2.80	1.14
Improvement	2.15	0.97
Evidence-based decision making	2.57	1.10
Relationship Management	2.27	0.97

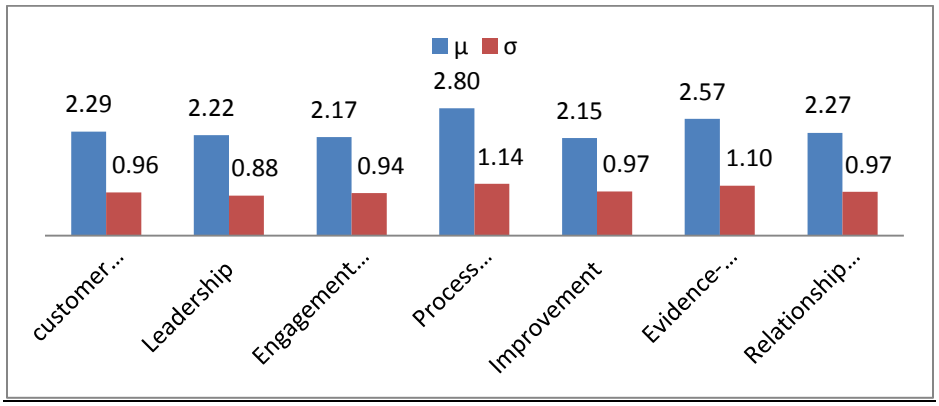


Figure 5-1: Overall Means and Standard Deviations for all Principles

5.4.2 Hypothesis Testing

Minitab software was adopted to carry out hypothesis testing using two approaches. In the first approach, one sample T-test was carried out by comparing the means of the responses with 2.6 according to the intervals of the 5-points Likert Scale. While in the second approach one sample T-test was carried out by comparing the means of the responses by 3.70 taken from previous studies.

First Approach

Results obtained from Minitab are presented in Table 5-17.

Null hypothesis $H_0: \mu \geq 2.6$

Alternative hypothesis $H_1: \mu < 2.6$

Table 5-17: First Approach T & P values

Principle	Sample	T-Value	P-Value	Hypotheses (H0)
Customer Focus	AVGP1	-2.81	0.004	Rejected
Leadership	AVGP2	-2.16	0.018	Rejected
Engagement of People	AVGP3	-3.35	0.001	Rejected
Process Approach	AVGP4	2.40	0.990	Fail to rejected
Improvement	AVGP5	-3.15	0.001	Rejected
Evidence-based Decision Making	AVGP6	0.54	0.704	Fail to rejected
Relationship Management	AVGP7	-2.45	0.009	Rejected

According to one sample T-test with 5% significance level, if the P value is less than 5% then the null hypothesis is rejected, while if the P value is greater than 5% then we fail to reject the null hypothesis.

Hypothesis 1:

P value = 0.004 which is less than 0.05 so we have a strong evidence that the applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of customer focus.

Hypothesis2:

P value = 0.018 which is less than 0.05 so we have a strong evidence that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of leadership.

Hypothesis 3:

P value = 0.001 which is less than 0.05 so we have a strong evidence that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of engagement of people.

Hypothesis 4:

P value = 0.99 which is greater than 0.05 so we conclude that applying the Palestinian standard (PS – 15) leads to fulfilling the principle of process approach.

Hypothesis 5:

P value = 0.01 which is less than 0.05 so we have a strong evidence that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of improvement.

Hypothesis 6:

P value=0.704 which is greater than 0.05 so we conclude that applying the Palestinian standard (PS – 15) leads to fulfilling the principle of evidence-based decision-making.

Hypothesis 7:

P value= 0.009 which is less than 0.05 so we have a strong evidence that applying the Palestinian standard (PS – 15) does not lead to fulfilling the principle of relationship management.

As a result principles 1, 2,3,5,7 are not fulfilled and principles 4 and 6 are fulfilled.

Second Approach

Null hypothesis $H_0: \mu \geq 3.70$

Alternative hypothesis $H_1: \mu < 3.70$

Table 5-18: Second Approach T & P values

Principle	Sample	T-Value	P-Value	Hypotheses (H0)
Customer Focus	AVGP1	-18.79	0.000	Rejected
Leadership	AVGP2	-17.40	0.000	Rejected
Engagement of People	AVGP3	-15.70	0.000	Rejected
Process Approach	AVGP4	-7.13	0.000	Rejected
Improvement	AVGP5	-13.91	0.000	Rejected
Evidence-based Decision Making	AVGP6	-8.68	0.000	Rejected
Relationship Management	AVGP7	-15.03	0.000	Rejected

The P values of all principles in Table 5-18 are approximately zero which is less than 0.05 and accordingly we conclude that applying the Palestinian Standard PS-15 does not lead to fulfilling any of the seven QMP's.

5.5 Results

In order to measure the extent to which the principles of quality management have been fulfilled through applying the Palestinian standard PS-15, a survey has been used for this purpose. Descriptive results have been extracted and hypotheses have been tested using two approaches. In the first approach, means of all the principles fulfilled in the organizations applying the Palestinian Standard were compared with 2.5 and the results were that process approach and evidence-based decision-making are fulfilled while other

principles are not fulfilled. These results can be justified by the fact that the current Palestinian Standard is concerned with operations and documentation. While in the second approach, means of all principles fulfilled in the organizations applying the Palestinian Standard PS-15 were compared with 3.70 and the result is that applying the current Palestinian standard does not fulfill any of the principles of quality management.

Chapter 6

ISO 9001 Requirements vs. PS 15 Requirements

6.1 Overview

In this chapter, the gaps between the requirements of the Palestinian standardPS-15 and the requirements of ISO 9001:2015 were studied in order to determine the shortcomings in the Palestinian Standard.

6.2 ISO 9001:2015 Clauses

The latest version of ISO 9001 is ISO 9001:2015, is divided into 10 clauses with supporting sub clauses. Clauses 1-3 include scope, normative references, and terms and definitions respectively. Clauses 4-10 include the requirements of quality management system of the organization which were studied in this chapter. The successful implementation of ISO 9001:2015 must satisfy these requirements along with meeting customer requirements and any other regulatory and statutory requirements.

ISO 9001:2015 Clauses are:

1- Scope.

2- Normative references.

3- Terms and definitions.

4- Context of the organization.

5- Leadership.

6- Planning.

7- Support.

8- Operation.

9- Performance evaluation.

10- Improvement.

Clauses 4-10 and their sub-clauses are presented in Figure 6-1:

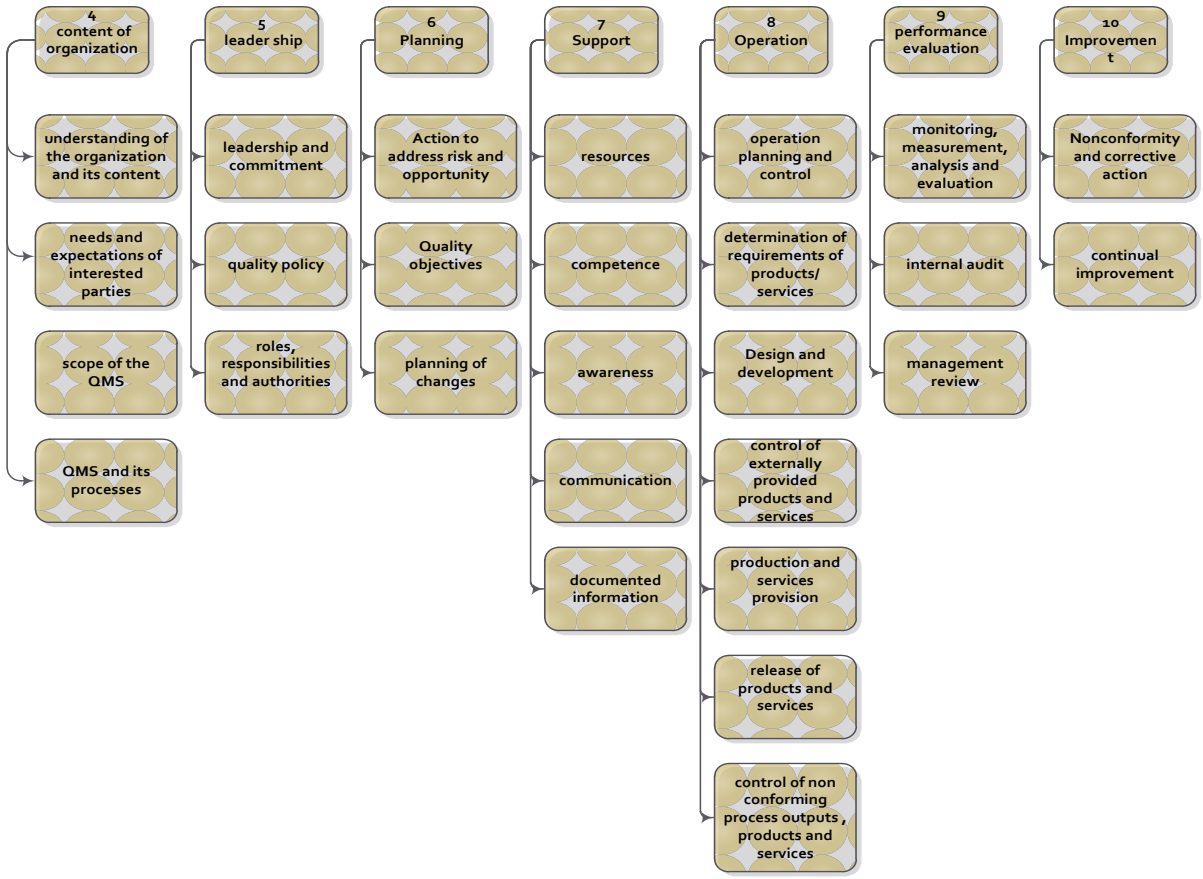


Figure 6-1: 4-10 Clauses of ISO 9001:2015

Whereas the Palestinian standard PS-15 is not divided into specific, regular, and homogeneous clauses, the requirements are listed sequentially without grouping similar requirements in clauses. PS-15 is attached in appendix (A).

To identify the gap between the ISO9001:2015 standard and the Palestinian standard (PS-15), comparison matrix was prepared.

6.3 Comparison Matrix

The aim of this matrix is to identify which requirements are fulfilled by PS-15 and which ones are not fulfilled. Accordingly the gap between PS-15 and ISO 9001:2015 will be identified (Appendix D). The comparison matrix was prepared showing the projections of similar requirements between the Palestinian standard PS-15 and ISO 9001: 2015.

The preparation of this matrix is divided into three steps:

1- The requirements of QMS according to ISO 9001:2015 which are clauses 1-10 are presented in first column.
2- Identifying the fulfilled requirements of PS-15 by comparing each one to ISO requirements and the fulfilled one was presented beside the matching one in ISO in the second column.
3- The missing requirements in PS-15 are considered as unfulfilled requirements and were presented in the third column.

To validate results obtained from this matrix, it was reviewed and approved by two parties. The first party was an auditor from the PSI and the second party was an external auditor Mr. Issa Beitouni, a certified QMS consultant.

6.4 Matrix Summary

6.4.1 Clause 4: Context of Organization

When applying the QMS in any organization that adopts the ISO 9001:2015, the alignment between the objectives of the organization and its purpose accurately in the quality system is considered as the first step, this process is called (the context of the organization).

The context of the organization is concerned with identifying:

- Factors affecting the organization in all its forms and levels, and the impact of these factors on the quality system.
- Goals and objectives.
- Product complexity.
- Company culture.
- Organization size and market.
- Customers and parties involved.
- Risks and opportunities and linking them to the quality system.

Clause 4 is divided into 4 sub clauses as follow:

4-1 Understanding the organization and its context. This sub clause is not fulfilled by PS-15.

4-2 Understanding the needs and expectations of interested parties. This sub clause is not fulfilled by PS-15.

4-3 Determining the scope of the QMS. This sub clause is not fulfilled by PS-15.

4-4 QMS and its processes: this sub clause deals with :

4-4-1 this section includes:

- Establish, implement, maintain and improve a process-based QMS.
- Determine the needed processes and their application.

4-4-2 this section includes:

- Maintain documented information on process operation.
- Retain documented information on process operation.

Referring to the comparison matrix, it was found that (4-4-1) is fulfilled and (4-4-2) in not fulfilled by PS-15.

6.4.2 Clause 5: Leadership

ISO emphasizes the role of leadership and defined its responsibilities and obligations. The leadership was required to manage quality rather than delegating it. It also emphasized the leadership's commitment to defining responsibilities at all levels of the organization to ensure quality improvement. Adopting leadership to focus on customers is one of the things that ISO has focused on through its commitment to customer requirements, customer satisfaction, and risk identification. ISO has mandated leadership to develop quality policy, communications, responsibilities and authorities.

Clause 5 is divided into 3 sub clauses as follow:

5-1 Leadership and commitment. This sub clause deals with :

5-1-1 General.

5-1-2 Customer focus

Referring to the comparison matrix, it was found that this sub clause is not fulfilled by PS-15

5-2 Policy. This sub clause deals with :

5-2-1 Establishing the quality policy.

This sub clause is fulfilled by PS-15.

5-2-2 Communicating the quality policy.

This sub clause is not fulfilled by PS- 15.

5-3 Organizational roles, responsibilities and authorities.

This sub clause is not fulfilled by PS-15 except the responsibilities of quality manager.

6.4.3 Clause 6: Planning

Planning brings forward risk-based thinking. Once the organization highlights risks and opportunities, it needs to determine how these problems are addressed through planning. The planning looks at what, who, when and how these risks should be addressed, establishment of quality goals and how to achieve them, planning of action if any changes to the QMS are made and updating the QMS based on measuring the impact of opportunities and risks.

Clause 6 is divided into 3 sub clauses as follow:

6-1 Action to address risks and opportunities.

6-2 Quality objectives and planning to achieve them.

6-3 Planning of changes.

Referring to the comparison matrix, clause 6 (planning) is not fulfilled by PS-15.

6.4.4 Clause 7: Support

Right resources, people and infrastructure support organizations to achieve their goals and objectives. Support looks at:

- Providing necessary assets, resources and systems.
- Providing controlling the resources.
- Determining and maintaining organizational knowledge
- People competencies and training needs.
- Communicating the quality policy and objectives and employees contribution to the QMS.
- Documenting information

Clause 7 is divided into 5 sub clauses which are:

7-1 Resources : this sub clause deals with:

7-1-1 People.

7-1-2 Infrastructure.

7-1-3 Environment for the operation of process.

7-1-4 Monitoring and measuring resources.

7-1-5 Organizational knowledge.

People are the only resource that was fulfilled by the PS-15.

7-2 Competence: fulfilled by PS-15

7-3 Awareness: not fulfilled by PS-15

7-4 Communication: not fulfilled by PS-15

7-5 Documented information: creating, updating and controlling the documented information are fulfilled by PS-15.

6.4.5 Clause 8: Operation

The importance of operations is to address internal processes and transactions with external resources in the organization. This clause provides appropriate requirements to control these processes, as well as ways to manage planned and unintended changes. Plan and control processes needed to meet the requirements for products and services (design and development, external providers, production and service provision, release of products and services, nonconforming outputs).

Clause 8 is divided into 7 sub clauses as follows:

8-1 Operational planning and control. This sub clause is not fulfilled by PS-15.

8-2 Requirements for product and services. This sub clause deals with:

8-2-1 Customer communication.

8-2-2 Determination of requirements for product and services.

8-2-3 Review of requirement for the product and services.

The reviewing is divided into two sections:

8-2-3-1Ensuring that the organization has the ability to meet the requirements for products and services.

8-2-3-2Retaining documented information.

8-2-4 Changes to requirements for product and services.

All these requirements are not fulfilled by PS-15 except one requirement concerning how to handle orders with specific request to a particular customer.

8-3 Design and development of products and services: this sub clause deals with:

8-3-1 General.

8-3-2 Design and development planning.

8-3-3 Design and development input.

8-3-4 Design and development control.

8-3-5 Design and development outputs.

8-3-6 Design and development changes.

Referring to the comparison matrix it can be concluded that PS-15 has not fulfilled any of these requirements except that it required the organization to inform the PSI of any fundamental modification of the product and, this modification of the product must be properly recorded.

8-4 Control of externally provided products and services. This sub clause deals with:

8-4-1 General.

8-4-2 Type of extent of control.

8-4-3 Information for external providers.

Referring to the comparison matrix, it was found that the PS-15 has fulfilled all the requirements in these sub clauses except the information for external providers (8-4-3).

8-5 Production and service provision. This sub clause deals with:

8-5-1 Control of production and service provision.

8-5-2 Identification and traceability.

8-5-3 Property belonging to customers or external providers.

8-5-4 Preservation.

8-5-5 Post-delivery activities.

8-5-6 Control of changes.

Referring to the comparison matrix, it was found that all requirements are fulfilled by PS-15 except the requirements related to: property belonging to customers or external providers (8-5-3), post- delivery activities (8-5-5) and control of changes (8-5-6).

8-6 Release of products and services. This sub clause is fulfilled by PS-15.

8-7 Control of nonconforming outputs. This sub clause deals with:

8-7-1 Identifying and controlling the outputs that do not conform to requirements.

8-7-2 Retaining of documented information.

Referring to the comparison matrix, it was found that the PS-15 has fulfilled the process and procedure for addressing the nonconformity (8-7-1) but it has not fulfilled documenting information of non conformity (8-7-2).

6.4.6 Clause 9: Performance Evaluation

Performance evaluations can be considered one of the most important processes in organizations, as the benefit of the performance evaluation process belongs to both individuals and organizations. To achieve that, organizations should determine what, how, when and by whom results will be measured and evaluated, determine methods for obtaining, monitoring and reviewing customer satisfaction, have an objective, planned and effectively implemented internal audit program and reviewing the QMS at planned intervals.

Clause 9 is divided into 3 sub clauses as follow:

9-1 Monitoring, measurement, analysis and evaluation. This sub clause deals with:

- 9-1-1 General.
- 9-1-2 Customer satisfaction.
- 9-1-3 Analysis and evaluation.

Referring to the comparison matrix , it was found that the general requirements (9-1-1) such as determining what data needs to be collected, how that data is collected and interpreted, and what results should be acted upon from a variety of inputs at various points in the quality management process are fulfilled by the PS-15. However, customer satisfaction (9-1-2) and, analysis and evaluation (9-1-3) are not fulfilled by PS-15.

9-2 Internal audit : this sub clause deals with:

- 9-2-1 Conducting of internal audits at planned intervals.
- 9-2-2 The organization shall:

a) Plan, establish, implement and maintain an audit program(s) including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration the importance of the processes concerned, changes affecting the organization, and the results of previous audits;

b) Define the audit criteria and scope for each audit;

c) Select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;

d) Ensure that the results of the audits are reported to relevant management;

e) Take necessary correction and corrective actions without undue delay;

f) Retain documented information as evidence of the implementation of the audit program and the audit results.

Referring to the comparison matrix, we found that PS-15 has not fulfilled this sub clause.

9-3 Management review. This sub clause deals with:

9-3-1 The requirements of reviewing the organizations quality management system by top management.

9-3-2 Management review inputs.

9-3-3 Management review.

Referring to the comparison matrix, it was found that the PS-15 has not fulfilled this sub clause.

6.4.7 Clause 10: Improvement

Improvement is vital for the organization to maintain current performance levels, to deal with weaknesses, risks and create new opportunities. To achieve this, organizations should determine and select opportunities for improvement, react to nonconformities and take action to eliminate the cause, implement corrective actions as appropriate and review their effectiveness, keep records of nonconformities and corrective actions and continually improve their QMS.

Clause 10 is divided into 3 sub clauses as follow:

10-1 General. This sub clause is not fulfilled by PS-15.

10-2 Nonconformity and corrective action. this sub clause deals with :

- 10-2-1 Actions required in case of nonconformity.
- 10-2-2 Retaining of documented information as evidence.

Referring to the comparison matrix, it was found that PS-15 has fulfilled the first part of this sub clause (10-2-1) but it has not fulfilled the other (10-2-2)

10-3 Continual improvement: this sub clause is not fulfilled by PS-15.

6.5 Gap Analysis Results

The fulfilled clauses and their sub clauses are presented in Figure 6-2:

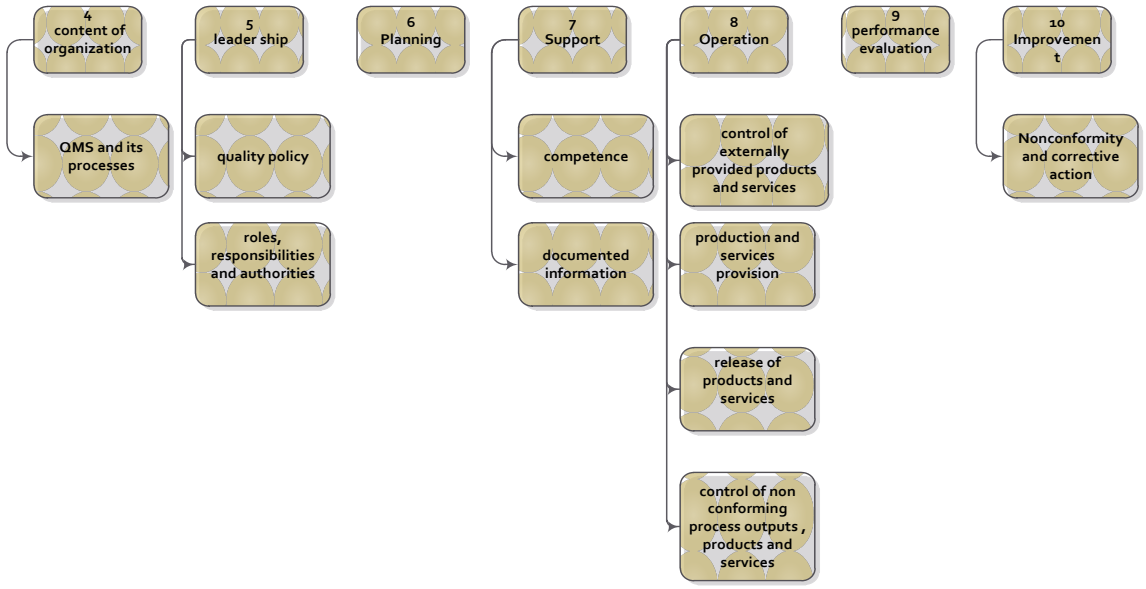


Figure 6-2: ISO 9001:2015 Clauses fulfilled by PS-15

The missing clauses and their sub clauses are presented in Figure 6-3.

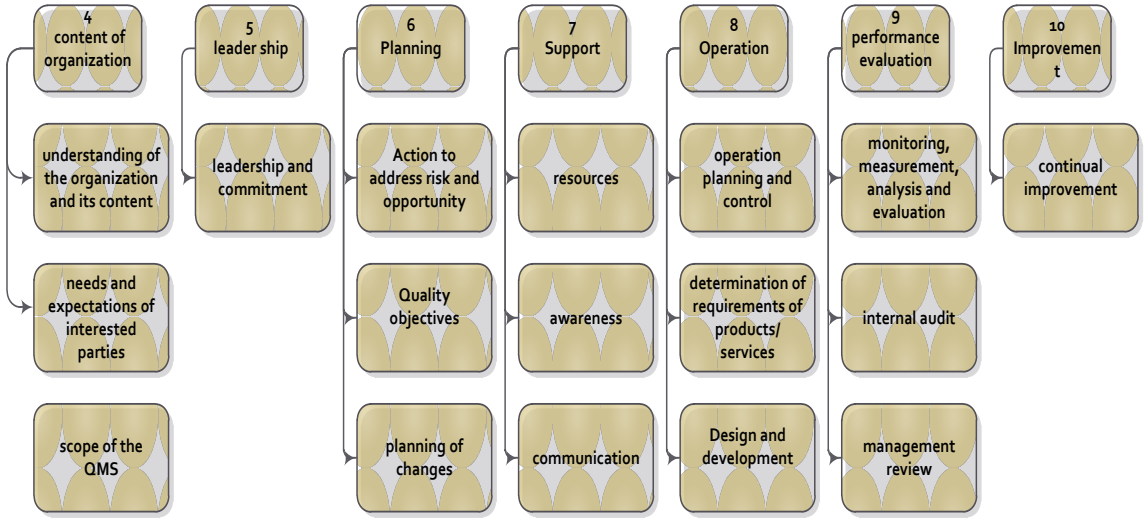


Figure 6-3: ISO 9001:2015 Clauses not fulfilled by PS-15

From Figure 6-3, it can be concluded that 17 sub clauses out of 27 were not fulfilled by PS-15. Since these sub clauses are mandatory to achieve the principles of quality management system, this gap is used to present recommendations to improve the Palestinian specifications to meet the requirements of ISO 9001:2015 and thus achieving the principles of quality management system.

Chapter 7

Conclusions, Recommendations and Future Researches

7.1 Overview

In order to improve the Palestinian Standard PS-15, three phases were conducted: Evaluation of PS-15 from PSI's perspective using interviews and SWOT analysis, measuring the fulfillment of ISO 9001:2015 principles through applying PS-15 from customer's perspective using a survey, and a comparison study between the ISO 9001:2015 requirements and PS-15 requirements using comparison matrix. These studies confirmed the research problem in terms of the need to improve the Palestinian standard and what are the needed improvements.

This chapter aims to provide the conclusions based on the results of the three studies mentioned above in addition to recommended guidelines for preparing the new Palestinian Standard.

7.2 Conclusions

This research provides a set of conclusions concerning the most important feedback from the PSI about the current PS-15, the principles of the quality management system which have not been fulfilled by applying the Palestinian standard, and the missing requirements in the Palestinian Standard PS-15 in comparison with the ISO 9001: 2015 requirements.

These conclusions are:

1- The Palestinian standard has not been subjected to any amendments or development since its adoption.

2- ISO 9001:2015 certificates should be considered as a basic reference for improving the Palestinian standard (PS-15).

3- Weak drafting and ambiguity in some concepts of PS-15.

4- Making the requirements of the (PS-15) easy to apply will encourage organizations to adopt it.

5- A quality management system built based on current PS-15 is weak in comparison with the quality management system built based on ISO 9001:2015.

6- Necessity of continuously updating the Palestinian standard PS-15.

7- Applying the Palestinian standard (PS – 15) does not lead to fulfilling the following Quality Management Principles of ISO 9001:2015 (according to approach 2 of hypothesis testing):

- Customer focus.
- Leadership.
- Engagement of people.
- Process approach.
- Improvement.
- Relationship management.
- Evidence-based decision-making.

8- The missing requirements in the Palestinian Standard PS-15 in comparison with the ISO 9001: 2015 requirements are the requirements related to:

- Understanding of the organization and its context.
- Needs and expectations of interested parties.

- Scope of the QMS.
- Leadership and commitment.
- Action to address risk and opportunity.
- Quality objectives.
- Planning of changes.
- Resources.
- Awareness.
- Communication.
- Operation planning and control.
- Determination of requirements of products/ services.
- Design and development.
- Monitoring, measurement, analysis and evaluation.
- Internal audit.
- Management review.
- Continual improvement.

9- The Palestinian Standard PS-15 will become applicable to both products and services if the ISO9001:2015 standard is the primary reference for the improvement process of PS-15.

7.3 Recommendations

This section provides set of recommendations for the PSI. These recommendations are guidelines that must be taken into consideration when developing the Palestinian Standard. A meeting was held with the Director of the Quality Department and the Director of

Standardization Department at the institution and a document containing the research results and recommendations was presented to them, and their feedback was provided through the attached letter in Appendix E.

These recommended guidelines are as follow:

1. Developing the Palestinian standard (PS-15) in order to better control the quality of products and improve the performance of the Palestinian organizations.
2. Employing the process approach in the new Palestinian standard, as well as integrating PDCA cycle (Plan-Do-Check-Act). Process approach enables the organization to manage their processes. Whereas the PDCA cycle assures providing required resources of processes and opportunities for improving that processes.
3. Adopting risk-based thinking in the new Palestinian Standard, as risk-based thinking provides preventive controls that reduce the deviations from what has been planned.
4. Including the missing requirements in the Palestinian Standard according to a comparison study with ISO 9001:2015 to ensure fulfilling the quality management principles.
5. Dividing the Palestinian standard into clauses. Each clause consists of a set of identical and homogeneous requirements that serve the same objective.
6. Clauses must begin with requirements that deal with the voice of customers and ends by requirements which measure the satisfaction of customers.
7. Each clause should contain an introduction that explains the importance of this clause and its objectives.

8. Each requirement should represent one task (measuring, recording, analyzing…) in order to facilitate understanding and applying this requirement.
9. Requirements formulation should be simple and clear.
10. Using clear terminologies, agreed upon, and have clear meaning to avoid confusion when applying the requirements.
11. The standard should contain a clear explanation of used terminologies.
12. To facilitate applying the Palestinian standard, the following verbal forms can be used (as used in ISO 9001:2015):
    - shall : requirement
    - should: recommendation
    - may: permission
    - can: possibilities

7.4 Future Researches

- Study obstacles of applying the Palestinian Standard PS-15 in the Palestinian organizations.
- Improving the steps of obtaining the Palestinian Quality Mark using Lean Six Sigma (DMAIC) Methodology.
- Study the obstacles of adopting ISO 9001:2015 as a substitute to PS-15 required to obtain the Palestinian Quality Mark.

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Appendices

Appendix A: The Palestinian Standard PS-15 Arabic/English Editions

Arabic Edition:

مواصفة فلسطينية
م ف 15-1997

الطبعة الثالثه

متطلبات وسم الانتاج بعلامة المواصفة (علامة الجودة) الفلسطينية
Requirements for marking products with PS Mark (Quality Mark)

المحتويات

1- عـــــام

1-1 تحدد هذه التعليمات متطلبات نظام الجودة لدى المنتجين الذين حصلوا على تصريح من مؤسسة المواصفات والمقاييس (من الآن تسمى المؤسسة) لوسم منتوجاتهم بإشارة المواصفـات أو لدى منتجين معنيين بالحصول على مثل هذا التصريح.

2-1 تسري هذه المتطلبات على المنتجين بالأضافه إلى التزاماتهم الأخرى تجاه المؤسسة كما نص عليه قانون المواصفات - الاتفاق بين المنتج والمؤسسة - وإجراءات الإدارة.

3-1 إن التنفيذ الفعال لمتطلبات هذه التعليمات يمكن أن يضمن مطابقة المنتوجات للمواصفة الفنية لمدة طويلة كما تقلل من احتمال إنتاج منتوجات غير مطابقة للمواصفات وتحول دون اتخاذ خطوات ضد المنتجين الذين ينتجون المنتوجات غير المطابقة.

4-1 إن متطلبات هذه التعليمات هي المتطلبات الدنيا. ربما بخصوص منتوجات خاصة يكون هناك ضرورة أن تحدد متطلبات أخرى ومحددة من قبل اللجنة الفنية المختصة.

5-1 أن استعمال شارة المواصفات من قبل المنتج ما هو إلا تصريح المنتج بأن المنتوج مطابق للمواصفة الفنية. لهذا السبب من الضروري أن يكون باستطاعة المنتج أن يفحص إنتاجه بنفسه وان يحدد المنتوجات غير المطابقة وان يسعى لتصليح الخلل المكتشف وتحديد الأسباب التي أدت إلى حدوث الخلل واتخاذ الخطوات الضرورية لإزالة هذه الأسباب حتى لا يتكرر حدوث الخلل.

6-1 وظيفة ممثلي المؤسسة التأكد بأن المتطلبات المفصلة بهذه التعليمات منفذه عمليا بالفعل. إن عدم تنفيذ هذه المتطلبات، بغض النظر مطابقة المنتوج للمواصفة الفنية أو لا، يمكن أن يؤدي إلى إلغاء شارة المواصفات للمنتوج.

2- تعريفات

1-2 منتوجات: وتشمل المواد، الاجزاء، الأنظمة الفرعية.... الخ والموسومة بشارة المواصفات أو المعدة لان توسم بشارة المواصفات.

2-2 المنتج: كما تم تعريفه بتشريعات شارة المواصفات.

3-2 المواصفات: هي المواصفات والتفصيلات الفنية التي نشرت من قبل المؤسسة.

4-2 ممثل المؤسسة: هو الشخص الذي تم تعينه من قبل مدير قسم الجودة والشهادات لكي يمثل المؤسسة في أمر معين.

3- متطلبات

1-3 مسئوليات إدارة المنتج

1-1-3 على إدارة المنتج أن تحدد وتوثق سياستها في الجودة، في إطار هذه السياسة تلتزم إدارة المنتج بمتطلبات مواصفات المنتوجات وبمتطلبات هذه التعليمات.

2-1-3 على إدارة المنتج أن تعين مسئول لنظام الجودة في طاقمها أو أن يكون باستطاعته أن يرفع التقارير مباشرة لها. (من الآن يسمى ممثل إدارة المنتج)

3-1-3 على إدارة المنتج أن تمنح ممثلها حرية العمل والسلطة الملائمة لتنفيذ مهامه وتطبيق متطلبات هذه التعليمات.

4-1-3 يكون ممثل إدارة المنتج صلة الربط مع المؤسسة بكل المواضيع المتعلقة بمنح التصريح وخصوصا تنفيذ متطلبات هذه التعليمات.

5-1-3 على إدارة المنتج أن توظف المصادر الملائمة والأيدي العامله المؤهلة،بقدر الحاجة إليها، لتطبيق متطلبات هذه التعليمات.

2-3 نظام الجودة

1-2-3 على المنتج أن يؤسس ويحافظ على نظام جوده فعال وموثق يضمن بان تكون المنتوجات مطابقة لمتطلبات المواصفات الفنية، هذا النظام الموثق يشمل:

إجراءات، تعليمات عمل، تعليمات فحص، وأي وثائق متعلقة بالمتطلبات المحددة في هذه التعليمات والمواصفات الفنية.

2-2-3 على المنتج أن يجهز خطة جوده مفصلة لكل منتوج ليوافق عليها ممثل المؤسسة. على خطة الجودة أن تشمل، ولكن ليست محصورة بـ، التفاصيل التالية:-

1- مخطط مفصل لعملية الإنتاج منذ بدء استلام المواد الخام حتى المنتوج النهائي وعملية تغليفه وتخزينه.
2- بيان نقاط الفحص في عملية الإنتاج.
3- اذا لزم الامر، تفاصيل نقاط التوقف في عملية الإنتاج (هي نقاط الفحص التي يجب عدم تحويل المنتوج عندها للمرحلة التالية حتى الحصول على نتائج فحص إيجابية).
4- تفاصيل البنود التي ستفحص عند كل نقطة فحص.
5- تفاصيل أدوات وطريقة الفحص عند كل نقطة.
6- وصف للنماذج التي يتم تسجيل نتائج الفحص عليها.
7- حجم عينة ووتيرة الفحص عند كل نقطة.
8- مواصفات الشخص المسؤول عن إجراء الفحوص.

3-3 ملف المنتوج

1-3-3 يجب أن يجهز لكل منتوج ملف يصف تصميمه بوضوح. وبصوره عامه يشمل ملف المنتوج، اذا لزم واضطر الامر، البنود التالية:

1- مخطط للمنتوج يحوي على وصف عام له وأبعاده الرئيسية.
2- صور فوتوغرافية عامه للمنتوج (من زوايا مختلفة) واجزائه الرئيسية.

3- في حالة المنتوجات الكهربائية - خرائط للدوائر الكهربائية الاساسيه، إن وجدت علاقة، وتشمل مخطط توصيلات الأسلاك موضحا ألوان الأسلاك، تعليم المرابط وما شابهه.

4- قائمة الاجزاء الرئيسية التي توضح-نوع الجزء-اسم منتج الجزء–الموديل-اسماء المؤسسات/المختبرات التي صادقت على الجزء (إن وجدت)-والصفات الفنية الاساسيه للجزء.

ملاحظه: الاجزاء الرئيسية هي التي تؤثر على سلامة المنتوج والملامح التي يمكن أن تؤثر على مطابقة المنتوج للمواصفة.

5- صفات المواد الاساسيه التي صنع منها المنتوج - على أن يتم التركيز بصوره خاصة على المواد السامة والقابلة للاشتعال.

6- كتالوجات، تعليمات وأي نشرات فنية أخرى يمكن أن تساعد في وصف المنتوج.

2-3-3 يجب أن يحافظ المنتج على ملف المنتوج. في حالات معينة، يمكن لممثل المؤسسة أن يطلب الملف لحفظه في المؤسسة، أو ان يسلم المنتج الملف لممثل المؤسسة للتفتيش والتقييم لفترة قصيرة من الزمن.

3-3-3 على المنتج أن يشعر المؤسسة بأي تعديل أساسي على المنتوج. ويجب أن يتم تدوين هذا التعديل في ملف المنتوج بصورة مناسبة. يجب أن تصادق المؤسسة على التغييرات في الملف.

4-3 إجراءات الجودة

1-4-3 على المنتج أن يجهز إجراءات جوده مفصلة وموثقة تصف نظام الجودة الذي يحافظ عليه وفق متطلبات هذه التعليمات

2-4-3 على إجراءات الجودة أن تحدد المسئوليات،الصلاحيات، والعلاقات المتبادلة بين جميع عاملي المنتج الذين لهم علاقة بالمنتوجات.

3-4-3 يجب أن يصادق ويوقع مدير الشركة وممثل إدارة المنتج على إجراءات الجودة

4-4-3 تجهز إجراءات الجودة وفق مواصفة كتابة اجراءات الجودة وتعليمات المؤسسة.

ملاحظة: كانت المواصفة تحت التحضير أثناء نشر هذه المواصفة.

5-3 مراجعة الطلبيات

عندما يتم إنتاج منتوج وفق طلب خاص لزبون معين، على المنتج أن يراجع الطلبية ليتاكد (ضمن عدة أشياء أخرى) بان الطلبية لا تتناقض مع المواصفة الفنية للمنتوج. عند وجود أي تناقض، على المنتج أن يرفض الطلبية إلا إذا حصل على موافقة مسبقة من مجلس علامة الجودة.

6-3 التوثيق

1-6-3 يجب أن يكون بمتناول المنتج جميع التوثيقات الحديثة الضرورية لإنتاج وفحص المنتوجات، والتي تشمل المواصفات الفنية للمنتوج، المخططات، تعليمات الإنتاج والفحص... الخ.

2-6-3 على المنتج أن يؤسس ويحافظ على إجراءات موثقة لمراقبة التوثيق، وهذه المراقبة تشمل (وليست محصورة بـ) ما يلي:-

1- ضمان بان كل التوثيقات المطلوبة متوفرة بكل المواقع التي من الضروري عندها إجراء عمليات متعلقة بإنتاج وفحص المنتوجات.

2- طريقه لتحديث التوثيقات عند الضرورة.

3- ترتيبات ملائمة للتخلص من كل التوثيقات المنتهية أو إتلافها أو تمييزها بصورة مختلفة.

7-3 مراقبة المشتريات

1-7-3 يجب أن تكون كل طلبيات الشراء من موردين ومتعهدين ثانويين خطية وان تحتوي على وصف دقيق للمواد المطلوبة، الاجزاء، التركيبات الفرعية، الإجراءات.....الخ (بعد الآن تسمى المواد). كذلك على الطلبيه أن تصف الفحوص التي يجب على المورد أو المتعهد الثانوي أن ينفذها والتسجيلات المرافقة للارساليه.

ملاحظة : المورد: هي المؤسسة التي تورد البضائع الجاهزة.

متعهد ثانوي: هي المؤسسة التي تنتج المادة من اجل الزبون وفق مواصفاته.

2-7-3 على المنتج أن يحدد متطلبات وأنظمة الجودة للمتعهد الثانوي لكي يحافظ عليها للحد الضروري. في هذه الحالات على المنتج أن يتأكد من أن المتعهد الثانوي حقق هذه المتطلبات بالفعل. على المنتج أن يضع إجراءات لاختيار متعهدين ثانويين على أساس جودة عملهم، وان يتحقق من ذلك بإجراء تفتيش متابعة. على المنتج أن يرفض التعامل مع أي متعهد ثانوي يثبت بان جودة عمله غير مطابقة لمتطلباته.

3-7-3 على المنتج أن يتخذ جميع الخطوات الضرورية للتأكد بان المواد المشتراه لن تسبب في انحراف المنتوج عن المواصفة الفنية. إذا أقرت المواصفة الفنية متطلبات للمواد، فعلى المنتج أن يتحقق من المطابقة.

8-3 تشخيص ومتابعة المنتوج

على المنتج أن يؤسس ويضع ويشغل طريقة موثقة لتشخيص المنتوج خلال جميع مراحل الإنتاج، التوزيع، والتركيب. هذا التشخيص يحتوي وفق المطلوب على ما يلي: -

1- تشخيص لوجبة الإنتاج.

2- تشخيص لجميع مراحل الإنتاج، تاريخ المرحلة والمسئول عنها.

3- تشخيص للمواد والاجزاء التي أضيفت إلى المنتوج.

4- كمية المنتوجات بوجبة الإنتاج.

5- رقم تشخيصي لكل منتوج، إذا كانت المواصفة تطلب ذلك.

9-3 التفتيش والفحص

1-9-3 عـام:

3-9-1-1 ينفذ التفتيش وفق المخططات، المواصفات وتعليمات الفحص، المفصلة والصحيحة

3-9-1-2 يجب أن توثق نتائج التفتيش على نماذج مصادق عليها، وان توقع من قبل الشخص المسئول عن إجراء الفحص.

3-9-1-3 اخذ العينات للتفتيش يجب أن يعتمد على برنامج إحصائي مقبول لأخذ للعينات.

3-9-1-4 يجب على المنتج أن يتأكد من أن الظروف المحيطة بمكان الفحص ملائمة للتفتيش والفحوص التي تنفذ، آخذا بالحسبان المنتوج، دقة الفحص، ومتطلبات المواصفة الفنية.

3-9-2 تفتيش الاستلام:

3-9-2-1 على المنتج أن ينفذ إجراءات تفتيش على المواد المرسلة من الموردين والمتعهدين الثانويين، يجب أن ينفذ التفتيش وفق تعليمات موثقه والتي تحدد (ضمن أشياء أخرى) حجم عينه الفحص، المواضيع التي يجب أن يفتش عليها، وطرق التفتيش /الفحص، ومعيار القبول والرفض.

3-9-2-2 يحدد حجم العينة والمواضيع التي سيفتش عليها بالاعتماد على طبيعة المادة، مصداقية المورد أو المتعهد الثانوي، تسجيلات الجودة السابقة الموردة من نفس المصدر، تقارير الفحص المرافقة، وما شابه.

3-9-2-3 على اقل تقدير، يجب أن يجري المنتج تفتيشا بصريا للكشف عن أي عيوب ظاهرة، التأكد من الكمية المستلمة، ويفتش على تقارير فحص المورد أو المتعهد الثانوي.

3-9-3 فحوص خط الإنتاج:

3-9-3-1 على المنتج أن ينفذ تفتيشا وفحصا على المنتوج في نقاط الفحص المحددة في خطة الجودة للمنتوج.

3-9-3-2 يجب الحصول على نتيجة إيجابية للفحص عند نقاط التوقف المحددة في خطة الجودة للمنتوج للانتقال بالمنتوج لمرحلة الإنتاج التالية.

3-9-4 تفتيش نهائي:

3-9-4-1 يجب على المنتج أن ينفذ تفتيشا نهائيا وفق (وليس محددا بـ...) خطة الجودة لكي يتأكد من مطابقة المنتوج النهائي للمواصفة الفنية. عندما تطلب المواصفة الفنية فحوص معينة للمنتوج النهائي، على المنتج أن يجري تلك الفحوص.

3-9-4-2 على التفتيش النهائي أن يتأكد من أن جميع الفحوص المحددة لعملية الإنتاج تمت كما يجب.

3-10 أدوات التفتيش والفحص والقياس

3-10-1 يجب أن يتأكد المنتج من تواجد جميع أدوات التفتيش والفحص والقياس المطلوبة (من الآن تسمى أدوات الفحص) للفحوص المحددة وبالدقة المحددة وحسب خطة الجودة للمنتوج. وبالتحديد، على المنتج أن يوفر أجهزة الفحص التي تمكنه من تحديد ملائمة المنتوج للمواصفة.

*ملاحظة: من اجل الوصول إلى تطابق وتلائم بين فحوص المنتج وفحوص المؤسسة، يوصى المنتج بان يستشير ممثل المؤسسة في أي عملية شراء لأجهزة فحص جديدة.

3-10-2 عندما تكون أجهزة الفحص مكلفة وليست بحوزة المنتج، فعليه أن يتخذ الترتيبات المناسبة والمقبولة من قبل المؤسسة لإجراء الفحوص المطلوبة وبالوتيرة المطلوبة بواسطة مختبر مقبول على المؤسسة.

3-10-3 يجب أن تعاير أجهزة الفحص بواسطة أجهزة معايرة مرخصة لها علاقة معروفة وصحيحة مع المواصفات الوطنية المتعارف عليها. تحدد الظروف وتيرة المعايرة، بشكل عام تتم المعايرة سنويا إلا إذا ثبت أن من الممكن زيادة أو إنقاص هذه الوتيرة.

3-10-4 في وضع استخدام القوالب أو النماذج أو غيرها لتحديد مطابقة المنتوج للمتطلبات، تعتبر أجهزة فحص.

3-10-5 يجب أن تتم المعايرة في مختبر معتمد من قبل المؤسسة.

3-10-6 تحمل أجهزة الفحص وسائل لتشخيص وضع المعايرة - هذا التشخيص يشمل على الأقل التفاصيل التالية:

1- تاريخ المعايرة الأخير.
2- تاريخ المعايرة القادم.
3- اسم المختبر والشخص الذي قام بالمعايرة.

3-10-7 يجب أن يتأكد المنتج بان الأجهزة غير المعايرة أو الخاطئة لا تستخدم وليست بحوزة عاملي المنتج.

3-10-8 يجب أن يتأكد المنتج من أن نقل وحفظ وتخزين أجهزة الفحص لا تؤثر على دقتها وملاءمتها

3-10-9 يجب أن يحافظ المنتج على وجود فهرس بطاقات مرتب لأجهزة الفحص يسجل به المعلومات الفنية للأجهزة ومعلومات المعايرة، كما يحتوي على السجل الكامل للتصليحات وإعادة التشغيل التي جرت عليها.

3-10-10 بالرغم مما ذكر مسبقا، من المسموح استخدام أجهزة فحص لأغراض عامة فقط وليس لأغراض القياس، فهذه الأجهزة ليست بحاجة لمعايرة دورية بشرط أن تحمل علامة واضحة تبين بان هذه الأجهزة ليست لأغراض القياس.

3-11 وضع الفحص والتفتيش

3-11-1 يحدد وضع الفحص والتفتيش وضع المنتوج وفق معيارين اثنين:

1- هل تم فحص المنتوجات أم هي خلال الفحص.
2- نجاح المنتوجات بعد الفحص أو رسوبها.

3-11-2 يتم الوسم بوسائل ملائمة للمنتوج ولطريقة الإنتاج، مثل، ختم المنتوج نفسه، شارة ملصقه للمنتوج، علامة على كرت مرفق وما شابه.

3-11-3 في وضع عدم إمكانية وسم المنتوج لأسباب فنية، يتم الوسم بوسائل ملائمة أخرى مثل وضعها في مكان خاص، تلوين منشآت التخزين وما شابه

4-11-3 توسم المنتوجات غير المطابقه للمتطلبات بصوره مغايرة.

5-11-3 تحدد سجلات التفتيش والفحص الشخص الذي حدد وضع المنتوج.

6-11-3 تحدد إجراءات المنتج الأشخاص المخولين بتغيير وضع المنتوجات غير المطابقة للمتطلبات.

12-3 مراقبه المنتوجات غير المطابقة

1-12-3 يجب عزل جميع المنتوجات (من مختلف مراحل الإنتاج) التي وجدت بأنها غير مطابقة عن باقي منتوجات عملية الإنتاج وخزنها في مخزن مميز بصورة ملائمة. عند عدم إمكانية تطبيق هذه المتطلبات لأسباب موضوعية، يجب اخذ خطوات متشددة للتأكد من عدم استعمال هذه المنتوجات إلا بموافقة شخص مخول.

2-12-3 يجب أن يؤسس المنتج إجراءات لنقل المنتوجات غير المطابقة، وهذه الإجراءات تحدد بصورة منفردة الشخص المخول للتصرف بها.

3-12-3 يجب على المنتج أن يؤسس ويحافظ على سجلات منتظمة للمنتوجات غير المطابقة والمكتشفة أثناء تفتيش الاستلام، عملية الإنتاج، التفتيش النهائي، أو التي وجدت تالفة لدى الزبائن (إما عن طريق الشكاوى أو خلال فترة الضمان).

4-12-3 يجب إعادة التفتيش على المنتوجات غير المطابقة إذا أعيد تشغيلها أو تصليحها.

13-3 النقل، التخزين، التغليف، والتسليم

1-13-3 يجب على المنتج أن يوفر وسائل نقل ملائمة لمنع إلحاق أي ضرر بالمنتوجات المنقولة، أو بمنتوجات أخرى موجودة في مرحلة النقل. على الشخص المصاحب للنقل الميكانيكي أن يكون مؤهلا لهذه الطريقة، وفي وضع نص القانون على هذا يجب أن يحمل شهادة ملائمة تؤهله للقيام بهذا العمل.

2-13-3 يجب على المنتج أن يوفر أماكن تخزين ملائمة آخذا بعين الاعتبار الظروف الملائمة للمنتوجات المخزنة لمنع أي تلف أو تردي بوضع المنتوجات أو المواد الخام. كما يجب أن تفصل المواد الخام عن المنتوجات النهائية.

3-13-3 يجب على المواد الخام أن توسم بصورة مناسبة تضمن تمييزها الكامل بدون غموض. وبشكل عام تستخدم طريقة (الداخل أولا يخرج أولا) لمنع أي تردي بجودة المواد الخام.

4-13-3 على المنتج أن يتأكد من أن المنتوجات النهائية المتطابقة فقط هي التي تخزن في مخازن المنتوجات النهائية. يجب عدم وسم المنتوجات غير المطابقة للمواصفة الفنية.

5-13-3 على المنتج أن يفتش على المنتوجات النهائية والمواد الخام المخزنة بوتيرة مناسبة لكي يتم تشخيص أي تردي محتمل لها.

6-13-3 على المنتج أن يؤسس ويحافظ على إجراءات مراقبة خاصة للمواد الخام التي تتميز بقلة زمن تخزينها، على أن يتخلص منها عند انتهاء صلاحياتها.

7-13-3 يجب أن يؤخذ بعين الاعتبار عند تغليف المنتوجات النهائية بان توفر الحماية الملائمة ضد التضرر أثناء النقل في المصنع، أو أثناء التسليم للزبون، وظروف التخزين لدى الزبون. على المنتج أن يحقق هذه الظروف حتى لو لم يرد ذكرها في المواصفة الفنية. يجب أن تحتوي الرزمة على كل المواد المصاحبة مثل تعليمات التشغيل وإضافات التركيب (إن وجدت).

14-3 إجراءات التصحيح

1-14-3 على المنتج أن يتخذ إجراءات تصحيح في وضع تكرار مشاكل في الجودة، وخاصة تلك المشاكل المتعلقة بمطابقة المنتوج للمواصفة الفنية. ويمكن اكتشاف مشاكل الجودة عند المنتج (خلال المراحل المختلفة لعملية الإنتاج) بعد تقديم شكوى من الزبون، أو عن طريق نتائج الفحوص التي تجريها المؤسسة.

2-14-3 على إجراءات التصحيح أن تشمل تحقيقا لتشخيص أسباب مشاكل الجودة، وان تضع طريقة لإزالة هذه الأسباب، وان تتخذ جميع الإجراءات الضرورية لمنع تكرار حدوث هذه الأسباب.

15-3 سجلات الجودة

1-15-3 كل عمليات التفتيش والفحص بدءا من المواد الخام وحتى المنتوج النهائي يجب أن ترفق بسجلات ملائمة.

2-15-3 على المنتج أن يحافظ على تقارير الفحص والتفتيش بطريقة تسمح بالرجوع إليها بناءا على العناصر التالية مثل: التاريخ، رقم وجبة الإنتاج، نوع المنتوج وما شابهه. يجب تخزين السجلات في مكان ملائم يمنع حدوث أي تلف أو تردي أو ضياع للسجلات.

3-15-3 يجب على المنتج أن يؤسس ويحافظ على ملف خاص لشكاوى الزبائن موضحا إجراءات التصحيح التي اتخذت بعد هذه الشكاوى.

4-15-3 يجب أن تحفظ سجلات الجودة لمدة لا تقل عن عام، إلا إذا طلب غير ذلك من قبل الزبون، المواصفة، القانون أو المؤسسة.

5-15-3 يجب أن تكون سجلات الجودة بمتناول ممثل المؤسسة لإجراء التفتيش والفحص.

6-15-3 تضاف متطلبات هذا الفقرة للتعليمات الخاصة للسجلات المذكورة في فقرات أخرى من هذه التعليمات.

16-3 تدريب وتأهيل العاملين

1-16-3 على المنتج أن يدرب أولئك العاملين التي من الممكن أن تؤثر أعمالهم على جودة المنتوج. يجب أن يغطي برنامج التدريب (إن كان هناك حاجة) إجراءات الجودة للمنتج، طرق الإنتاج، طرق التفتيش والفحص، متطلبات المواصفة الفنية، ومتطلبات هذه التعليمات

2-16-3 على المنتج أن يوفر شهادات للعاملين والتي تتطلب المواصفة أو القانون بان يكونوا مخولين لأعمالهم.

3-16-3 على المنتج أن يحدد الأعمال الخاصة التي تؤثر بشكل كبير على جودة المنتوج، وعليه أن يوفر شهادات للعاملين على هذه الأعمال.
4-16-3 على المنتج أن يحافظ على سجلات ملائمة لتدريب وتخويل العاملين.
5-16-3 عندما تؤثر مواصفات جسدية خاصة بالعاملين بالإنتاج على جودة المنتوج، يجب أن تجرى لهم فحوص طبية دورية.
على المنتج أن يتخذ جميع الاحتياطات من اجل منع العاملين الذين لديهم قدرات محدودة من العمل في وظائف ممكن أن تؤدي إلى إنتاج غير مطابق.

The Palestinian Standard PS-15 English Edition

Requirements for marking products with PS Mark (Quality Mark)

1. **General**

1.1These instructions specify the requirements of the quality system of producers who have obtained a permit from the Standards and Metrology Institution (henceforth called the Corporation) to mark their products with the specification mark or with producers concerned with obtaining such a permit.

1.2These requirements shall apply to producers in addition to their other obligations to the Corporation as provided for in the Standards Act - the agreement between the producer and the enterprise - and the management procedures.

1.3The effective implementation of the requirements of these instructions can ensure that the products comply with the technical specification for a long period of time, reduce the possibility of producing non-conforming products, and prevent taking steps against producers who produce non-conforming products.

1.4The requirements of these instructions are the minimum requirements. With regard to special products, it is necessary to specify other requirements specified by the competent technical committee.

1.5The use of the Product Mark by the Product is a product declaration that the Product conforms to the Technical Specifications. For this reason it is necessary that the product can inspect its own production and identify the non-conforming products and seek to repair the detected defect and identify the reasons that led to the imbalance and take the necessary steps to remove these reasons so as not to recur the occurrence of the imbalance.

1.6The function of the Foundation's representatives shall ensure that the requirements detailed in these Instructions are effectively implemented. Failure to implement these requirements, regardless of whether or not the product meets the technical standard, can result in the revocation of the product specification badge.

2. **Definitions**:

2.1 Products: Includes materials, parts, and sub-systems, etc., marked with specifications or prepared to mark specifications.

2.2 Product: as defined by the standard badge legislation.

2.3 Specifications: The specifications and technical specifications published by the Foundation.

2.4 Representative of the Foundation: The person appointed by the Director of the Quality and Certification Department to represent the Corporation in a particular order.

3. **Requirements**.

3.1 Product management responsibilities

3.1.1 Product management shall define and document its quality policy. Within the framework of this policy, product management shall comply with the requirements of product specifications and the requirements of these instructions.

3.1.2 Product management must appoint an official for the quality system of its staff or be able to report directly to it. (Henceforth, that called the Product Management Representative).

3.1.3The management of the product shall grant its representative the freedom of action and the appropriate authority to carry out his duties and to implement the requirements of these instructions.

3.1.4 The representative of the Product Department shall be the liaison with the Corporation in all matters relating to granting the permit, in particular the implementation of the requirements of these instructions.

3.1.5 The management of the product shall employ adequate sources and qualified working hands, to the extent necessary, to apply the requirements of these instructions.

3.2 Quality system

3.2.1 The product shall establish and maintain an effective and reliable quality system that ensures that the products conform to the requirements of technical specifications. This documented system includes: Procedures, work instructions, inspection instructions, and any documents relating to the requirements specified in these instructions and technical specifications.

3.2.2 The product shall prepare a detailed quality plan for each product to be approved by the representative of the institution. The quality plan should include, but is not limited to, the following details:

1- A detailed plan for the production process from the beginning of the receipt of the raw materials until the final product, the packaging and storage process.

2-Statement of inspection points in the production process.

3. If necessary, the details of the stops in the production process (the test points that the product should not be converted to the next stage until the results of a positive examination).

4. Details of the items to be examined at each inspection point.

5. Details of tools and method of examination at each point.

6. Description of the models for which the test results are recorded.

7- Sample size and frequency of inspection at each point.

8. The specifications of the person responsible for conducting the tests.

3.3 Product file

3.3.1 Each product shall be equipped with a file that clearly describes its design. Generally, the product file includes, if necessary, the following items:

1. A scheme of the product containing a general description of it and its main dimensions.

2. General photographs of the product (from different angles) and its main parts.

3 - In the case of electrical products - maps of the main electrical circuits, if any relationship, including the scheme of wiring connections, explaining the colors of wires, marking connectors and similar.

4 - List of the main parts that illustrate: Part type, Product name of the part, Model, The names of institutions, laboratories that have ratified the part (if any), and the basic technical characteristics of the part.

Note: The main parts are those that affect the safety of the product and the features that can affect the conformity of the product to the standard.
5 - Characteristics of the basic materials from which the product was made, with special emphasis on toxic and flammable substances.
6. Catalogs, instructions and any other technical publications that can help describe the product.

3.3.2 The product must be kept on the product file. In certain cases, the enterprise representative may request the file to be kept in the organization, or the product should deliver the file to the enterprise representative for inspection and evaluation for a short period of time.
3.3.3 The Product shall feel that the Corporation shall have any fundamental modification to the Product. This modification of the product file must be properly recorded. The organization must approve changes to the file.

3.4 Quality procedures.

3.4.1 The product shall provide detailed and documented quality procedures describing the quality system that it maintains in accordance with the requirements of these instructions.

3.4.2 Quality procedures shall specify the responsibilities, competencies and interrelationship between all product employees who are related to the products.

3.4.3The company manager and the product management representative shall certify and sign the quality procedures.

3.4.4Quality procedures shall be prepared according to the standard of writing the quality procedures and the instructions of the institution.

Note: The specification was under preparation during the publication of this standard.

3.5 Review of Orders

When a product is produced according to a specific request to a particular customer, the product must review the order to ensure (among other things) that the order does not contradict the technical specification of the product. When there is any contradiction, the product must reject the order only if it receives the prior approval of the Quality Mark Board.

3.6 Documentation

3.6.1 The product shall have all the necessary modern documentation necessary for the production and inspection of the products, including the technical specifications of the product, the drawings, production instructions, inspection ... etc.

3.6.2 The Product shall establish and maintain documented documentation control procedures, including (but not limited to) the following:

1. Ensure that all required documentation is available at all locations where it is necessary to conduct operations related to the production and inspection of products.

2. A way to update the documentation when necessary.

3. Adequate arrangements for the disposal, destruction or different discrimination of all completed documentation.

3.7 Procurement Control

3.7.1 All purchase orders must be made by suppliers and subcontractors in writing and contain an accurate description of the required materials, parts, sub-assemblies, procedures, etc. (henceforth referred to as materials). The applicant should also describe the tests that the supplier or subcontractor must perform and the accompanying recordings of the consignment.

Note: Supplier: is an enterprise that supplies finished goods.

Subcontractor: An organization that produces material for the customer according to its specifications.

3.7.2 The product shall specify the quality requirements and regulations of the subcontractor in order to maintain them to the necessary extent. In such cases, the producer must ensure that the subcontractor has already met these requirements. The producer shall establish procedures for the selection of secondary contractors on the basis of the quality of their work and shall be

verified by a follow-up inspection. The Product shall refuse to deal with any subcontractor who proves that the quality of his work is not in conformity with his requirements.

3.7.3 The product shall take all necessary steps to ensure that the purchased material will not cause the product to deviate from the technical specification. If the technical specification meets the requirements of the materials, the product must verify the conformity.

3.8 Diagnosis and follow-up of the product

The product shall establish, develop and operate a documented method for diagnosing the product during all stages of production, distribution, and installation. This diagnosis contains as required the following:
1- Diagnosis of the production schedule.

2 - Diagnosis of all stages of production, the date of the stage and responsible for it.

3- Diagnosis of the materials and parts added to the product.

4 - Quantity of products with a meal.

5- A diagnostic number for each product, if the specification so requests.

3.9 Inspection and Testing

3.9.1 General:

3.9.1.1 The inspection shall be carried out in accordance with the detailed and correct specifications, specifications and inspection instructions 3.9.1.2The inspection results shall be documented on approved forms and signed by the person responsible for conducting the examination. 3.9.1.3 Sampling for inspection shall be based on an acceptable statistical program for taking samples.

3.9.1.4 The product shall ensure that the conditions surrounding the place of inspection are appropriate for the inspection and examinations carried out, taking into account the product, the accuracy of the inspection and the requirements of the technical specification.

3.9.2 Inspection of receipt:

3.9.2.1 The product shall carry out inspection procedures on materials sent by suppliers and secondary contractors. The inspection shall be carried out in accordance with documented instructions which specify, inter alia, the size of the inspection, the subjects to be inspected, inspection / inspection methods, the standard of acceptance and rejection.

3.9.2.2 The size of the sample and the topics to be examined based on the nature of the material shall determine the credibility of the supplier or subcontractor, the previous quality records supplied from the same source, the accompanying inspection reports and the like.

3.9.2.3 At the very least, the product must perform a visual inspection to detect any apparent defects, ascertain the quantity received, and inspect the inspection reports of the supplier or subcontractor.

3.9.3 Production line tests:

3.9.3.1 The product shall carry out inspection of the product at the inspection points specified in the product quality plan.

3.9.3.2 A positive result of the inspection shall be obtained at the stops specified in the product quality plan for the transition to the next production stage.

3.9.4 Final Inspection:

3.9.4.1 The product shall carry out a final inspection in accordance with (and not limited to ...) the quality plan in order to ensure that the final product conforms to the technical specification. When the technical specification requires specific tests for the final product, the product must carry out these tests.

3.9.4.2 The final inspection shall ensure that all tests specified for the production process are performed properly.

3.10 Inspection, Testing and Measurement Tools.

3.10.1 The product shall ensure the presence of all inspection, inspection and measurement tools required (henceforth referred to as inspection tools) for

specific tests and at the specified accuracy and according to the quality plan of the product. Specifically, the product must provide the testing equipment that enables it to determine the product's suitability for the specification.

* Note: In order to achieve a match and match between the product tests and the institution tests, the product is recommended to consult with the representative of the institution in any purchase of new screening devices.
3.10.2 When inspection equipment is expensive and not in the possession of the producer, it shall make appropriate and acceptable arrangements by the enterprise to perform the required tests at the required pace with a laboratory acceptable to the enterprise.
3.10.3 Inspection devices shall be calibrated by certified calibration equipment having a known and correct relationship with the national standard. Conditions determine the calibration frequency. In general, calibration is performed annually unless it is proved possible to increase or decrease this frequency.

3.10.4 In the development of the use of templates, models or others to determine the conformity of the product to the requirements,
3.10.5 Calibration shall be carried out in an accredited laboratory.
3.10.6 Testing devices shall carry means for diagnosis of calibration status - this diagnosis shall include at least the following details:
1. The date of the last calibration.

2. The next calibration date.

3. Name of the laboratory and the person who calibrated.

3.10.7 The product shall ensure that non-calibration or faulty devices are not used and are not in the possession of the product agents. 3.10.8 The product shall ensure that the transfer, storage and storage of the inspection equipment does not affect its accuracy and suitability 3.10.9 The product shall maintain a payroll index for the inspection equipment that records the technical information of the equipment and the calibration information, and contains the complete record of repairs and re-operation.

3.10.10Despite the foregoing, it is permitted to use only general purpose test devices, not for measurement purposes. These devices do not need periodic calibration, provided they carry a clear indication that these devices are not for measurement purposes.

3.11 Testing and Inspection Status.

3.11.1 The mode of inspection and inspection shall determine the status of the product according to two criteria:

1. Have the products been examined or are they being tested? 2 - The success of products after examination or failure.

3.11.2 The marking shall be done by appropriate means of the product and for the production method, such as, the product seal itself, the label of the product,

the sign of an attachment card and the like.

3.11.3 In the event that the product cannot be labeled for technical reasons, it shall be marked by other appropriate means such as placing it in a special place, and coloring storage facilities.

3.11.4 Products that do not conform to requirements are marked differently.

3.11.5 Inspection and inspection records shall specify the person who has determined the status of the product.

3.11.6 Product procedures shall specify the persons authorized to change the status of products that do not meet the requirements.

3.12 Products Nonconformity Control.

3.12.1 All products (of different stages of production) that are found to be non-identical to the rest of the production process and stored in an appropriately designated warehouse shall be isolated. If these requirements cannot be applied for objective reasons, strict steps should be taken to ensure that these products are not used unless authorized by an authorized person.

3.12.2 The product shall establish procedures for the carriage of non-conforming products, which shall individually determine the person authorized to act.

3.12.3 The producer shall establish and maintain regular records of non-conforming and disclosed products during the inspection of the receipt, the

production process, the final inspection, or that are found to be defective by the customers (either through complaints or during the warranty period).

3.12.4 Inspection of non-conforming products shall be carried out if they are re-operated or repaired.

3.13 Transportation, storage, packaging, and delivery

3.13.1The product shall provide adequate means of transport to prevent any damage to movable products or other products in the transport phase. The person accompanying the mechanical transport must be eligible for this method. In the text of the law, he must have an appropriate certificate that qualifies him to carry out this work.

3.13.2 The product shall provide adequate storage facilities, taking into account the conditions of the products stored to prevent any damage or deterioration of the status of the products or raw materials. Raw materials should also be separated from finished products.

3.13.3 Raw materials shall be properly labeled to ensure their complete and unambiguous distinction. In general, the method (inside first out first) is used to prevent any deterioration in the quality of raw materials.

3.13.4 The product shall ensure that only identical finished products are stored in finished product stores. Products that do not conform to the technical specification shall not be marked.

3.13.5 The product shall be inspected for finished products and raw materials stored at an appropriate rate in order to diagnose any possible deterioration.

3.13.6 The producer shall establish and maintain special control measures for raw materials with low storage time, and shall be disposed of at the expiry of their terms of reference.

3.13.7 Packaging of finished products shall be considered to provide adequate protection against damage during transportation at the factory, during delivery to the customer, and storage conditions of the customer. The product must achieve these conditions even if not mentioned in the technical specification. The package must contain all accompanying materials such as operating instructions and installation additives (if any).

3.14 Correction Procedures

3.14.1The producer shall take corrective action in the event of repeated quality problems, in particular those related to the conformity of the product to the technical specification. Product quality problems (during the different stages of the production process) can be detected after a complaint has been made by the customer or by the results of the examinations conducted by the institution.

3.14.2 Correction procedures shall include an investigation to diagnose the causes of quality problems, develop a method to remove these causes, and take all necessary measures to prevent the recurrence of such causes.

3-15 quality records

3.15.1All inspections and inspections, from raw materials to final product, shall be accompanied by appropriate records.

3.15.2 The product shall maintain inspection and inspection reports in such a way as to refer to them based on the following elements such as: date, meal number, product type and the like. Records must be kept in a convenient place to prevent any damage, degradation or loss of records.

3.15.3 The producer shall establish and maintain a special complaint file for customers, specifying the corrective measures taken after such complaints. 3.15.4 Quality records shall be kept for at least a year, unless otherwise requested by the customer, the standard, the law or the institution.

3.15.5 Quality records shall be available to the representative of the institution for the conduct of inspection and examination.

3.15.6 Add the requirements of this paragraph to the special instructions for records mentioned in other paragraphs of these instructions.

3.16 Training and qualification of employee's.

3.16.1The product shall train those workers whose business may affect the quality of the product. The training program should cover (if necessary) product quality procedures, production methods, inspection and inspection

methods, technical specification requirements, and requirements of these instructions.

3.16.2 The producer shall provide certificates to the employees that require the standard or the law to be authorized for their business.

3.16.3 The product shall specify the special works that significantly affect the quality of the product and shall provide certificates to the employees of such works.

3.16.4 The product shall maintain appropriate records for the training and authorization of personnel.

3.16.5 When the physical characteristics of the production personnel affect the quality of the product, they shall undergo periodic medical examinations. The product must take all precautions in order to prevent workers who have limited capabilities of working in jobs that may lead to an unmatched production.

Appendix B: Questionnaire

الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY

في ضوء اعداد الباحث لدراسة علمية تهدف الى تحسين المواصفة الفلسطينية PS-15لمتطلبات نظام الجودة اللازم للحصول على علامة الجودة الفلسطينية , الرجاء التكرم من سيادتكم التفضل باستيفاء عناصر هذه الاستبانة الذي يعد من الادوات الرئيسية لجمع البيانات. علما بأن كافة البيانات الواردة في الاستبانة لن يتم استخدامها الا في اغراض البحث العلمي , فضلا عن خضوعها للسرية التامة .

ولكم مني جزيل الشكر

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معلومـــــــات ديمـوغـرافيـــــة					
الجنس	1- ذكر			2- أنثى	
العمر	1- أقل من 22	2- 22-29	3- 30-39	4- 40-49	5- 50 فما فوق
التحصيل العلمي	1- اقل من توجيهي	2- توجيهي	3- دبلوم	4- بكالوريوس	5- ماجستير فأعلى
مكان السكن	1- رام الله والبيرة	2- شمال الضفة	3- جنوب الضفة	4- القدس	5- اريحا
مكان العمل					
قطاع العمل	1- انشاءات	2- اغذية	3- تصنيع هندسي	4- كيماويات	5- اخرى
المسمى الوظيفي					
معلومات الاتصال	الخلوي: رقم العمل: البريد الالكتروني:				

يرجى الاجابة على كافة الاقسام بوضع علامة ✓)(في المربع المخصص .

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على الزبائن من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	الممارسة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	التعرف على الزبائن المباشرين وغير المباشرين الذي يتلقون قيمة (منتج, خدمة) من المنظمة					
2	تحديد احتياجات الزبائن الحالية والمتسقبلية وتوقعاتهم					
3	ربط اهداف المؤسسة باحتياجات الزبائن وتوقعاتهم					
4	وصل احتياجات العملاء وتوقعاتهمفي جميع أنحاء المنظمة.					
5	تلبية احتياجات العملاء وتوقعاتهم من خلال التخطيط للسلع والخدمات المقدمة					
6	تلبية احتياجات العملاء وتوقعاتهم من خلال تطوير للسلع والخدمات المقدمة					
7	تلبية احتياجات العملاء وتوقعاتهم من خلال تصميم السلع والخدمات المقدمة					
8	تلبية احتياجات العملاء وتوقعاتهم من خلال انتاج السلع والخدمات المناسبة					
9	تلبية احتياجات العملاء وتوقعاتهم من خلال تسليم السلع والخدمات بشكل صحيح					
10	تلبية احتياجات العملاء وتوقعاتهم من خلال دعم السلع والخدمات المقدمة بعد تسليمها					

11	قياس ومراقبة رضا العملاءواتخاذ الإجراءات المناسبة.					
12	تحديد واتخاذ إجراءات بشأن احتياجات وتوقعات الأطراف التي يمكن أن تؤثررضا العملاء.					
13	إدارة العلاقات مع العملاء بنشاطلتحقيق النجاح المستمر					

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على مفهوم القيادة في المنظمة من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	**الممارسة**	**موافق بشدة**	**موافق**	**محايد**	**غير موافق**	**غير موافق بشدة**
1	عمل اتصال بين رسالة المنظمة ورؤيتهاالإستراتيجية وسياساتها وعملياتها في جميع أنحاءالمنظمة.					
2	إنشاء والحفاظ على القيم المشتركة والعدلوالنماذج الأخلاقية للسلوك على جميع المستوياتفي المنظمة.					
3	تأسيس ثقافة الثقة والنزاهة.					
4	تشجيع الالتزام على مستوى المنظمةللجودة.					
5	تأكد من أن القادة على جميع المستويات هم قدوة ايجابية للناس في المنظمة.					
6	تزويد الناس بالموارد المطلوبة ،التدريب والسلطة للتمكن من إجراء المساءلة.					
7	إلهام الناس وتشجيعهم وتنظيم إسهاماتهم في المنظمة.					

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على اشراك العاملين من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	الممارسة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	التواصل مع العاملين لترويجفهم أهميةمساهماتهم الفردية.					
2	تعزيز التعاون في جميع أنحاءالمنظمة.					
3	تسهيل المناقشة المفتوحة ومشاركةالمعرفة والخبرة.					
4	تمكين العاملين لتحديد قيود ومحددات الأداء واتخاذ المبادراتبلا خوف.					
5	إدراك والتعرف على مساهمات ومعرفة العاملين ومستوى التطوير الذاتي.					
6	تمكين التقييم الذاتي للأداءضد الأهداف الشخصية.					
7	إجراء استبيانات لتقييم رضا العاملين ، إبلاغهمبالنتائج ،واتخاذ الإجراءات المناسبة					

هذا الجزء من الاسئلة يتعلق باعتماد المنظمة لنهج العلميات من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	الممارسة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	تحديد أهداف النظام والعمليات اللازمة لتحقيقها.					
2	تحديد السلطات والمسؤوليات واليات المساءلة لإدارة العمليات.					
3	فهم قدرات المؤسسة وتحديد قيود الموارد قبل اتخاذ الإجراء.					
4	تحديد الاعتماد المتبادل في العملية وتحليل تأثير التعديلات على العمليات الفردية على النظام ككل.					
5	إدارة العمليات وعلاقاتها المتبادلة كنظام لتحقيق أهداف الجودة للمنظمة بفعالية وكفاءة.					

6	ضمان توافر المعلومات اللازمة لتشغيل وتحسين العمليات ورصد وتحليل وتقييم أداء النظام.					
7	إدارة المخاطر التي يمكن أن تؤثر على مخرجات العمليات والنتائج الإجمالية لنظام إدارة الجودة.					

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على التحسين من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	**الممارسة**	**موافق بشدة**	**موافق**	**محايد**	**غير موافق**	**غير موافق بشدة**
1	إنشاء أهداف التحسين على جميع مستويات المنظمة.					
2	تثقيف وتدريب الناس على جميع المستويات حول كيفية تطبيق الأدوات والمنهجيات الأساسيةلتحقيق أهداف التحسين.					
3	التأكد من أن الأشخاص مؤهلين للنجاح في تعزيز وإكمال مشاريع التحسين.					
4	تطوير ونشر العمليات لتنفيذ مشاريع التحسين في جميع أنحاء المنظمة.					
5	تتبع ومراجعة وتدقيق عملية التخطيط والتنفيذ والإنجاز والنتائج لمشاريع التحسين.					
6	دمج اعتبارات التحسين في تطوير السلع والخدمات والعمليات الجديدة أو المعدلة.					
7	الاعتراف والإقرار بالتحسين.					

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على القرارات المبنية على الأدلة من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	الممارسة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	تحديد وقياس ومراقبة المؤشرات الرئيسية لإثبات أداء المؤسسة.					
2	جعل جميع البيانات المطلوبة متاحة للأشخاص المعنيين.					
3	التأكد من أن البيانات والمعلومات دقيقة وموثوقة وآمنة بما فيه الكفاية.					
4	تحليل وتقييم البيانات والمعلومات باستخدام أساليب مناسبة.					
5	التأكد من أن الأشخاص مؤهلين لتحليل البيانات وتقييمها حسب الحاجة.					
6	اتخاذ القرارات واتخاذ الإجراءات يتم على أساس الأدلة ، متوازنة مع الخبرة والحدس					

هذا الجزء من الاسئلة يتعلق بتركيز المنظمة على ادارة العلاقات من خلال اجراءات نظام الجودة المطبق والمبني طبقا للمواصفة الفلسطينية (PS-15).

ساعدت اجراءات نظام الجودة المطبق على:						
الرقم	الممارسة	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1	تحديد الأطراف المعنية ذات الصلة (مثل الموردين والشركاء والعملاء والمستثمرين والموظفين والمجتمع ككل) وعلاقتهم بالمنظمة.					
2	تحديد وترتيب أولويات العلاقات مع الأطراف المعنية التي تحتاج إلى إدارتها.					
3	إنشاء العلاقات بحيث توازن بين المكاسب قصيرة الأجل والاعتبارات طويلة الأجل.					
4	تجميع وتبادل المعلومات والخبرات والموارد مع الأطراف المعنية ذات الصلة.					

5	قياس الأداء وتقديم ملاحظات الأداء إلى الأطراف المهتمة ، حسب الاقتضاء ، لتحسين مبادرات التحسين.					
6	إنشاء أنشطة تعاونية وتطويرية تعاونية مع الموردين والشركاء والأطراف المعنية الأخرى.					
7	التشجيع والاعتراف بالتحسينات والإنجازات التي حققها الموردون والشركاء.					

Appendix C: SWOT Analysis

الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY

الاخوة / الاخوات

تهدف هذه الاستمارة لتحديد نقاط القوة والضعف والفرص والمخاطر للمواصفة الفلسطينية PS-15 والمتعلقة بمتطلبات نظام الجودة الواجب توفرها في المنظمة المعنية بالحصول على علامة الجودة الفلسطينية PS.

وتعتبر هذه الاستمارة جزء من رسالة ماجستير بعنوان:

"تحسين المواصفة الفلسطينية PS-15 الخاصة بمتطلبات نظام الجودة اللازم للحصول على علامة الجودة"

نضمن لكم المحافظة على السرية التامة للمعلومات المعطاة وأي معلومات يتم استخدامها ستكون للبحث العلمي فقط.

نشكر لكم تعاونكم

لاستفساراتكم يمكن التواصل على البريد الالكتروني : ashraf_qasrawi_79@yahoo.com

SWOT ANALYSIS	أمور مساعدة لتحقيق الأهداف	أمور معطلة لتحقيق الأهداف
داخلية تعلق بالمنظمة	**نقاط القوة** ما الذي يتميز به نظام الجودة المقتبس من المواصفة الفلسطينية PS15 عن باقي الأنظمة والذي بدوره قد يحفز المنظمات لتطبيقه؟ ١. ..... ٢. ..... ٣. ..... ٤. ..... ٥. ..... ٦. ..... ٧.	**نقاط الضعف** ما هي نقاط الضعف التي قد تكون مانعة لتبني المنظمات لنظام الجودة المقتبس من PS15 ؟ ١. ..... ٢. ..... ٣. ..... ٤. ..... ٥. ..... ٦. ..... ٧. .....
خارجية تعلق بالبيئة الخارجية	**الفرص** بحسب وجهة نظرك ما هي إمكانيات تطوير وتحسين المواصفة الفلسطينية PS15 للحصول على نظام جودة فعال؟ ١. ..... ٢. ..... ٣. ..... ٤. ..... ٥. ..... ٦. ..... ٧.	**مخاطر** ما هي مخاطر الإبقاء على المواصفة بشكلها الحالي دون العمل على تطويرها وتحسينها؟ ١. ..... ٢. ..... ٣. ..... ٤. ..... ٥. ..... ٦. ..... ٧. .....

Appendix D: Comparison matrix of ISO9001.2015 and PS-15 requirement

ISO 9001.2015	PS-15	What's missed
0.1 General The adoption of a quality management system is a strategic decision for an organization that can help to improve its overall performance and provide a sound basis for sustainable development initiatives. The potential benefits to an organization of implementing a quality management system based on this International Standard are: a) The ability to consistently provide products and services that meet customer and applicable. statutory and regulatory requirements; b) Facilitating opportunities to enhance customer satisfaction. c) Addressing risks and opportunities associated with its context and objectives. d) The ability to demonstrate conformity to specified quality management system requirements. This International Standard can be used by internal and external parties. It is not the intent of this International Standard to imply the need for:	1.3 The effective implementation of the requirements of these instructions can ensure that the products comply with the technical specification for a long period of time, reduce the possibility of producing non-conforming products, and prevent taking steps against producers who produce non-conforming products. 1.4 The requirements of these instructions are the minimum requirements. With regard to special products, it is necessary to specify other requirements specified by the competent technical committee.	

— Uniformity in the structure of different quality management systems. — Alignment of documentation to the clause structure of this International Standard. — The use of the specific terminology of this International Standard within the organization. The quality management system requirements specified in this International Standard are complementary to requirements for products and services. This International Standard employs the process approach, which incorporates the Plan-Do-Check-Act (PDCA) cycle and risk-based thinking. The process approach enables an organization to plan its processes and their interactions. Ensure that its processes are adequately resourced and managed, and that opportunities for improvement are determined and acted on. Risk-based thinking enables an organization to determine the factors that could cause its processes and its quality management system to deviate from the planned results, to put in place preventive controls to minimize negative effects and to make maximum use of		

opportunities as they arise (see Clause A.4). Consistently meeting requirements and addressing future needs and expectations poses a challenge for organizations in an increasingly dynamic and complex environment. To achieve this objective, the organization might find it necessary to adopt various forms of improvement in addition to correction and continual improvement, such as breakthrough change, innovation and re-organization. In this International Standard, the following verbal forms are used: — "shall" indicates a requirement; — "should" indicates a recommendation; — "may" indicates a permission; — "can" indicate a possibility or a capability. Information marked as "NOTE" is for guidance in understanding or clarifying the associated requirement.		
0.2 Quality management principles		**0.2Quality management principles**
0.3 Process approach		**0.3Process approach**
0.3.1 General		**0.3.1 General**

0.3.2 Plan-Do-Check-Act cycle		**0.3.2 Plan-Do-Check-Act cycle**
0.3.3 Risk-based thinking		**0.3.3 Risk-based thinking**
0.4 Compatibility with other management system standards		**0.4 Compatibility with other management system standards**
Quality management systems — Requirements		
1 Scope This International Standard specifies requirements for a quality management system when an organization: a) needs to demonstrate its ability to consistently provide product or service that meets customer and applicable statutory and regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. All requirements of this International Standard are generic and are intended to be applicable to all organizations,	1.1 These instructions specify the requirements of the quality system of producers who have obtained a permit from the Standards and Metrology Institution (henceforth called the Corporation) to mark their products with the specification mark or with producers concerned with obtaining such a permit. 1.2 These requirements shall apply to producers in addition to their other obligations to the Corporation as provided for in the Standards Act - the agreement between the producer and the enterprise - and the management procedures.	

regardless of type, size and product provided. *NOTE 1* *In this International Standard, the terms "product" or "service" only apply to products and services intended for, or required by, a customer.* *NOTE 2* *Statutory and regulatory requirements can be expressed as legal requirements.*		
2 Normative references		**2 Normative references**
3 Terms and definitions For the purposes of this document, the terms and definitions given in ISO 9000:2015 apply.	2.1 Products: Includes materials, parts, and sub-systems, etc., marked with specifications or prepared to mark specifications. 2.2 Product: as defined by the standard badge legislation. 2-3 Specifications: The specifications and technical specifications published by the Foundation. 2.4 Representative of the Foundation: The person appointed by the Director of the Quality and Certification Department to represent the Corporation in a particular order	
4 Context of the organization		

4.1 Understanding the organization and its context		**4.1 Understanding the organization and its context**
4.2 Understanding the needs and expectations of interested parties		**4.2 Understanding the needs and expectations of interested parties**
4.3 Determining the scope of the quality management system		**4.3 Determining the scope of the quality management system**
4.4 Quality management system and its processes		
4.4.1The organization shall establish, implement, maintain and continually improve a quality management system, including the processes needed and their interactions, in accordance with the requirements of this International Standard. **The organization shall determine the processes needed for the quality management system and their application throughout the organization and shall:** **a) determine the inputs required and the outputs expected from these processes;** **b) determine the sequence and**	1.6 The function of the Foundation's representatives shall ensure that the requirements detailed in these Instructions are effectively implemented. Failure to implement these requirements, regardless of whether or not the product meets the technical standard, can result in the revocation of the product specification badge. 3.2.1 The product shall establish and maintain an effective and reliable quality system that ensures that the products conform to the requirements of technical specifications. This documented system includes: Procedures, work instructions, inspection	

interaction of these processes; **c) determine and apply the criteria and methods, (including monitoring, measurements and related performance indicators) needed to ensure the effective operation, and control of these processes;** **d) determine the resources needed and ensure their availability;** **e) assign the responsibilities and authorities for these processes;** **f) address the risks and opportunities in accordance with the requirements of 6.1,** **g) evaluate these processes and implement any changes needed to ensure that these processes achieve their intended results;** **h) improve the processes and the quality management system**	instructions, and any documents relating to the requirements specified in these instructions and technical specifications. 3.2.2 The product shall prepare a detailed quality plan for each product to be approved by the representative of the institution. The quality plan should include, but is not limited to, the following details: - 1- A detailed plan for the production process from the beginning of the receipt of the raw materials until the final product and the packaging and storage process. 2 - Statement of inspection points in the production process. 3. If necessary, the details of the stops in the production process (the test points that the product should not be converted to the next stage until the results of a positive examination). 4. Details of the items to be examined at each inspection point. 5. Details of tools and method of examination at each point. 6. Description of the models for which the test results are recorded. 7- Sample size and frequency of inspection at each point. 8. The specifications of the person responsible for conducting the tests.	

	3-4 quality procedures 3.4.1 The product shall provide detailed and documented quality procedures describing the quality system that it maintains in accordance with the requirements of these instructions 3.4.2 Quality procedures shall specify the responsibilities, competencies and interrelationship between all product employees who are related to the products. 3.4.3 The company manager and the product management representative shall certify and sign the quality procedures 3.4.4 Quality procedures shall be prepared according to the standard of writing the quality procedures and the instructions of the institution. Note: The specification was under preparation during the publication of this standard.	
4.4.2 **To the extent necessary, the organization shall:** **a) maintain documented information to support the operation of its processes;** **b) retain documented information to have confidence that the processes are being carried out as planned**		**4.4.2** **To the extent necessary, the organization shall:** **a) maintain documented information to support the operation of its processes;** **b) retain documented information to have confidence that the processes are being carried out as planned**

5 Leadership		
5.1 Leadership and commitment		**5.1 Leadership and commitment**
5.1.1 General		**5.1.1 General**
5.1.2 Customer focus		**5.1.2 Customer focus**
5.2 Policy		
5.2.1 Establishing the quality policy Top management shall establish, implement and maintain a quality policy that: a) is appropriate to the purpose and context of the organization and supports its strategic direction; b) provides a framework for setting quality objectives; c) includes a commitment to satisfy applicable requirements; d) Includes a commitment to continual improvement of the quality management system.	3.1.1 Product management shall define and document its quality policy. Within the framework of this policy, product management shall comply with the requirements of product specifications and the requirements of these instructions.	
5.2.2 Communicating the quality policy		**5.2.2 Communicating the quality policy**
5.3 Organizational roles, responsibilities and authorities Top management shall ensure that the	3.1.3 The management of the product shall grant its representative the freedom of action and the appropriate authority to	تم التطرق الى مسؤول الجودة فقط

responsibilities and authorities for relevant roles are assigned, communicated and understood within the organization. Top management shall assign the responsibility and authority for: a) ensuring that the quality management system conforms to the requirements of this International Standard; b) ensuring that the processes are delivering their intended outputs; c) reporting on the performance of the quality management system and on opportunities for improvement (see 10.1), in particular to top; d) ensuring the promotion of customer focus throughout the organization; e) ensuring that the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented	carry out his duties and to implement the requirements of these instructions. 3.1.4 The representative of the Product Department shall be the liaison with the Corporation in all matters relating to granting the permit, in particular the implementation of the requirements of these instructions.	

6 Planning		**6 Planning**
6.1 Actions to address risks and opportunities		**6.1 Actions to address risks and opportunities**
6.1.2 The organization shall plan		**6.1.2 The organization shall plan**
6.2 Quality objectives and planning to achieve them.		**6.2 Quality objectives and planning to achieve them.**
6.2.1 The organization shall establish quality objectives at relevant functions, levels and processes needed for the quality management system. **The quality objectives shall:** **a) be consistent with the quality policy,** **b) be measurable;** **c) take into account applicable requirements;** **d) be relevant to conformity of products and services and the enhancement customer satisfaction;** **e) be monitored;** **f) be communicated;** **g) Be updated as appropriate.** **The organization shall maintain documented information on the**		**6.2.1 The organization shall establish quality objectives at relevant functions, levels and processes needed for the quality management system.** **The quality objectives shall:** **a) be consistent with the quality policy,** **b) be measurable;** **c) take into account applicable requirements;** **d) be relevant to conformity of products and services and the enhancement customer satisfaction;** **e) be monitored;** **f) be communicated;** **g) Be updated as appropriate.** **The organization shall maintain documented information on the**

quality objectives.		**quality objectives.**
6.2.2 When planning how to achieve its quality objectives, the organization shall determine: **a) what will be done;** **b) what resources will be required;** **c) who will be responsible;** **d) when it will be completed;** **e) how the results will be evaluated**		**6.2.2 When planning how to achieve its quality objectives, the organization shall determine:** **a) what will be done;** **b) what resources will be required;** **c) who will be responsible;** **d) when it will be completed;** **e) how the results will be evaluated**
6.3 Planning of changes		**6.3 Planning of changes**
7 Support		
7.1 Resources		
7.1.1 General		**7.1.1 General**
7.1.2 People The organization shall determine and provide the persons necessary for the effective implementation of its quality management system and for the operation and control of its processes.	3.1.2 Product management must appoint an official for the quality system of its staff or be able to report directly to it. (Henceforth called the Product Management Representative) 3.1.5 The management of the product shall employ adequate sources and qualified working hands, to the extent	

	necessary, to apply the requirements of these instructions.	
7.1.3 Infrastructure		**7.1.3 Infrastructure**
7.1.4 Environment for the operation of processes		**7.1.4 Environment for the operation of processes**
7.1.5 Monitoring and measuring resources		**7.1.5 Monitoring and measuring resources**
7.1.5.1 General		**7.1.5.1 General**
7.1.5.2 Measurement traceability		**7.1.5.2 Measurement traceability**
7.1.6 Organizational knowledge		**7.1.6 Organizational knowledge**
7.2 Competence The organization shall: a) Determine the necessary competence of person(s) doing work under its control that affects the performance and effectiveness of the quality management system. b) Ensure that these persons are competent on the basis of appropriate	3.16 Training and qualification of employees 3.16.1 The product shall train those workers whose business may affect the quality of the product. The training program should cover (if necessary) product quality procedures, production methods, inspection and inspection methods, technical specification	

education, training, or experience. c) Where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken. d) Retain appropriate documented information as evidence of competence.	requirements, and requirements of these instructions 3.16.2 The producer shall provide certificates to the employees that require the standard or the law to be authorized for their business. 3.16.3 The product shall specify the special works that significantly affect the quality of the product and shall provide certificates to the employees of such works. 3.16.4 The product shall maintain appropriate records for the training and authorization of personnel. 3.16.5 When the physical characteristics of the production personnel affect the quality of the product, they shall undergo periodic medical examinations. The product must take all precautions in order to prevent workers who have limited capabilities of working in jobs that may lead to an unmatched production.	
7.3 Awareness		**7.3 Awareness**
7.4 Communication		**7.4 Communication**
7.5 Documented information		
	3.6.1 The product shall have all the	

7.5.1 General The organization's quality management system shall include: a) Documented information required by this International Standard. b) Documented information determined by the organization as being necessary for the effectiveness of the quality management system. *NOTE The extent of documented information for a quality management system can differ from one organization to another due to:* *a) the size of organization and its type of activities, processes, products and services;* *b) the complexity of processes and their interactions;* *c) The competence of persons.*	necessary modern documentation necessary for the production and inspection of the products, including the technical specifications of the product, the drawings, production instructions, inspection ... etc. 3.15.1 All inspections and inspections, from raw materials to final product, shall be accompanied by appropriate records. 3.15.3 The producer shall establish and maintain a special complaint file for customers, specifying the corrective measures taken after such complaints. 3.15.6 Add the requirements of this paragraph to the special instructions for records mentioned in other paragraphs of these instructions.	
7.5.2 Creating and updating When creating and updating documented information the organization shall ensure appropriate: a) identification and description (e.g. a title, date, author, or reference number); b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic); c) Review and approval for suitability and adequacy.	3.15.2 The product shall maintain inspection and inspection reports in such a way as to refer to them based on the following elements such as: date, meal number, product type and the like. Records must be kept in a convenient place to prevent any damage, degradation or loss of records.	

7.5.3 Control of documented Information		
7.5.3.1 Documented information required by the quality management system and by this International Standard shall be controlled to ensure: **a) it is available and suitable for use, where and when it is needed;** **b) It is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).**	3.3.2 The product must be kept on the product file. In certain cases, the enterprise representative may request the file to be kept in the organization, or the product should deliver the file to the enterprise representative for inspection and evaluation for a short period of time. 3.15.5 Quality records shall be available to the representative of the institution for the conduct of inspection and examination.	
7.5.3.2 For the control of documented information, the organization shall address the following activities, as applicable: **a) distribution, access, retrieval and use;** **b) storage and preservation, including preservation of legibility;** **c) control of changes (e.g. version control);** **d) Retention and disposition.**	3.6.2 The Product shall establish and maintain documented documentation control procedures, including (but not limited to) the following: 1. Ensure that all required documentation is available at all locations where it is necessary to conduct operations related to the production and inspection of products. 2 - A way to update the documentation when necessary. 3. Adequate arrangements for the disposal, destruction or different discrimination of all completed documentation 3.15.4 Quality records shall be kept for at	

	least a year, unless otherwise requested by the customer, the standard, the law or the institution.	
8 Operation		
8.1 Operational planning and control		**8.1 Operational planning and control**
8.2 Requirements for products and services		
8.2.1 Customer communication		**8.2.1 Customer communication**
8.2.2 Determination of requirements for products and services		**8.2.2 Determination of requirements for products and services**
8.2.3 Review of requirements for products and services		**8.2.3 Review of requirements for products and services**
8.2.3.1 The organization shall ensure that it has the ability to meet the requirements for products and services to be offered to customers.	3.5 Review of Orders When a product is produced according to a specific request to a particular customer, the product must review the	

The organization shall conduct a review before committing to supply products and services to a customer, to include: **a) Requirements specified by the customer, including the requirements for delivery and post-delivery activities.** **b) Requirements not stated by the customer, but necessary for specified or intended use, when known.** **c) Requirements specified by the organization.** **d) Statutory and regulatory requirements applicable to the products and services.** **d) Contract or order requirements differing from those previously expressed.**	order to ensure (among other things) that the order does not contradict the technical specification of the product. When there is any contradiction, the product must reject the order only if it receives the prior approval of the Quality Mark Board.	
8.2.3.2 The organization shall retain documented information, as applicable: **a) on the results of the review;** **b)on any new requirements for the products and services**		**8.2.3.2 The organization shall retain documented information, as applicable:** **a) on the results of the review;** **b)on any new requirements for the products and services**
8.2.4 Changes to requirements for products and services		**8.2.4 Changes to requirements for products and services**

8.3 Design and development of products and services		
8.3.1 General		**8.3.1 General**
8.3.2 Design and development planning In determining the stages and controls for design and development, the organization shall consider: a) The nature, duration and complexity of the design and development activities. b) The required process stages, including applicable design and development reviews. c) The required design and development verification and validation activities. d) The responsibilities and authorities involved in the design and development process. e) The internal and external resource needs for the design and development of products and services. f) The need to control interfaces between persons involved in the design and development process. g) The need for involvement of customers and users in the design and development process. h) The requirements for subsequent	3.3.3 The Product shall feel that the Corporation shall have any fundamental modification to the Product. This modification of the product file must be properly recorded. The organization must approve changes to the file.	8.3.2 d-i-j

provision of products and services. i) The level of control expected for the design and development process by customers and other relevant interested parties. j) The documented information needed to demonstrate that design and development requirements have been met.		
8.3.3 Design and development Inputs		**8.3.3 Design and development Inputs**
8.3.4 Design and development controls		**8.3.4 Design and development controls**
8.3.5 Design and development outputs		**8.3.5 Design and development outputs**
8.3.6 Design and development changes		**8.3.6 Design and development changes**
8.4 Control of externally provided		

products and services		
8.4.1 General The organization shall ensure that externally provided processes, products, and services conform to requirements. The organization shall determine the controls to be applied to externally provided processes, products and services when: a) products and services are provided by external providers for incorporation into the organization's own products and services; b) products and services are provided directly to the customer(s) by external providers on behalf of the organization; c) a process or part of a process is provided by an external provider as a result of a decision by the organization. The organization shall determine and apply criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers, based on their ability to provide processes or products and services in accordance with requirements. The organization shall retain documented information of these activities and any necessary actions arising from the evaluations.	3.7.1 All purchase orders must be made by suppliers and subcontractors in writing and contain an accurate description of the required materials, parts, sub-assemblies, procedures, etc. (henceforth referred to as materials). The applicant should also describe the tests that the supplier or subcontractor must perform and the accompanying recordings of the consignment. Note: Supplier: is an enterprise that supplies finished goods. Subcontractor: An organization that produces material for the customer according to its specifications. 3.7.2 The product shall specify the quality requirements and regulations of the subcontractor in order to maintain them to the necessary extent. In such cases, the producer must ensure that the subcontractor has already met these requirements. The producer shall establish procedures for the selection of secondary contractors on the basis of the quality of their work and shall be verified by a follow-up inspection. The Product shall refuse to deal with any subcontractor who proves that the quality of his work is not in conformity with his	

	requirements. 3.9.2.1 The product shall carry out inspection procedures on materials sent by suppliers and secondary contractors. The inspection shall be carried out in accordance with documented instructions which specify, inter alia, the size of the inspection, the subjects to be inspected, inspection / inspection methods, The standard of acceptance and rejection. 3.9.2.2 The size of the sample and the topics to be examined based on the nature of the material shall determine the credibility of the supplier or subcontractor, the previous quality records supplied from the same source, the accompanying inspection reports and the like. 3.9.2.3 At the very least, the product must perform a visual inspection to detect any apparent defects, ascertain the quantity received, and inspect the inspection reports of the supplier or subcontractor.	
8.4.2 Type and extent of control The organization shall ensure that externally provided processes, products and services do not adversely affect the organization's ability to consistently deliver conforming products and services to its customers.	3.7.3 The product shall take all necessary steps to ensure that the purchased material will not cause the product to deviate from the technical specification. If the technical specification meets the requirements of the materials, the product must verify the conformity.	

The organization shall: a) ensure that externally provided processes remain within the control of its quality management system; b) define both the controls that it intends to apply to an external provider and those it intends to apply to the resulting output; c) take into consideration: 1) the potential impact of the externally provided processes, products and services on the organization's ability to consistently meet customer and applicable statutory and regulatory requirements; 2) the effectiveness of the controls applied by the external provider. d) Determine verification or other activities necessary to ensure the externally provided processes, products and services meet requirements.		
8.4.3 Information for external providers		**8.4.3 Information for external providers**
8.5 Production and service provision		
8.5.1 Control of production and service provision The organization shall implement production and service provision under	1.5 The use of the Product Mark by the Product is a product declaration that the Product conforms to the Technical Specifications. For this reason it is	B+C+F

controlled conditions. Controlled conditions shall include, as applicable: a) The availability of documented information that defines: 1) The characteristics of the products to be produced, the services to be provided, or the activities to be performed. 2) The results to be achieved. b) The availability and use of suitable monitoring and measuring resources. c) The implementation of monitoring and measurement activities at appropriate stages to verify that criteria for control of processes or outputs, and acceptance criteria for products and services, have been met. d) The use of suitable infrastructure and environment for the operation of processes. e) The appointment of competent persons, including any required qualification. f) The validation, and periodic revalidation, of the ability to achieve planned results of the processes for production and service provision, where the resulting output cannot be verified by subsequent monitoring or measurement. g) The implementation of actions to prevent human error.	necessary that the product can inspect its own production and identify the non-conforming products and seek to repair the detected defect and identify the reasons that led to the imbalance and take the necessary steps to remove these reasons so as not to recur the occurrence of the imbalance. 3.3.1 Each product shall be equipped with a file that clearly describes its design. Generally, the product file includes, if necessary, the following items: 1- A scheme of the product containing a general description of it and its main dimensions. 2. General photographs of the product (from different angles) and its main parts. 3 - In the case of electrical products - maps of the main electrical circuits, if any relationship, including the scheme of wiring connections, explaining the colors of wires, teaching clamps and similar. 4 - List of the main parts that illustrate - Part type - Product name of the part - Model - The names of institutions / laboratories that have ratified the part (if any) - The basic technical characteristics of the part. Note: The main parts are those that affect	8.5.1 A 1

h) The implementation of release, delivery and post-delivery activities.	the safety of the product and the features that can affect the conformity of the product to the standard. 5 - Characteristics of the basic materials from which the product was made - with special emphasis on toxic and flammable substances. 6. Catalogs, instructions and any other technical publications that can help describe the product. 3.9.1.1 The inspection shall be carried out in accordance with the detailed and correct specifications, specifications and inspection instructions 3.9.1.2 The inspection results shall be documented on approved forms and signed by the person responsible for conducting the examination. 3.9.1.3 Sampling for inspection shall be based on an acceptable statistical program for taking samples. 3.9.1.4 The product shall ensure that the conditions surrounding the place of inspection are appropriate for the inspection and examinations carried out, taking into account the product, the accuracy of the inspection and the requirements of the technical specification. 3.9.3 Production line tests: 3.9.3.1 The product shall carry out	

	inspection and inspection of the product at the inspection points specified in the product quality plan. 3.9.3.2 A positive result of the inspection shall be obtained at the stops specified in the product quality plan for the transition to the next production stage. 3.13.6 The producer shall establish and maintain special control measures for raw materials with low storage time, and shall be disposed of at the expiry of their terms of reference.	
8.5.2 Identification and traceability The organization shall use suitable means to identify outputs when it is necessary to ensure the conformity of products and services. The organization shall identify the status of outputs with respect to monitoring and measurement requirements throughout production and service provision. the organization shall control the unique identification of the outputs, when traceability is a requirement, and shall retain the documented information necessary to enable traceability.	3.8 Diagnosis and follow-up of the product The product shall establish , develop and operate a documented method for diagnosing the product during all stages of production, distribution, and installation. This diagnosis contains as required the following: 1- Diagnosis of the production schedule. 2 - Diagnosis of all stages of production, the date of the stage and responsible for it. 3. Diagnosis of the materials and parts added to the product. 4 - Quantity of products with a meal. 5- A diagnostic number for each product, if the specification so requests. 3.11 Test and Inspection Status 3.11.1 The mode of inspection and	

	inspection shall determine the status of the product according to two criteria: 1. Have the products been examined or are they being tested? 2 - The success of products after examination or failure. 3.11.2 The marking shall be done by appropriate means of the product and for the production method, such as, the product seal itself, the label of the product, the sign of an attachment card and the like. 3.11.3 In the event that the product cannot be labeled for technical reasons, it shall be marked by other appropriate means such as placing it in a special place, coloring storage facilities and the like 3.11.4 Products that do not conform to requirements are marked differently. 3.11.5 Inspection and inspection records shall specify the person who has determined the status of the product. 3.11.6 Product procedures shall specify the persons authorized to change the status of products that do not meet the requirements.	
8.5.3 Property belonging to customers or external providers		**8.5.3 Property belonging to customers or external providers**

8.5.4 Preservation The organization shall preserve the outputs during production and service provision, to the extent necessary to maintain conformity to requirements. *NOTE* *Preservation can include identification, handling, contamination control, packaging, storage, transmission or transportation, and protection.*	3.13 Transportation, storage, packaging, and delivery. 3.13.1 The product shall provide adequate means of transport to prevent any damage to movable products or other products in the transport phase. The person accompanying the mechanical transport must be eligible for this method. In the text of the law, he must have an appropriate certificate that qualifies him to carry out this work. 3.13.2 The product shall provide adequate storage facilities, taking into account the conditions of the products stored to prevent any damage or deterioration of the status of the products or raw materials. Raw materials should also be separated from finished products. 3.13.3 Raw materials shall be properly labeled to ensure their complete and unambiguous distinction. In general, the method (inside first out first) is used to prevent any deterioration in the quality of raw materials. 3.13.4 The product shall ensure that only identical finished products are stored in finished product stores. Products that do not conform to the technical specification shall not be marked. 3.13.5 The product shall be inspected for finished products and raw materials	

	stored at an appropriate rate in order to diagnose any possible deterioration. 3.13.7 Packaging of finished products shall be considered to provide adequate protection against damage during transportation at the factory, during delivery to the customer, and storage conditions of the customer. The product must achieve these conditions even if not mentioned in the technical specification. The package must contain all accompanying materials such as operating instructions and installation additives (if any).	
8.5.5 Post-delivery activities		**8.5.5 Post-delivery activities**
8.5.6 Control of changes		**8.5.6 Control of changes**
8.6 Release of products and services The organization shall implement the planned arrangements at appropriate stages to verify that product and service requirements have been met. The release of products and services to the customer shall not proceed until the planned arrangements have been	3.9.4 Final Inspection: 3.9.4.1 The product shall carry out a final inspection in accordance with (and not limited to ...) the quality plan in order to ensure that the final product conforms to the technical specification. When the technical specification requires specific tests for the final product, the product	

satisfactorily completed, unless otherwise approved by a relevant authority and, as applicable, by the customer. The organization shall retain documented information on the release of products and services. The documented information shall include: a) evidence of conformity with the acceptance criteria; b) traceability to the person(s) authorizing the release.	must carry out these tests. 3.9.4.2 The final inspection shall ensure that all tests specified for the production process are performed properly.	
8.7 Control of nonconforming outputs		
8.7.1The organization shall ensure that outputs, that not conform to requirements are identified and controlled to prevent their unintended use or delivery **The organization shall take appropriate corrective action based on the nature of the nonconformity and its effect on the conformity of products and services. This applies also apply to nonconforming products and services detected after delivery of the products, during or after the provision of the service.**	3-12 Control Nonconforming Products 3.12.1 All products (of different stages of production) that are found to be non-identical to the rest of the production process and stored in an appropriately designated warehouse shall be isolated. If these requirements cannot be applied for objective reasons, strict steps should be taken to ensure that these products are not used unless authorized by an authorized person. 3.12.2 The product shall establish procedures for the carriage of non-conforming products, which shall	

The organization shall deal with nonconforming outputs, in one or more of the following ways: **a) correction;** **b) segregation, containment, return or suspension of provision of products and services;** **c) informing the customer;** **d) Obtaining authorization for acceptance under concession.** **Conformity to the requirements shall be verified when nonconforming outputs are corrected.**	individually determine the person authorized to act. 3.12.3 The producer shall establish and maintain regular records of non-conforming and disclosed products during the inspection of the receipt, the production process, the final inspection, or that are found to be defective by the customers (either through complaints or during the warranty period). 3.12.4 Inspection of non-conforming products shall be carried out if they are re-operated or repaired.	
8.7.2 **The organization shall retain documented information that;** **a) Describes the nonconformity.** **b) Describes the actions taken.** **c) Describes any concessions obtained.** **d) Identifies the authority deciding the action in respect of the nonconformity.**		**8.7.2** **The organization shall retain documented information that;** **a) Describes the nonconformity.** **b) Describes the actions taken.** **c) Describes any concessions obtained.** **d) Identifies the authority deciding the action in respect of the nonconformity.**
9 Performance Evaluation		
9.1 Monitoring, Measurement, Analysis And Evaluation		

9.1.1 General The organization shall determine: a) What needs to be monitored and measured. b) The methods for monitoring, measurement, analysis and evaluation, needed to ensure valid results. c) When the monitoring and measuring shall be performed. d) When the results from monitoring and measurement shall be analyzed and evaluated. The organization shall evaluate the performance and the effectiveness of the quality management system. The organization shall retain appropriate documented information as evidence of the results.	3.10 Inspection, Inspection and Measurement Tools 3.10.1 The product shall ensure the presence of all inspection, inspection and measurement tools required (henceforth referred to as inspection tools) for specific tests and at the specified accuracy and according to the quality plan of the product. Specifically, the product must provide the testing equipment that enables it to determine the product's suitability for the specification. * Note: In order to achieve a match and match between the product tests and the institution tests, the product is recommended to consult with the representative of the institution in any purchase of new screening devices. 3.10.2 When inspection equipment is expensive and not in the possession of the producer, it shall make appropriate and acceptable arrangements by the enterprise to perform the required tests at the required pace with a laboratory acceptable to the enterprise. 3.10.3 Inspection devices shall be calibrated by certified calibration equipment having a known and correct relationship with the national standard. Conditions determine the calibration	

	frequency. In general, calibration is performed annually unless it is proved possible to increase or decrease this frequency. 3.10.4 In the development of the use of templates, models or others to determine the conformity of the product to the requirements, 3.10.5 Calibration shall be carried out in an accredited laboratory. 3.10.6 Testing devices shall carry means for diagnosis of calibration status - this diagnosis shall include at least the following details: 1- The date of the last calibration. 2. The next calibration date. 3. Name of the laboratory and the person who calibrated. 3.10.7 The product shall ensure that non-calibration or faulty devices are not used and are not in the possession of the product agents. 3.10.8 The product shall ensure that the transfer, storage and storage of the inspection equipment does not affect its accuracy and suitability 3.10.9 The product shall maintain a payroll index for the inspection equipment that records the technical information of the equipment and the calibration information, and contains the	

	complete record of repairs and re-operation. 3.10.10 Despite the foregoing, it is permitted to use only general purpose test devices, not for measurement purposes. These devices do not need periodic calibration, provided they carry a clear indication that these devices are not for measurement purposes.	
9.1.2 Customer satisfaction		**9.1.2 Customer satisfaction**
9.1.3 Analysis and evaluation		**9.1.3 Analysis and evaluation**
9.2 Internal Audit		**9.2 Internal Audit**
9.2.1 The organization shall conduct internal audits at planned intervals to provide information on whether the quality management system; **a) conforms to:** **1) the organization's own requirements for its quality management system;** **2) the requirements of this International Standard;** **b) is effectively implemented and maintained**		**9.2.1 The organization shall conduct internal audits at planned intervals to provide information on whether the quality management system;** **a) conforms to:** **1) the organization's own requirements for its quality management system;** **2) the requirements of this International Standard;** **b) is effectively implemented and maintained**

9.2.2 The organization shall		**9.2.2 The organization shall**
9.3 Management review		**9.3 Management review**
9.3.1 Top management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness and alignment with the strategic direction of the organization.		**9.3.1 Top management shall review the organization's quality management system, at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness and alignment with the strategic direction of the organization.**
9.3.2 Management Review Inputs		**9.3.2 Management Review Inputs**
9.3.3 Management review outputs		**9.3.3 Management review outputs**
10 Improvement		
10.1 General		**10.1 General**
10.2 Nonconformity and corrective action		
10.2.1 When a nonconformity occurs, including any arising from complaints, the organization shall: **a) react to the nonconformity, and as**	3.14 Correction Procedures 3.14.1 The producer shall take corrective action in the event of repeated quality problems, in particular those related to	

applicable: **1) take action to control and correct it;** **2) deal with the consequences;** **b) evaluate the need for action to eliminate the cause(s) of the nonconformity, in order that it does not recur or occur elsewhere, by:** **1) reviewing and analyzing the nonconformity;** **2) determining the causes of the nonconformity;** **3) determining if similar nonconformities exist, or could potentially occur;** **c) implement any action needed;** **d) review the effectiveness of any corrective action taken;** **e) update risks and opportunities determined during planning, if necessary;** **f) make changes to the q**	the conformity of the product to the technical specification. Product quality problems (during the different stages of the production process) can be detected after a complaint has been made by the customer or by the results of the examinations conducted by the institution. 3.14.2 Correction procedures shall include an investigation to diagnose the causes of quality problems, develop a method to remove these causes, and take all necessary measures to prevent the recurrence of such causes.	
10.2.2 The organization shall retain documented information as evidence of: **a) the nature of the nonconformities and any subsequent actions taken;** **b) The results of any corrective action.**		**10.2.2 The organization shall retain documented information as evidence of:** **a) the nature of the nonconformities and any subsequent actions taken;** **b) The results of any corrective action.**
10.3 Continual improvement		**10.3 Continual improvement**

Appendix E: PSI-Feedback

STATE OF PALESTINE
PALESTINE STANDARDS INSTITUTION
Quality & Certification Dept.

دولة فلسطين
مؤسسة المواصفات والمقاييس
دائرة الجودة والتأهيل

التاريخ: 2019/5/23

الأخ/ م. اشرف القاسم المحترم،،

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الموضوع: اطروحة الماجستير بخصوص تحديث المواصفة الفلسطينية م.ف. 15

تهديكم مؤسسة المواصفات والمقاييس الفلسطينية أطيب تحياتها، وبناء على الاجتماع الذي عقد معكم صباح يوم الاثنين الماضي 20-05-2019 بحضور مدير دائرة التوصيف وبعد الاطلاع على مخرجات الدراسة البحثية والتي نراها مفيدة كنقاط ارتكاز لتحديثها فاننا نتوجه لكم بجزيل الشكر والتقدير لجهودكم ومتابعتكم ونتمنى لكم التوفيق والنجاح، كما نتمنى عليكم تحديد اية مواضيع بحثية مستقبلية تخص توجيه المواصفة الفلسطينية انفة الذكر لتلبية متطلبات نظام ادارة الجودة في مصانع الاغذية.

وتفضلوا بقبول فائق الاحترام والتقدير،،

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ملخص الدراسة

تعتبرعلامة الجودة أداة فعالة للمنظمات لتحسين رضا عملائها ، وتقديم منتج يفي بالمعايير ، ويحسن مبيعات المنتجات وصادراتها ، ويشجع المنظمات على تحسين وتطوير عملياتها ومنتجاتها باستمرار. أحد شروط الحصول على علامة الجودة الفلسطينية أن تبني المنظمة نظام إدارة الجودة على أساس المواصفة الفلسطينيةPS-15 .

وفقًا لمؤسسة المواصفات والمقاييس الفلسطينية ، يجب مراجعة أو تطوير أي مواصفة فلسطينية كل خمس سنوات. في حين أن المواصفة PS-15 تم بناءها واعتمادها من قبل مؤسسة المواصفات والمقاييس الفلسطينية في عام 1997 الا انه لم تتم اي مراجعة أو تطويرلها حتى اليوم. علاوة على ذلك ، لا توجد اي دراسات سابقة متعلقة بتحسين وتطويرالمواصفة PS-15 .

يهدف هذا البحث إلى دراسة وتحديد فرص التحسين للمواصفة الفلسطينية وملء الفجوة في الأدبيات. تم اعتماد ثلاث منهجيات بحثية لتحقيق أهداف البحث. كانت المنهجية الأولى هي إجراء المقابلات وتحليل SWOT لدراسة النسخة الحالية من المواصفة الفلسطينية PS-15 من منظور مؤسسة المواصفات والمقاييس الفلسطينية. المنهجية الثانية هي دراسة النسخة الحالية من المواصفة الفلسطينية PS-15 من منظور السوق من خلال مسح مدى تحقق مبادئ إدارة الجودة من خلال تطبيق المواصفة الفلسطينية PS-15 . اما المنهجية الثالثة فكانت دراسة مقارنة بين متطلبات ISO 9001: 2015 ومتطلبات PS-15 لتحديد الفجوة في المواصفة الفلسطينية. يلخص البحث أهم الاستنتاجات والتوصيات مثل ضرورة تطوير المواصفة الفلسطينيةبناء على ISO 9001:2015 مع الأخذ في الاعتبار أن يكون من السهل تطبيقها من قبل المنظمات ، لها بنية متسقة ومقسمة بشكل جيد ، ويجري صياغتها بطريقة جيدة. أثبتت الدراسة أيضًا أن المواصفة الفلسطينية الحالية PS-15 لا تحقق أيًا من مبادئ إدارة الجودة لل ISO 9001: 2015 وشددت على إضافة المتطلبات المفقودة في المواصفة الفلسطينيةوالمتعلقة بالقيادة والدعم والتشغيل والتخطيط والتحسين مقارنة مع متطلباتISO 9001: 2015 .