



Grain Mill Operator

QP Code: FIC/Q1003

Version: 2.0

NSQF Level: 3

Food Industry Capacity & Skill Initiative || Shriram Bharatiya Kala kendra, 3rd floor, 1, Copernicus Marg, Mandi House, New Delhi
Delhi 110001

Qualification Pack

Contents

FIC/Q1003: Grain Mill Operator	3
<i>Brief Job Description</i>	3
Applicable National Occupational Standards (NOS)	3
<i>Compulsory NOS</i>	3
<i>Qualification Pack (QP) Parameters</i>	3
FIC/N1008: Prepare for production of products from various grains	5
FIC/N1009: Operate grain mill	11
FIC/N1007: Prepare and maintain work area and process machineries for operating a grain mill	20
FIC/N1010: Complete documentation and record keeping related to operating a grain mill	25
FIC/N9001: Ensure food safety, hygiene and sanitation for processing food products	31
Assessment Guidelines and Weightage	36
<i>Assessment Guidelines</i>	36
<i>Assessment Weightage</i>	37
Acronyms	38
Glossary	39

Qualification Pack

FIC/Q1003: Grain Mill Operator

Brief Job Description

A Grain Mill Operator carries out processes such as cleaning, de-stoning, de-husking, hulling, polishing and grinding to produce milled grains and flour(s).

Personal Attributes

A Grain Mill Operator must have the ability to plan, organize, prioritize, calculate, concentrate and handle pressure. The individual must possess reading, writing and communication skills. In addition, the individual must have mechanical aptitude and trouble shooting skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [FIC/N1008: Prepare for production of products from various grains](#)
2. [FIC/N1009: Operate grain mill](#)
3. [FIC/N1007: Prepare and maintain work area and process machineries for operating a grain mill](#)
4. [FIC/N1010: Complete documentation and record keeping related to operating a grain mill](#)
5. [FIC/N9001: Ensure food safety, hygiene and sanitation for processing food products](#)

Qualification Pack (QP) Parameters

Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing-Food Grain Milling (including oilseeds)
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	NCO-2004/8273.90

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Minimum Educational Qualification & Experience	12th Class OR 10th Class with 2 Years of experience relevant experience OR 10th Class (and 1 year course in relevant stream) OR 10th Class + I.T.I (2 years) OR 10th Class + I.T.I (1 year in relevant stream)
Minimum Level of Education for Training in School	10th Class
Pre-Requisite License or Training	1. Food standards for all grains milled 2. Operating different types of milling equipments 3. GMP 4. HACCP 5. QMS 6. Computer basics and ERP system followed in the organization 7. Training in Food Safety Standards and Regulations (as per FSSAI) (Mandatory)
Minimum Job Entry Age	18 Years
Last Reviewed On	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Approval Date	30/09/2021
Version	2.0
Reference code on NQR	2021/FI/FICSI/04573
NQR Version	1

Remarks:

Nil

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FIC/N1008: Prepare for production of products from various grains

Description

This OS unit is about preparing for production of products from various grains.

Elements and Performance Criteria

Plan equipment utilization for preparation of products from various grains

To be competent, the user/individual on the job must be able to:

- PC1.** read and understand the production order from the supervisor
- PC2.** ensure the working and performance of each equipment required for process
- PC3.** calculate the process time for effective utilization of machineries
- PC4.** plan batch size considering full capacity utilization of equipments
- PC5.** plan to utilize equipments for multiple products without affecting the quality of the finished products, and to optimize production and saving energy
- PC6.** allot responsibilities/ work to the assistants and helpers

Check raw materials and equipment for production of products from various grains

To be competent, the user/individual on the job must be able to:

- PC7.** refer process chart/ product flow chart
- PC8.** weigh the raw materials required for the batch
- PC9.** check the conformance of raw material quality to company standards, through physical analysis or by referring the quality analysis report from the supplier / internal lab analysis report
- PC10.** lubricate machineries for smooth operation
- PC11.** ensure working and performance of required machineries and tools
- PC12.** keep the tools accessible to attend repairs/faults in case of breakdown

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the organisation
- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes like procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages, working hours and accident compensation as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** types of raw materials (various grains) and products obtained from each raw materials
- KU10.** types of machineries used in processing and machineries used in the organisation

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- KU11.** maintenance of process equipments
- KU12.** supplier/manufacturers instructions related to machineries
- KU13.** process for producing each product
- KU14.** basic mathematics
- KU15.** calculation of raw material for required quantity of finished product
- KU16.** quality parameters, basic food microbiology and quality assessment based on physical parameters
- KU17.** food safety and hygiene
- KU18.** GMP
- KU19.** HACCP

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online erp or as per applicability in the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement
- GS10.** read internal information documents sent by internal teams
- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** ccand cross department teams on the issues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively

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- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving
- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan equipment utilization for preparation of products from various grains</i>	18	32	-	-
PC1. read and understand the production order from the supervisor	4	6	-	-
PC2. ensure the working and performance of each equipment required for process	4	6	-	-
PC3. calculate the process time for effective utilization of machineries	4	6	-	-
PC4. plan batch size considering full capacity utilization of equipments	2	3	-	-
PC5. plan to utilize equipments for multiple products without affecting the quality of the finished products, and to optimize production and saving energy	1	4	-	-
PC6. allot responsibilities/ work to the assistants and helpers	3	7	-	-
<i>Check raw materials and equipment for production of products from various grains</i>	17	33	-	-
PC7. refer process chart/ product flow chart	2	3	-	-
PC8. weigh the raw materials required for the batch	3	7	-	-
PC9. check the conformance of raw material quality to company standards, through physical analysis or by referring the quality analysis report from the supplier / internal lab analysis report	3	7	-	-
PC10. lubricate machineries for smooth operation	3	7	-	-
PC11. ensure working and performance of required machineries and tools	4	6	-	-
PC12. keep the tools accessible to attend repairs/faults in case of breakdown	2	3	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1008
NOS Name	Prepare for production of products from various grains
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Qualification Pack

FIC/N1009: Operate grain mill

Description

This unit is about operating machineries for milling grains to produce various grain products as per the specifications and standards of the organization.

Elements and Performance Criteria

Operating grain mill

To be competent, the user/individual on the job must be able to:

- PC1.** read and understand the production order from the supervisor
- PC2.** refer to the process chart/ product flow chart for grain processing and understand the machineries required and process parameters
- PC3.** set controls of automatic measuring scales in continuous process to transfer measured quantity of food grains for milling
- PC4.** change screens/sieves of cleaning, grading and sieving machines such as rotary screen cleaner, graders, plan sifter, etc. for cleaning based on size and for grading based on fineness
- PC5.** adjust controls of blowers or suction fan to remove light impurities, dust and smaller particles
- PC6.** set controls and operate elevators and conveyors to transfer dumped grains to the processing machine in different areas for various processing
- PC7.** set controls and adjust the speed of the separator, aspirator, etc. to remove light weight impurities from grains
- PC8.** set controls of de-stoner for feed rate into the machine, speed of machine to remove stones from grains
- PC9.** set and maintain water level and time of the conditioner for soaking/conditioning/tempering the grains, observe gauges to determine that moisture content and adjust controls to maintain required moisture content
- PC10.** turn valves to allow steam through process lines (for par-boiling), observe gauges to verify temperature, pressure etc, and adjust controls to maintain required temperature, pressure etc
- PC11.** adjust controls or turns valve to control speed to regulate amount of grain (par boiled grain) conveyed into drier
- PC12.** adjust controls of the drier to set the temperature and drying time to dry wet grain to required moisture level
- PC13.** operate husker to remove husk from the grain by adjusting the rollers (of rubber roll huskers) and setting the clearance between the rollers
- PC14.** operate aspirator by controlling the speed of the aspirator fan to separate dehusked grains and remove husk
- PC15.** operate splitter machines to split or separate de-husked grains by controlling the rotation of the rotary blades
- PC16.** operate whitener and polisher machines to remove bran from grains by adjusting pressure in whiteners and polishers to peel off the bran

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- PC17.** control the stream of air passing through the cylinder to cool the grain and to blow off the bran
- PC18.** operate length graders to grade processed grain based on length by controlling the rotation of the cylinders, and maintaining and ensuring the position of each
- PC19.** operate sifter to remove broken grains by controlling the vibration speed
- PC20.** observe cleaning, de-stoning, soaking, par boiling, de-husking, hulling and polishing processes
- PC21.** start and control operation of the machine such as separator, de-stoner, husker, abrasive whitener, friction whitener, polisher, sorter, grader, to clean, de-stone, de-husk, remove bran, polish, sort and grade grains (as applicable)
- PC22.** check the grains during and after each process and adjust machineries setting to achieved products as per specifications and standards of the organisation
- PC23.** check the weight of grains before and after each stage of processing
- PC24.** operate grinders like plate mill/ stone mill/roller mill to reduce the size of processed grain
- PC25.** fix/replace grinding rollers
- PC26.** open and close slides in spouts to route grain to various grinders and sifters
- PC27.** open and adjust feed chutes to regulate flow of grain through machine hopper into grinders
- PC28.** adjust the clearance between each rollers of roller mill by turning wheels or by setting controls according to grain size and hardness
- PC29.** start machine and adjust controls to regulate speed, to obtain required fineness and to achieve maximum yield
- PC30.** inspect product and sift out chaff to determine the yield
- PC31.** assess quality of finished product(s) by checking the physical parameters and sample the products and transfer sample to quality lab for analysis
- PC32.** start conveyors and elevators to transfer finished products to packing machine
- PC33.** operate packaging/bagging machinery by setting the batch code, date coding and filling quantity, etc.
- PC34.** start, stop or regulate speed of packaging line conveyor
- PC35.** check the weight of the packed/bagged product to ensure its conformance to standards

Post production cleaning and regular

To be competent, the user/individual on the job must be able to:

- PC36.** clean work area, machineries, equipment and tools using recommended cleaning agents and sanitizers

maintenance of equipments

To be competent, the user/individual on the job must be able to:

- PC37.** attend minor repairs/faults of all machines (if any)
- PC38.** ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the sop or following suppliers instructions/manuals

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

Qualification Pack

- KU1.** organization standards, process standards and procedures followed in the organisation
- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages, working hours and accident compensation as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** type of raw materials (grains) and products obtained from raw materials
- KU10.** production process for each type of grain
- KU11.** production process and process parameters for various products produced from each grain
- KU12.** types of machineries used in processing grains and machineries used in the organisation
- KU13.** handling all machineries
- KU14.** maintenance of machineries, equipments and tools
- KU15.** supplier/manufacturers instructions related to machineries
- KU16.** basic mathematics
- KU17.** quality parameters, basic food microbiology and quality assessment based on physical parameters
- KU18.** cleaning procedures like clean-in-place (CIP) and clean-out-place (COP)
- KU19.** knowledge on sanitizers and disinfectants and its handling and storing methods
- KU20.** food laws and regulations on product, packaging and labelling
- KU21.** food safety and hygiene
- KU22.** GMP
- KU23.** HACCP

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online erp or as per applicability in the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement
- GS10.** read internal information documents sent by internal teams

Qualification Pack

- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** ccand cross department teams on theissues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authoritymatrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving
- GS27.** apply domain information about maintenance processes and technicalknowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Operating grain mill</i>	31.5	58.5	-	-
PC1. read and understand the production order from the supervisor	1.5	0.5	-	-
PC2. refer to the process chart/ product flow chart for grain processing and understand the machineries required and process parameters	1.5	0.5	-	-
PC3. set controls of automatic measuring scales in continuous process to transfer measured quantity of food grains for milling	1	2	-	-
PC4. change screens/sieves of cleaning, grading and sieving machines such as rotary screen cleaner, graders, plan sifter, etc. for cleaning based on size and for grading based on fineness	1	2	-	-
PC5. adjust controls of blowers or suction fan to remove light impurities, dust and smaller particles	1	2	-	-
PC6. set controls and operate elevators and conveyors to transfer dumped grains to the processing machine in different areas for various processing	1	2	-	-
PC7. set controls and adjust the speed of the separator, aspirator, etc. to remove light weight impurities from grains	1	2	-	-
PC8. set controls of de-stoner for feed rate into the machine, speed of machine to remove stones from grains	1	2	-	-
PC9. set and maintain water level and time of the conditioner for soaking/conditioning/tempering the grains, observe gauges to determine that moisture content and adjust controls to maintain required moisture content	1	2	-	-
PC10. turn valves to allow steam through process lines (for par-boiling), observe gauges to verify temperature, pressure etc, and adjust controls to maintain required temperature, pressure etc	1	2	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. adjust controls or turns valve to control speed to regulate amount of grain (par boiled grain) conveyed into drier	1	2	-	-
PC12. adjust controls of the drier to set the temperature and drying time to dry wet grain to required moisture level	1	2	-	-
PC13. operate husker to remove husk from the grain by adjusting the rollers (of rubber roll huskers) and setting the clearance between the rollers	1	2	-	-
PC14. operate aspirator by controlling the speed of the aspirator fan to separate dehusked grains and remove husk	1	2	-	-
PC15. operate splitter machines to split or separate de-husked grains by controlling the rotation of the rotary blades	1	2	-	-
PC16. operate whitener and polisher machines to remove bran from grains by adjusting pressure in whiteners and polishers to peel off the bran	1	2	-	-
PC17. control the stream of air passing through the cylinder to cool the grain and to blow off the bran	1	2	-	-
PC18. operate length graders to grade processed grain based on length by controlling the rotation of the cylinders, and maintaining and ensuring the position of each	1	2	-	-
PC19. operate sifter to remove broken grains by controlling the vibration speed	0.5	1.5	-	-
PC20. observe cleaning, de-stoning, soaking, par boiling, de-husking, hulling and polishing processes	1	2	-	-
PC21. start and control operation of the machine such as separator, de-stoner, husker, abrasive whitener, friction whitener, polisher, sorter, grader, to clean, de-stone, de-husk, remove bran, polish, sort and grade grains (as applicable)	1	1	-	-
PC22. check the grains during and after each process and adjust machineries setting to achieved products as per specifications and standards of the organisation	0.5	1.5	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC23. check the weight of grains before and after each stage of processing	1	2	-	-
PC24. operate grinders like plate mill/ stone mill/roller mill to reduce the size of processed grain	1	2	-	-
PC25. fix/replace grinding rollers	0.5	1.5	-	-
PC26. open and close slides in spouts to route grain to various grinders and sifters	0.5	1.5	-	-
PC27. open and adjust feed chutes to regulate flow of grain through machine hopper into grinders	1	2	-	-
PC28. adjust the clearance between each rollers of roller mill by turning wheels or by setting controls according to grain size and hardness	1.5	1.5	-	-
PC29. start machine and adjust controls to regulate speed, to obtain required fineness and to achieve maximum yield	1	1	-	-
PC30. inspect product and sift out chaff to determine the yield	0.5	1.5	-	-
PC31. assess quality of finished product(s) by checking the physical parameters and sample the products and transfer sample to quality lab for analysis	0.5	1.5	-	-
PC32. start conveyors and elevators to transfer finished products to packing machine	0.5	1.5	-	-
PC33. operate packaging/bagging machinery by setting the batch code, date coding and filling quantity, etc.	0.5	1.5	-	-
PC34. start, stop or regulate speed of packaging line conveyor	0.5	1.5	-	-
PC35. check the weight of the packed/bagged product to ensure its conformance to standards	0.5	0.5	-	-
<i>Post production cleaning and regular</i>	1	3	-	-
PC36. clean work area, machineries, equipment and tools using recommended cleaning agents and sanitizers	1	3	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>maintenance of equipments</i>	2.5	3.5	-	-
PC37. attend minor repairs/faults of all machines (if any)	1	3	-	-
PC38. ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the sop or following suppliers instructions/manuals	1.5	0.5	-	-
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1009
NOS Name	Operate grain mill
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Qualification Pack

FIC/N1007: Prepare and maintain work area and process machineries for operating a grain mill

Description

This unit is about preparing and maintaining work area and process machineries for operation of a grain mill.

Elements and Performance Criteria

Prepare and maintain work area (for operating a grain mill)

To be competent, the user/individual on the job must be able to:

- PC1.** clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests
- PC2.** ensure that the work area is safe and hygienic for food processing
- PC3.** dispose waste materials as per defined SOPs and industry requirements

Prepare and maintain process machineries and tools (for operating a grain mill)

To be competent, the user/individual on the job must be able to:

- PC4.** check the working and performance of all machineries and tools used such as de-stoner, de-huller, polisher, blender, pulverizer, grinders like plate mill / hammer mill / roller mill, screens and sieves, packaging machines, etc.
- PC5.** clean the machineries and tools used with approved sanitizers following the company specifications and standards
- PC6.** place the necessary tools required for process
- PC7.** attend to the minor repairs/ faults of all machines, if required
- PC8.** select and set the machines and tools required for production

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the organisation
- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes like procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages, working hours and accident compensation as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** types of chemicals, materials and equipment required for cleaning and maintenance
- KU10.** cleaning process to disinfect equipment/ tools
- KU11.** supplier/manufacturers instructions related to cleaning and maintenance

Qualification Pack

- KU12.** knowledge of food safety standards and regulations (as per FSSAI)
- KU13.** knowledge on legal regulations pertaining to work place such as health and safety, recommended dosage for use of sanitizers, control of substances hazardous to health, handling/storage/ disposal/ cautions of use of sanitizers and disinfectants, fire precautions, occurrences, hygiene practice, disposal of waste, environmental protection, etc.

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online erp or as per applicability in the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement
- GS10.** read internal information documents sent by internal teams
- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** ccand cross department teams on the issues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving



Qualification Pack

- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare and maintain work area (for operating a grain mill)</i>	18	32	-	-
PC1. clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	10	15	-	-
PC2. ensure that the work area is safe and hygienic for food processing	3	7	-	-
PC3. dispose waste materials as per defined SOPs and industry requirements	5	10	-	-
<i>Prepare and maintain process machineries and tools (for operating a grain mill)</i>	17	33	-	-
PC4. check the working and performance of all machineries and tools used such as de-stoner, de-huller, polisher, blender, pulverizer, grinders like plate mill / hammer mill / roller mill, screens and sieves, packaging machines, etc.	5	10	-	-
PC5. clean the machineries and tools used with approved sanitizers following the company specifications and standards	5	10	-	-
PC6. place the necessary tools required for process	2	3	-	-
PC7. attend to the minor repairs/ faults of all machines, if required	2.5	5	-	-
PC8. select and set the machines and tools required for production	2.5	5	-	-
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1007
NOS Name	Prepare and maintain work area and process machineries for operating a grain mill
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Qualification Pack

FIC/N1010: Complete documentation and record keeping related to operating a grain mill

Description

This OS unit is about documenting and maintaining records of raw materials, process and finished products, related to operation of a grain mill

Elements and Performance Criteria

Document and maintain records of raw material (related to operating a grain mill)

To be competent, the user/individual on the job must be able to:

- PC1.** document and maintain record of details of raw materials and packaging materials such as name of raw materials, type and variety, vendor/supplier details, season, grown area, quantity, receiving date, supplier details, receiving date/ date of manufacture, expiry date, supplier quality document, quality parameters of all raw materials, internal quality analysis report, etc. as per organisation standards
- PC2.** document and maintain record on observations (if any) related to raw materials and packaging materials
- PC3.** load the raw materials details in ERP for future reference
- PC4.** verify the documents and track from finished product to raw materials, in case of quality concerns and during quality management system audits

Document and maintain records of production schedule and process parameters (related to operating a grain mill)

To be competent, the user/individual on the job must be able to:

- PC5.** document and maintain records of production plan with details such as product details, production sequence, equipments and machinery details, efficiency and capacity utilization of equipment
- PC6.** document and maintain records of process details such as type of raw material used, process parameters (temperature, time, pressure, etc. as applicable) for entire production in process chart or production log for all products produced
- PC7.** document and maintain records of batch size, production yield, wastage of raw materials, energy utilization and final products produced
- PC8.** document and maintain record of observations (if any) or deviations related to process and production
- PC9.** load the production plan and process details in ERP for future reference
- PC10.** verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits

Document and maintain records of the finished products (related to operating a grain mill)

To be competent, the user/individual on the job must be able to:

- PC11.** document and maintain records of the types of finished products produced
- PC12.** document and maintain records of the finished products details such as batch number, time of packing, date of manufacture, date of expiry, other label details, primary, secondary and tertiary packaging materials for all finished products, storage conditions, etc. as per organisation standards

Qualification Pack

- PC13.** document and maintain record of observations or deviations (if any) related to finished products
- PC14.** load the finished product details in erp for future reference
- PC15.** verify the documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the organisation
- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes like procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages, working hours and accident compensation as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** documentation system followed in the organization such as production chart, process chart and finished goods chart
- KU10.** details to be recorded on raw materials and finished products
- KU11.** details to be recorded and maintained on production plan and process parameters
- KU12.** methods to record and maintain records on observations (if any) related to raw materials, process and finished products
- KU13.** tracking back the record from finished product to raw material
- KU14.** entering details in the erp system followed by the organisation

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online erp or as per applicability in the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipments operation and process requirement

Qualification Pack

- GS10.** read internal information documents sent by internal teams
- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** ccand cross department teams on the issues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving
- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Document and maintain records of raw material (related to operating a grain mill)</i>	15	10	-	-
PC1. document and maintain record of details of raw materials and packaging materials such as name of raw materials, type and variety, vendor/supplier details, season, grown area, quantity, receiving date, supplier details, receiving date/ date of manufacture, expiry date, supplier quality document, quality parameters of all raw materials, internal quality analysis report, etc. as per organisation standards	6	4	-	-
PC2. document and maintain record on observations (if any) related to raw materials and packaging materials	3	2	-	-
PC3. load the raw materials details in ERP for future reference	3	2	-	-
PC4. verify the documents and track from finished product to raw materials, in case of quality concerns and during quality management system audits	3	2	-	-
<i>Document and maintain records of production schedule and process parameters (related to operating a grainmill)</i>	30	20	-	-
PC5. document and maintain records of production plan with details such as product details, production sequence, equipments and machinery details, efficiency and capacity utilization of equipment	6	4	-	-
PC6. document and maintain records of process details such as type of raw material used, process parameters (temperature, time, pressure, etc. as applicable) for entire production in process chart or production log for all products produced	9	6	-	-
PC7. document and maintain records of batch size, production yield, wastage of raw materials, energy utilization and final products produced	6	4	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC8. document and maintain record of observations (if any) or deviations related to process and production	3	2	-	-
PC9. load the production plan and process details in ERP for future reference	3	2	-	-
PC10. verify documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits	3	2	-	-
<i>Document and maintain records of the finished products (related to operating a grain mill)</i>	15	10	-	-
PC11. document and maintain records of the types of finished products produced	2	1	-	-
PC12. document and maintain records of the finished products details such as batch number, time of packing, date of manufacture, date of expiry, other label details, primary, secondary and tertiary packaging materials for all finished products, storage conditions, etc. as per organisation standards	4	3	-	-
PC13. document and maintain record of observations or deviations (if any) related to finished products	3	2	-	-
PC14. load the finished product details in erp for future reference	3	2	-	-
PC15. verify the documents and track from finished product to ingredients, in case of quality concerns and for quality management system audits	3	2	-	-
NOS Total	60	40	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N1010
NOS Name	Complete documentation and record keeping related to operating a grain mill
Sector	Food Processing
Sub-Sector	Food Grain Milling
Occupation	Processing
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Qualification Pack

FIC/N9001: Ensure food safety, hygiene and sanitation for processing food products

Description

This unit is about maintaining food safety, hygiene and sanitation in work area and processing unit for processing food products

Elements and Performance Criteria

Perform safety and sanitation related functions (for processing food products)

To be competent, the user/individual on the job must be able to:

- PC1.** comply with food safety and hygiene procedures followed in the organization
- PC2.** ensure personal hygiene by use of gloves, hairnets, masks, ear plugs, goggles, shoes, etc.
- PC3.** ensure hygienic production of food by inspecting raw materials, ingredients, finished products etc. for compliance to physical, chemical and microbiological parameters
- PC4.** pack products in appropriate packaging materials, label and store them in designated area, free from pests, flies and infestations
- PC5.** clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose
- PC6.** use safety equipment such as fire extinguisher, eye wash unit, first aid kit when required
- PC7.** follow housekeeping practices by having designated area for machines/tools
- PC8.** follow industry standards like GMP, HACCP and product recall process
- PC9.** attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and prevent them
- PC10.** Identify, document and report problems such as rodents and pests to management
- PC11.** conduct workplace checklist audit before and after work to ensure safety and hygiene
- PC12.** document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system

Apply food safety practices (for processing food products)

To be competent, the user/individual on the job must be able to:

- PC13.** determine the quality of food using criteria such as odour, appearance, taste and best before date, and take immediate measures to prevent spoilage
- PC14.** store raw materials, finished products and allergens separately to prevent cross contamination
- PC15.** label raw materials and finished products and store them in different storage areas according to safe food practices
- PC16.** follow stock rotation based on FEFO/FIFO

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** organization standards, process standards and procedures followed in the organisation

Qualification Pack

- KU2.** types of products produced by the organisation
- KU3.** code of business conduct
- KU4.** dress code to be followed
- KU5.** job responsibilities/duties and standard operating procedures
- KU6.** internal processes such as procurement, store management, inventory management, quality management and key contact points for query resolution
- KU7.** provision of wages, working hours as per organisation policy
- KU8.** food safety and hygiene standards followed
- KU9.** possible physical, chemical and biological hazards and methods of prevention of various hazards
- KU10.** personal hygiene requirement
- KU11.** different types of sanitizers used for process area, equipment and the procedure to use them
- KU12.** knowledge on food safety standards and regulations (as per fssai)
- KU13.** quality parameters and quality assessment based on physical parameters, basic food microbiology
- KU14.** labelling/marketing requirements for raw materials, finished goods, stored materials, packaging materials and their designated storage area
- KU15.** cleaning and sanitation of equipment and work area
- KU16.** CIP and COP methods and procedures
- KU17.** storage norms for raw materials, packaging material and finished products
- KU18.** stock rotation of ingredients and finished products based on FEFO/FIFO
- KU19.** method of maintaining safety check lists for all machineries
- KU20.** GHP
- KU21.** GMP
- KU22.** HACCP

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** note the information communicated by the supervisor
- GS2.** note the raw materials used for production and the finished products produced
- GS3.** note the readings of the process parameters and provide necessary information to fill the process chart
- GS4.** note down observations (if any) related to the process
- GS5.** write information documents to internal departments/ internal teams
- GS6.** note down the data for online ERP or as per applicability in the organization
- GS7.** read and interpret the process required for producing various types of products
- GS8.** read and interpret and process flowchart for all products produced
- GS9.** read equipment manuals and process documents to understand the equipment operation and process requirement
- GS10.** read internal information documents sent by internal teams

Qualification Pack

- GS11.** discuss task lists, schedules and activities with the supervisor
- GS12.** effectively communicate with the team members
- GS13.** question the supervisor in order to understand the nature of the problem and to clarify queries
- GS14.** attentively listen and comprehend the information given by the speaker
- GS15.** communicate clearly with the supervisor and cross department teams on the issues faced during process
- GS16.** analyse critical points in day to day tasks through experience and observation and identify control measures to solve the issue
- GS17.** handle issues in case the supervisor is not available (as per the authority matrix defined by the organization)
- GS18.** plan and organize the work order and jobs received from the supervisor
- GS19.** organize raw materials and packaging materials required for all products following the instruction provided by the supervisor
- GS20.** plan and prioritize the work based on the instructions received from the supervisor
- GS21.** plan to utilise time and equipment's effectively
- GS22.** organize all process/ equipment manuals so as to access information easily
- GS23.** support the supervisor in scheduling tasks for helper(s)
- GS24.** understand customer requirements and their priority and respond as per their needs
- GS25.** support supervisor in solving problems by detailing out problems
- GS26.** discuss the possible solutions with the supervisor for problem solving
- GS27.** apply domain information about maintenance processes and technical knowledge about tools and equipment
- GS28.** use common sense and make judgments on day to day basis
- GS29.** use reasoning skills to identify and resolve basic problems
- GS30.** use intuition to detect any potential problems which could arise during operations
- GS31.** use acquired knowledge of the process for identifying and handling issues

Qualification Pack

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Perform safety and sanitation related functions (for processing food products)</i>	25	50	-	-
PC1. comply with food safety and hygiene procedures followed in the organization	2	3	-	-
PC2. ensure personal hygiene by use of gloves, hairnets, masks, ear plugs, goggles, shoes, etc.	1	5	-	-
PC3. ensure hygienic production of food by inspecting raw materials, ingredients, finished products etc. for compliance to physical, chemical and microbiological parameters	2	3	-	-
PC4. pack products in appropriate packaging materials, label and store them in designated area, free from pests, flies and infestations	4	6	-	-
PC5. clean, maintain and monitor food processing equipment periodically, using it only for the specified purpose	2	3	-	-
PC6. use safety equipment such as fire extinguisher, eye wash unit, first aid kit when required	4	6	-	-
PC7. follow housekeeping practices by having designated area for machines/tools	2	3	-	-
PC8. follow industry standards like GMP, HACCP and product recall process	4	6	-	-
PC9. attend training on hazard management to understand types of hazards such as physical, chemical and biological hazards and measures to control and prevent them	1	4	-	-
PC10. Identify, document and report problems such as rodents and pests to management	1	4	-	-
PC11. conduct workplace checklist audit before and after work to ensure safety and hygiene	1	4	-	-

Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. document and maintain raw material, packaging material, process and finished products for the credibility and effectiveness of the food safety control system	1	3	-	-
<i>Apply food safety practices (for processing food products)</i>	10	15	-	-
PC13. determine the quality of food using criteria such as odour, appearance, taste and best before date, and take immediate measures to prevent spoilage	2	3	-	-
PC14. store raw materials, finished products and allergens separately to prevent cross contamination	2	3	-	-
PC15. label raw materials and finished products and store them in different storage areas according to safe food practices	2	3	-	-
PC16. follow stock rotation based on FEFO/FIFO	4	6	-	-
NOS Total	35	65	-	-

Qualification Pack

National Occupational Standards (NOS) Parameters

NOS Code	FIC/N9001
NOS Name	Ensure food safety, hygiene and sanitation for processing food products
Sector	Food Processing
Sub-Sector	Fruits and Vegetables
Occupation	Generic
NSQF Level	4
Credits	TBD
Version	1.0
Last Reviewed Date	30/09/2021
Next Review Date	30/07/2024
Deactivation Date	30/07/2024
NSQC Clearance Date	30/09/2021

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Element/ Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each Element/ PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score the Recommended Pass % aggregate for the QP.

Qualification Pack

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Minimum Aggregate Passing % at QP Level : 70

(**Please note:** Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
FIC/N1008.Prepare for production of products from various grains	35	65	-	-	100	20
FIC/N1009.Operate grain mill	35	65	-	-	100	20
FIC/N1007.Prepare and maintain work area and process machineries for operating a grain mill	35	65	-	-	100	20
FIC/N1010.Complete documentation and record keeping related to operating a grain mill	60	40	-	-	100	20
FIC/N9001.Ensure food safety, hygiene and sanitation for processing food products	35	65	-	-	100	20
Total	200	300	-	-	500	100

Qualification Pack

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Qualification Pack

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.

Qualification Pack

Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.