



**Basic Agricultural Production and
Natural Resources Conservation Level-I
Based on Version-3 March 2018 OS.**

Training Module –Learning Guide 74-78

Unit of Competence: Apply Quality Standards

Module Title: Applying Quality Standards

TTLM Code: AGR BAN1 M18 TTLM 0919v1

October 2019





Module Title: Applying Quality Standards

TTLM Code: AGR BAN1 M18 TTLM 0919v1

This module includes the following Learning Guides

LG 74: Assess own work

LG Code: AGR BAN1 M18 LO1-LG-74

LG 75: Assess quality of service rendered

LG Code: AGR BAN1 M18 LO1-LG-75

LG 76: Record information

LG Code: AGR BAN1 M18 LO1-LG-76

LG 77: Study causes of quality deviations

LG Code: AGR BAN1 M18 LO1-LG-77

LG 78: Complete documentation

LG Code: AGR BAN1 M18 LO1-LG-78

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Instruction Sheet 1	Learning Guide #74
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Checking completed work against organization standards
- Demonstrating Understanding how the work activities and the completed work
- Identification and isolation of faulty services and products
- Recording and reporting faults and identified causes

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Check completed work against organization standards
- Demonstrate Understanding how the work activities and the completed work
- Identification and isolation of faulty services and products
- Record and report faults and identified causes

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described
3. Read the information written in the information “Sheet
4. Accomplish each “Self-check respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to the next or “Operation Sheet
6. Do the “LAP test”

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Information Sheet 1	Check completed work against organization standards
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Meaning of work

Work is central in many cultures, although every culture has its own values and conceptions about it. However, it seems that work is important and significant for a majority of people considering the time that individuals devote to work in their lives, the numerous functions which it accomplishes for them, and the fact that work is closely linked with other important aspects of daily life such as family, leisure, religion, and community life. As general there is no clear cut meaning of work but every sector define work in accordance with her/his organization/institution goals. Having saying this now let us see what do you mean complete work. If there is work, always also completion of work. Simply Complete work means for shoes factory is shoes /final product/ or for farmer wheat, maize and barley are complete work b/c he/she achieve goal. So achieving of own goal is complete work for all.

Meaning of work standard

A **‘standard’** is a result of a particular standardization effect, approved by the recognized authority. It may take the form of a document containing a set of conditions to be fulfilled, a fundamental unit or physical constituent or an object for physical comparison.

Standardization is the process of formulating and applying the rules for an orderly approach to a specific activity - for the benefit of all - with the co-operation of all concerned and in particular for the promotion of optimum overall economy, taking due account of functional conditions and safety requirements. Standardization is based on the consolidated results of science, technology and experience. It determines not only the basis for the present but also for future development and it should keep pace with advances.

In the context of all these factors, application of standards and standardization for agriculture can play a vital role in putting the agriculture on a sound footing for developing domestic and international markets.

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With development teams of two or three in daily contact and frequently exchanging views and criticisms, detailed, written quality and task-completion checking procedures may be felt to be unnecessary. Procedures still need to be agreed and the results need to be documented. The need to check quality and task completion applies at all stages of the development process but is underlined especially during the prototype validation stages.

The importance of documenting checks applies whatever the size of the team and whatever the complexity of the software. In the production of assets, this may involve checking to confirm the following:

- that all the asset files listed in the product specification document have been produced;
- that files are correctly named;
- that files are the correct byte size or near the projected file size (examining the file-sizes in a directory listing can be helpful in identifying problem files which are either much too large or much too small);
- that files are the correct resolution (screen-size and bit-depth in the case of graphics; duration, sampling frequency and bit-depth in the case of sound files);
- That the quality of files displaying on the target monitor or heard on target listening equipment is acceptable.



Note that sampling is seldom a satisfactory checking method. Checking should be exhaustive, unless for reasons of time or economy this is impossible. Usually, however, trying to economize on checking and testing is a false economy and cutting corners here will often come back to haunt the development team. At the end of the day, all files will need to be tested and, if at all possible, this should be done sooner rather than at a later trial stage.

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Workplace Procedure

Workplace procedure is a set of written instructions that identifies the health and safety issues that may happen from the jobs and tasks that make up a system of work.

A safe working procedure should be written when:

- designing a new job or task
- changing a job or task
- introducing new equipment
- reviewing a procedure when problems have been identified, example from an accident or incident investigation

The safe working procedure should identify:

- the teacher for the task or job and the students who will undertake the task
- the tasks that are to be undertaken that pose risks
- the equipment to be used in these tasks
- the control measures that have been formulated for these tasks
- any training or qualification needed to undertake the task
- the personal protective equipment to be worn
- action to be undertaken to address safety issues that may arise while undertaking the task

Following certain procedures is very important to perform a given operation. The table below shows different elements and their corresponding performance criteria to be able to identify occupational health and safety hazards, and assess risk, as well as follow instructions and procedure in the workplace with minimal supervision. The students will also be capable of participating and contributing to OHS management issues.

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Self-Check -1	Written Test
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Directions: Answer all the questions listed below

- 1. What is workplace Procedure?**
- 2. Identify safe working procedure?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____



Information Sheet-2	Demonstrate Understanding how the work activities and the completed work
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Interconnections between different work activities undertaken in different parts of an overall process are analytically distinct from interconnections between work activities conducted within diverse socio-economic relations or economic spaces. Similarly, the interpenetration with and relative extent of differentiation of work activity from other social and cultural relations is also a distinctive nature, as is the manner by which work activities mesh in temporal interconnection. These four dimensions are interdependent and so in addition to being considered separately on their own account; they are also to be analyzed in combination in relation to each other. It is important to remember that any particular process will ‘possess’ or be characterized by all four dimensions, each of which will have their own characteristics, intersecting or combining with each other in a specific manner. Separating out the dimensions involves slicing the same subject matter a different way, and approaching it with a different set of questions and concerns. Thus any overall process will have different phases or stages, broadly of provision or production, distribution, exchange and consumption. These may be undertaken through a variety of modes, including the possibility of different phases being delivered through different modes (e.g. production through the market, and distribution through the public sector as in the case of public transport). Similarly the work undertaken in both the phases and the modes may be more or less undifferentiated from other relationships (e.g. in marketwise care of the elderly, the work of paid careers is still likely to involve an emotional aspect). And each of these also has a temporal dimension several benefits are gained by deploying a procedural approach towards the overall configuration of work. First, it elucidates evolving patterns of work activity that could not be gained from concentrating on individual occupations or workplaces; second, it helps explain how work is distributed across vertical and horizontal occupational structures; and third, it rises to the surface basic questions about the drivers and dynamics of transformation involved in the changing interconnectedness of labor activities. Clearly, technological innovation, industrial restructuring and economic change are crucial considerations in analyzing shifts in mode of interconnection

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Self-Check -2	Written Test
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Directions: Answer all the questions listed below

1. How to perform work activities

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

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Types and work-related errors

A. Quantity of work (untimely completion, limited production)

1. Poor prioritizing, timing, scheduling
2. Lost time
 - Tardiness, absenteeism, leaving without permission
 - Excessive visiting, phone use, break time, use of the Internet
 - Misuse of sick leave
3. Slow response to work requests, untimely completion of assignments
4. Preventable accidents

B. Quality of work (failure to meet quality standards)

1. Inaccuracies, errors
2. Failure to meet expectations for product quality, cost or service
3. Customer/client dissatisfaction
4. Spoilage and/or waste of materials
5. Inappropriate or poor work methods

- Work Behavior Which Result in Performance Problems

A. Inappropriate behavior (often referred to as "poor attitude")

- Negativism, lack of cooperation, hostility
- Failure or refusal to follow instructions
- Unwillingness to take responsibility ("passing the buck")
- Insubordination
- Power games



B. Resistance to change

- Unwillingness, refusal or inability to update skills
- Resistance to policy, procedure, work method changes
- Lack of flexibility in response to problems

C. Inappropriate interpersonal relations

- Inappropriate communication style: over-aggressive, passive
- Impatient, inconsiderate, argumentative
- Destructive humor, sarcasm, horseplay, fighting
- Inappropriate conflict with others, customers, co-workers, supervisors

D. Inappropriate physical behavior

- Smoking, eating, drinking in inappropriate places
- Sleeping on the job
- Alcohol or drug use
- Problems with personal hygiene
- Threatening, hostile, or intimidating behavior



Self-Check -3	Written Test
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Directions: Answer all the questions listed below

1. What are types of work- related errors ?

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Information Sheet-4

Record and report faults and identified causes

These are the things to be considered when:

A. Receiving Materials

1. Match the packing slip to the items received and ensures that the materials are destined on tour department.
2. That you are receiving the materials indicated on the purchase order with regard to quantity and discount.
3. That the materials are in acceptable condition.
4. That terms regarding installation and/or set-up of equipment are met.

B. Receiving Reports

Whenever goods are received:

1. The person receiving the goods must document, using the administrative software, that all goods were received for each requisition before any payment can be made to the vendor.
2. Any exceptions must be noted so that partial payments can be processed or defective goods can be returned.



C. Return of Merchandise

1. When merchandise is received which is incomplete or defective, the supervisor will return the materials to the supplier or to the store where it was bought and make arrangements with the vendor for replacement.

D. Make an Inventory Report of the Materials

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- All materials received must be listed and be reported to monitor how many materials are already on hand, purchased or damaged.
- Effective management checks are an important means of providing assurance of the integrity and security of the benefit processes.
- They are also useful in identifying training needs; indicating

Self-Check -4	Written Test
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Directions: Answer all the questions listed below

1. When record and report faults and identified causes?

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Instruction Sheet 2	Learning Guide #75 Assess quality of service rendered
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Checking quality service rendered
- Evaluating service rendered.
- Identifying and corrective actions taken in causes of any identified faults

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Check quality service rendered
- Evaluate service rendered.
- Identify and corrective actions taken in causes of any identified fault

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described
3. Read the information written in the information “Sheet
4. Accomplish each “Self-check respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to the next or “Operation Sheet
6. Do the “LAP test”

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Information Sheet 1	Check quality service rendered
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The measurement of quality; generally includes the selection of an aspect of a product/system to be evaluated; establishing criteria and standards for quality product/system and comparing these with organizational criteria and standards. It is also focused on the three dimensions of software quality which are:

- ✓ process,
- ✓ product and
- ✓ Resources.

One of the key issues that challenge objective quality assessment is the multidimensionality of “quality” itself. However, the assessment process can be made simple and clear using pre-defined testing strategies. Examples are fault tests and positive tests. In the latter, software’s code is checked according to what it was designed to do. Meanwhile, in the fault model, the assessment is carried out to test.

2.1 Techniques of checking materials against workplace standards and specifications

Quality specifications may include:

- finish
- fit
- size
- durability
- product variations
- materials
- alignment
- color
- damage and imperfections
- fabric

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Quality check may include

- visual inspection
- physical measurements
- check against design/specifications

2.2 Types of measuring instruments

Measuring devices are needed to provide evidence of conformity of product to determined requirements.

A documented procedure) outlines the process used to ensure that monitoring and measurement to be carried out are carried out in a manner that is consistent with the monitoring and measurement requirements.

- Calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards
- Adjusted or re-adjusted as necessary
- Identified to enable the calibration status to be determined
- Safeguarded from adjustments that would invalidate the measurement result
- Protected from damage and deterioration during handling, maintenance and storage

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Self-Check -1	Written Test
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Directions: Answer all the questions listed below

1. **What types of measuring instruments?**
2. **What are techniques of checking materials against workplace standards and specifications?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

**Measuring techniques of materials, component parts or products**

Measure includes those measurements which may be taken by the employee in the work place/at their work station.

The characteristic of the materials to be used for specific project must be:

a. Good quality

This is the most important factor when choosing materials to buy. Products with good quality are long-lasting and safe to use because you know that it follows certain standards before being commercialized.

b. Reliable

It means that you can be sure that it will perform its function well, will operate safely and will give the best it could give.

c. Suitable for the application/purposes

Choose the materials which are very necessary to make the project possible.

Making a list of products/materials to buy is a good trait of a wise consumer. Products which are not to be used must be crossed out.

d. Low cost

It doesn't mean that you will choose for the less expensive one and exclude the quality. Low cost means you can afford to buy the materials without hurting your pocket and assure of better quality.



Self-Check -2

Written Test

Directions: Answer all the questions listed below

1. What are the characteristic of the materials to be used for specific project?

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Information Sheet 3	Identify and corrective actions taken in causes of any identified faults
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Types and work-related errors

A. Quantity of work (untimely completion, limited production)

1. Poor prioritizing, timing, scheduling
2. Lost time
 - Tardiness, absenteeism, leaving without permission
 - Excessive visiting, phone use, break time, use of the Internet
 - Misuse of sick leave
3. Slow response to work requests, untimely completion of assignments
4. Preventable accidents

B. Quality of work (failure to meet quality standards)

1. Inaccuracies, errors
2. Failure to meet expectations for product quality, cost or service
3. Customer/client dissatisfaction
4. Spoilage and/or waste of materials
5. Inappropriate or poor work methods

Work Behavior Which Result in Performance Problems

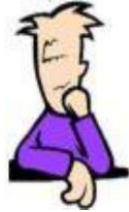
A. Inappropriate behavior (often referred to as "poor attitude")

- Negativism, lack of cooperation, hostility

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- Failure or refusal to follow instructions
- Unwillingness to take responsibility ("passing the buck")
- Insubordination
- Power games



B. Resistance to change

- Unwillingness, refusal or inability to update skills
- Resistance to policy, procedure, work method changes
- Lack of flexibility in response to problems

C. Inappropriate interpersonal relations

- Inappropriate communication style: over-aggressive, passive
- Impatient, inconsiderate, argumentative
- Destructive humor, sarcasm, horseplay, fighting
- Inappropriate conflict with others, customers, co-workers, supervisors

D. Inappropriate physical behavior

- Smoking, eating, drinking in inappropriate places
- Sleeping on the job
- Alcohol or drug use
- Problems with personal hygiene
- Threatening, hostile, or intimidating behavior

2.4.1. Corrective actions

Purpose/Importance

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The purpose of the corrective and preventive action subsystem is to collect information, analyze information, identify and investigate product and quality problems, and take appropriate and effective corrective and/or preventive action to prevent their recurrence.

Verifying or validating corrective and preventive actions, communicating corrective and preventive action activities to responsible people, providing relevant information for management review and documenting these activities are essential in dealing effectively with product and quality problems, preventing their recurrence, and preventing or minimizing device failures.

One of the most important quality system elements is the corrective and preventive action subsystem.

The procedures for corrective action shall include:

- A. The effective handling of customer complaints and reports of product nonconformities
- B. Investigation of the cause of nonconformities relating to product, process, and quality system, and recording the results of the investigation
- C. Determination of the corrective action needed to eliminate the cause of nonconformities
- D. Application of controls to ensure that corrective action is taken and that it is effective.

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Self-Check -3

Written Test

Directions: Answer all the questions listed below

- 1. What are types and work-related errors?**
- 2. What are purposes of corrective action?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

**Instruction Sheet 3****Learning Guide # 76 Recording Information**

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Recording information of quality performance
- Maintaining work quality records

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Record information of quality performance
- Maintain work quality records

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described
3. Read the information written in the information “Sheet
4. Accomplish each “Self-check respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to the next or “Operation Sheet
6. Do the “LAP test”



Information Sheet 1	Record information of quality performance
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Quality Management Terms:

- **Quality Improvement** can be distinguished from Quality Control in that Quality Improvement is the purposeful change of a process to improve the reliability of achieving an outcome.
- **Quality Control** is the ongoing effort to maintain the integrity of a process to maintain the reliability of achieving an outcome.
- **Quality Assurance** is the planned or systematic actions necessary to provide enough confidence that a product or service will satisfy the given requirements for quality.

3.1 Techniques of recording basic information & other indicators on the quality performance

a. Performance measurement process

Performance measurement is primarily managing outcome, and one of its main purposes is to reduce or eliminate overall variation in the work product or process. The goal is to arrive at sound decisions about actions affecting the product or process and its output.

b. What Are Performance Measures?

Performance measures quantitatively tell us something important about our products, services, and the processes that produce them. They are a tool to help us understand, manage, and improve what our organizations do. Performance measures let us know:

- how well we are doing
- if we are meeting our goals
- if our customers are satisfied
- If our processes are in statistical control
- If and where improvements are necessary.

c. Performance measurement process

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Most performance measures can be grouped into one of the following six general categories. However, certain organizations may develop their own categories as appropriate depending on the organization's mission:

1. **Effectiveness:** A process characteristic indicating the degree to which the process output (work product) conforms to requirements. (Are we doing the right things?)
2. **Efficiency:** A process characteristic indicating the degree to which the process produces the required output at minimum resource cost. (Are we doing things right?)
3. **Quality:** The degree to which a product or service meets customer requirements and Expectations.
4. **Timeliness:** Measures whether a unit of work was done correctly and on time. Criteria must be established to define what constitutes timeliness for a given unit of work. The criterion is usually based on customer requirements.
5. **Productivity:** The value added by the process divided by the value of the labor and capital consumed.
6. **Safety:** Measures the overall health of the organization and the working environment of its employees.

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Self-Check -1

Written Test

Directions: Answer all the questions listed below

- 1. What is quality Control?**
- 2. What is quality assurance?**
- 3. What are techniques of recording basic information & other indicators on the quality performance?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Information Sheet 2	Record information of quality performance
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3.1 Techniques of maintaining records of work quality

Why are records essential?

- For continuous monitoring of quality system
- For specimen tracking throughout process
- To identify failures in equipment
- To revisit information; reference
- For use as a management tool

Quality system

It is a cyclical process involving four key interrelated elements - Planning, Implementing, Reviewing, and Improving



Quality system may include:

- Quality assurance
- Quality control
- Quality inspection
- Quality improvement
- Total quality control

Quality assurance (QA

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QA is the systematic monitoring and evaluation of the various aspects of a project, service or facility to maximize the probability that minimum standards of quality are being attained by the production process. **QA** cannot absolutely guarantee the production of quality products.

Two principles included in QA are:

1. "Fit for purpose" - the product should be suitable for the intended purpose; and
2. "Right first time" - mistakes should be eliminated.

QA includes regulation of the quality of raw materials, assemblies, products and components, services related to production, and management, production and inspection processes. Quality is determined by the product users, clients or customers, not by society in general. It is not the same as 'expensive' or 'high quality'. Low priced products can be considered as having high quality if the product users determine them as such.

Quality inspection

The four types of quality inspection services:

1. A **Pre- production inspection**: tells the buyer which kind of raw materials (or components) will be used. Factories are often suspected of lowering their costs by purchasing substandard materials, and this can be disastrous for the buyer (e.g. the wrong kind of chip in an electronic device).

The pre-production inspection can also focus on the processes followed as production starts. Sometimes this can also be critical, as Chinese factories very often cut corners and do not respect the buyer’s blueprints (e.g. patterns for cutting fabric are received from the buyer, and they are modified to make the process easier and faster).

2. A **during production inspection** (often called “DUPRO” in the industry) allows the buyer to have an idea of average product quality, early in the production cycle. It is the most useful and the most under-rated tool at the disposal of importers, who often only rely on final inspections.

3. The **final random inspection** (also called “pre-shipment inspection”) is by far the most common type of QC check. It takes place once 100% of shipment quantity is finished and at least

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80% is packed, so it can be a real random inspection (this is not exactly the case if quality is checked earlier) and suppliers cannot play games.

4. The **container loading inspection**, like the pre-production inspection, it is seldom used. But it can be a worthwhile option in some specific cases.

Quality improvement system

- The quality system encompasses the need for regular and frequent discussion and analysis of findings from feedback, monitoring reports and reviews in order to identify desirable or necessary improvements in organization operations or performance.

Total quality control

"Total quality control", also called total quality management, is an approach that extends beyond ordinary statistical quality control techniques and quality improvement methods. It implies a complete overview and re-evaluation of the specification of a product, rather than just considering a more limited set of changeable features within an existing product. If the original specification does not reflect the correct quality requirements, quality cannot be inspected or manufactured into the product. For instance, the design of a pressure vessel should include not only the material and dimensions, but also operating, environmental, safety, reliability and maintainability requirements, and documentation of findings about these requirements.

Quality control system emphasis on three aspects:

1. Elements such as controls, job management, defined and well managed processes, performance and integrity criteria, and identification of records
2. Competence, such as knowledge, skills, experience, and qualifications
3. Soft elements, such as personnel integrity, confidence, organizational culture, motivation, team spirit, and quality relationships.

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Self-Check -2	Written Test
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Directions: Answer all the questions listed below

- 1. Why are records essential?**
- 2. What are four types of quality inspection service?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____



Instruction Sheet 4	Learning Guide # 77 Study Causes of quality deviations
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Investigating and report causes of deviation
- Recommend suitable preventive actions

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Investigating and report causes of deviation
- Recommend suitable preventive actions

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described
3. Read the information written in the information “Sheet
4. Accomplish each “Self-check respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to the next or “Operation Sheet
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Information Sheet 1	Investigating and report causes of deviation
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Standards are sets of rules that outline specification of dimensions, design of operation, materials and performance, or describe quality of materials, products or systems. These standards should cover the performance expectations of the product for particular applications.

The intent of standards is to provide at least minimum quality, safety or performance specifications so as to ensure relatively uniform products and performance, and to remove ambiguity as to the suitability of certain commercial products for particular applications.

4.1 Investigating techniques of the causes of deviations of the work quality from the

Standard

❖ The following standards may reduce the risk of error in working.

✓ **Specific quality standards for:**

1. Hardware

The durability of the work depends on the quality of its component parts and the assembly skills of those who install it. If the best-quality products or hardware are used but are installed incorrectly, the system will be a failure.

The application of suitable hardware and products must be supported by adequate levels of training of person who use them so that they can identify and use only appropriate products. In judging a product or hardware, the person must consider factors such as the following:

- Is the product or hardware under consideration suitable for the application or Purpose
- Will it be harmful to the health of the community in its normal use?
- Is there a risk of this hardware being released into the environment (e.g. the water) in the first instance or after the working life of the product or hardware has expired?

2. Production Process

In production process, checking of quality assurance must be highly considered. Quality assurance covers all activities from design, development, production, installation, servicing and

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documentation. This introduced the rules: "fit for purpose" and "do it right the first time". It includes the regulation of the quality of raw materials, assemblies, products and components; services related to production; and management, production, and inspection **processes**.

A. FAILURE TESTING

A valuable process to perform on a whole consumer product is failure testing, the operation of a product until it fails, often under stresses such as increasing vibration, temperature and humidity. This exposes many unanticipated weaknesses in a product, and the data is used to drive engineering and manufacturing process improvements.

B. STATISTICAL CONTROL

Many organizations use statistical process control to bring the organization to Six Sigma levels of quality, in other words, so that the likelihood of an unexpected failure is confined to six standard deviations on the normal distribution. Traditional statistical process controls in manufacturing operations usually proceed by randomly sampling and testing a fraction of the output. Variances of critical tolerances are continuously tracked, and manufacturing processes are corrected before bad parts can be produced.

C. COMPANY QUALITY

The company-wide quality approach places an emphasis on three aspects:

1. Elements such as controls, job management, adequate processes, performance and integrity criteria and identification of records
2. Competence such as knowledge, skills, experience and qualifications
3. Soft elements, such as personnel integrity, confidence, organizational culture, motivation, team spirit and quality relationships.

D. TOTAL QUALITY CONTROL

Total Quality Control is the most necessary inspection control of all in cases where, despite Statistical quality control techniques or quality improvements implemented, sales decrease.

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As the most important factor had been ignored, a few refinements had to be introduced:

- Marketing had to carry out their work properly and define the customer's specifications.
 - Specifications had to be defined to conform to these requirements.
3. Conformance to specifications i.e. drawings, standards and other relevant documents, were introduced during manufacturing, planning and control.
 4. Management had to confirm all operators are equal to the work imposed on them and holidays, celebrations and disputes did not affect any of the quality levels.
 5. Inspections and tests were carried out, and all components and materials, bought in or otherwise, conformed to the specifications, and the measuring equipment was accurate, this is the responsibility of the QA/QC department.
 6. Any complaints received from the customers were satisfactorily dealt with in a timely manner.
 7. Feedback from the user/customer is used to review designs.
 8. Consistent data recording and assessment and documentation integrity.
 9. Product and/or process change management and notification.

E. Final Product/ Customer Service

“Customer service” is a series of activities designed to enhance the level of customer's satisfaction – that is, the feeling that a product or service has met the customer's expectation”. Its importance varies by product, industry and customer.

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Self-Check -1

Written Test

Directions: Answer all the questions listed below

1. **What is Standards ?**
2. **What are pproduction Process?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Information Sheet 2	Recommend suitable preventive actions
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The **procedures for preventive action shall include:**

- a) The use of appropriate sources of information such as processes and work operations which affect product quality, concessions, audit results, quality records, service reports, and customer complaints to detect, analyze, and eliminate potential causes of nonconformities
- b) Determination of the steps needed to deal with any problems requiring preventive
Action
- c) Initiation of preventive action and application of controls to ensure that it is effective
- d) Confirmation that relevant information on actions taken is submitted for management review



The following table shows the Quality System Elements required by ISO 9000 in the making of the final product.

	Quality System Requirements	Contents
1	Management responsibility	Define and document commitment, policy and objectives, responsibility and authority, verification resources and personnel. Appoint a management representative and conduct regular reviews of the system
2	Quality system	Establish and maintain a documented quality system ensuring that products conform to specified requirements
3	Contract Review	Ensure that customer's contractual requirements are evaluated and met
4	Product development	Plan, control and verify product development to ensure that specified requirements are met
5	Document control	System for control and identification of all documents regarding quality, e.g. procedures, instructions, and specifications
6	Purchasing	Ensure that purchased products conform to specified requirements
7	Product identification and traceability	System to identify and control traceability of product at all stages from raw materials through production to the final product as delivered to the customer
8	Process control	Ensure and plan the control of production which directly effects quality by documented work instructions, monitoring and control of processes
9	Inspection and	Inspect and test incoming products, intermediate and final



	Quality System Requirements	Contents
	testing	product; establish product conformance to specified requirements and identify non-conforming products; maintain inspection and test records
10	Inspection, measuring and test equipment	Selection and control of equipment to ensure reliability and accuracy in measuring data
11	Inspection and test status	For the whole process the products shall be identified and clearly marked concerning test status, including indication of conformance or non-conformance
12	Control of nonconforming products	Identification, documentation, evaluation, isolation (if possible) and disposition of non conforming products
13	Corrective actions	Prevention of reoccurrence of failures (non-conformance)
14	Handling, storage packaging and delivery	Protection of the quality of the product during handling, storage, packaging and delivery



	Quality System Requirements	Contents
15	Quality records	Records, including those which demonstrate that the specified requirements have been met, shall be controlled and maintained
16	Internal Quality Audits	Regular, planned internal audits shall be carried out, documented and recorded to verify the effectiveness of the quality system
17	Training	Training requirements at all levels shall be identified and the training planned, conducted and recorded
18	Cleaning and Disinfection	Although not required by the ISO 9000 standards, these two points should be given special attention in all food companies
19	Personal hygiene	



Self-Check -2

Written Test

Directions: Answer all the questions listed below

1. What are the procedures for preventive action?

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____



Instruction Sheet	Learning Guide # 78 Complete Documentation
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Recording Information on quality parameters and other indicators of service performance.
- Record all service processes and outcomes.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Recording Information on quality parameters and other indicators of service performance.
- Record all service processes and outcomes

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described
3. Read the information written in the information “Sheet
4. Accomplish each “Self-check respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to the next or “Operation Sheet
6. Do the “LAP test”

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Information Sheet 1	Recording Information on quality parameters and other indicators of service performance
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Documents: written policies, process descriptions, procedures, and blank forms

- ❖ Used to communicate information
Records: worksheets, forms, charts, labels
- ❖ Used to capture information, activities, or results when performing a procedure
May be paper or electronic

Recording all production processes and outcomes

- ❖ **Record:** A document regardless of form or medium created, received, maintained, and used by an organization (public or private) or an individual in pursuance of legal obligations or in the transaction of business, of which it forms a part or provides evidence.

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Self-Check -1	Written Test
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Directions: Answer all the questions listed below

- 1. What document?**
- 2. What is record?**

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

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Information Sheet 2	Record all service processes and outcomes.
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Why is Records Essential?

- For continuous monitoring of quality system
- For specimen tracking throughout process
- To identify failures in equipment
- To revisit information; reference
- For use as a management tool

a. Patch documentation

The supplier shall establish and maintain methods to ensure that all documentation required to describe, test, install, and apply a patch has been verified and delivered with the patch.

b. Control of quality records

The supplier shall establish and maintain documented procedures for identification, collection, indexing, access, filing, storage, maintenance, and disposition of quality records. Quality records shall be maintained to demonstrate conformance to specified requirements and the effective operation of the quality system. Pertinent quality records from the subcontractor shall be an element of these data.

All quality records shall be legible and shall be stored and retained in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage or deterioration and to prevent loss. Retention times of quality records shall be established and recorded. Where agreed contractually, quality records shall be made available for evaluation by the customer or the customer's representative for an agreed period.

The supplier shall establish and maintain documented procedures for planning and implementing internal quality audits to verify whether quality activities and related results comply with planned arrangements and to determine the effectiveness of the quality system. Internal quality audits shall be scheduled on the basis of the status and importance of the activity to be audited and shall be carried

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out by personnel independent of those having direct responsibility for the activity being audited. The results of the audits shall be recorded and brought to the attention of the personnel having responsibility in the area audited. The management personnel responsible for the area shall take timely corrective action on deficiencies found during the audit. Follow-up audit activities shall verify and record the implementation and effectiveness of the corrective action taken.

c. Training

The supplier shall establish and maintain documented procedures for identifying training needs and provide for the training of all personnel performing activities affecting quality. Personnel performing specific assigned tasks shall be qualified on the basis of appropriate education, training and/or experience, as required. Appropriate records of training shall be maintained.

d. Servicing

Where servicing is a specified requirement, the supplier shall establish and maintain documented procedures for performing, verifying and reporting that the servicing meets the specified requirements.

e. Statistical Techniques

The supplier shall identify the need for statistical techniques required for establishing, controlling, and verifying process capability and product characteristics.

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Self-Check -2	Written Test
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Directions: Answer all the questions listed below

1. Why is Records Essential?

Note: Satisfactory rating - 3 Unsatisfactory - below 3

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

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List of Reference Materials

2. <http://www.rmit.edu.au/courses/C4238043846>
3. <http://www.scribd.com/doc/35606178/Module-7-Applying-Quality-Standards>
4. http://my.safaribooksonline.com/book/general-business/9781615640713/chapter-10-managing-for-productivity-and-quality/applying_quality_standards

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