

Revised Application Documentation: Version 4 /28 May, 2015

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

Food Industry Capacity & Skill Initiative (FICSI)
Federation House
1, Tansen Marg
New Delhi - 110001

Name and contact details of individual dealing with the submission

Name: Ms. Mallika Verma

Position in the organisation: Chief Executive Officer

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List of documents submitted in support of the Qualifications File

1. Career Map of Chief Miller - Annexure 1
2. Qualification Pack of Chief Miller - Annexure 2
3. List of QP/NOS validating companies – Annexure 3
4. NSDC Human Resource and Skill Requirement Study- Annexure 4

QUALIFICATION FILE SUMMARY

Qualification Title	Chief Miller (FIC Q1001)		
Body/bodies which will assess candidates	Mettl, Stamp, IQAG, Skills Mantra, Aspiring Mind		
Body/bodies which will award the certificate for the qualification.	Food Industry Capacity & Skill Initiative (FICSI)		
Body which will accredit providers to offer the qualification.	Food Industry Capacity & Skill Initiative (FICSI)		
Occupation(s) to which the qualification gives access	Chief Miller		
Proposed level of the qualification in the NSQF.	Level 6		
Anticipated volume of training/learning required to complete the qualification.	240 hours		
Entry requirements / recommendations.	Graduation in Science(with Chemistry)/Diploma in Milling		
Progression from the qualification.	Manager-Production (Level 7)		
Planned arrangements for RPL.	RPL arrangements and policies are under development.		
International Comparability	Not done as yet.		
Formal structure of the qualification			
Title of unit or other component (include any identification code used)	Mandatory/ Optional	Estimated size (learning hours)	Level
FIC/N1001 Prepare and maintain work area and process machineries for grain milling	Mandatory	16	6
FIC/N1002 Prepare for the milling process and manage it	Mandatory	32	6
FIC/N1003 Complete documentation and record keeping related to grain milling	Mandatory	144	6
FIC/N9001 Food safety, hygiene and sanitation for processing food products	Mandatory	16	Common across all levels
FIC/N9004 Manage and lead a team	Mandatory	32	6

Please attach any document giving further detail about the structure of the qualification – e.g. a Curriculum or Qualification Pack.

Give details of the document here:

1. Qualification Pack of Chief Miller - Annexure 2

SECTION 1

ASSESSMENT

Name of assessment body:

If there will be more than one assessment body for this qualification, give details.

The assessment bodies include Mettl, Stamp, IQAG and Skills Mantra, Aspiring Mind

Will the assessment body be responsible for RPL assessment?

Yes

Give details of how RPL assessment for the qualification will be carried out and quality assured.

The RPL assessment will be based on the approved Qualification Pack and Assessment Criteria mentioned in the Qualification Pack.

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of the NSQF:

Assessment will be done through third parties who will be affiliated to FICSI as an Assessment Body.

The assessment plan will contain the following information:

- What will be assessed, i.e. the competency based on each NOS
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- Criteria for decision making i.e. those aspects that will guide judgements
- Where appropriate, any supplementary criteria would be used to make a judgement on the level of performance

The assessment would be conducted through theory, viva voce and practical.

Please attach any documents giving further information about assessment and/or RPL.

Give details of the document(s) here:

ASSESSMENT EVIDENCE

Complete the following grid for each grouping of NOS, assessment unit or other component as listed in the entry on the structure of the qualification on page 1.

<u>CRITERIA FOR ASSESSMENT OF TRAINEES</u>
Job Role: Chief Miller
Qualification Pack: FIC/Q1001
Sector Skill Council: Food Industry Capacity & Skill Initiative (FICSI)

Guidelines for Assessment:

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each 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 PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Assessable Outcomes	Assessment Criteria	Total Marks	Out Of	Theory	Skills Practical
1. FIC/N1001 (Prepare and maintain work area and process machineries for grain milling)	PC1. Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests		25	10	15
	PC2. Ensure that the work area is safe and hygienic for food processing		10	3	7
	PC3. Dispose waste materials as per defined SOPs and industry requirements		15	5	10
	PC4. Check the working and performance of all machineries and tools used for the milling		15	5	10

	process such as de-stoners, dehuller, polisher, blender, pulverizer, stone 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		15	5	10
	PC6. Place the necessary tools required for process		5	2	3
	PC7. Attend to the minor repairs/ faults of all machines, if required		15	5	10
		Total	100	35	65
2. FIC/N1002 (Prepare for the milling process and manage it)	PC1. Check the availability of raw materials, packaging materials, equipment availability and manpower		3	1	2
	PC2. Plan daily production sequence based on: <ul style="list-style-type: none"> • Types and varieties of grains to be milled • Process requirement for each variety of grain • Common milling process for various varieties of products • Avoiding CIP after each product • Using same machinery for various varieties of products • Maximum capacity utilization of machineries • Process stage and process time for each product • Efficient utilization of resources/manpower • Prioritizing urgent orders 		10	2	8
	PC3. Calculate the batch size based on the production order and machine capacity		3	1	2

PC4. Calculate percentages yield based on the variety and quality of raw material		3	1	2
PC5. Calculate raw material requirement (considering the process loss) to produce required quantity of finished product(s)		3	1	2
PC6. Calculate raw materials, packaging materials and manpower requirement for completing the order		3	1	2
PC7. Check the working and performance of each equipment required for milling process		3	1	2
PC8. Calculate the process time for effective utilization of machineries		3	1	2
PC9. Plan batch size considering full capacity utilization of equipments		1	0.5	0.5
PC10. Plan to utilize equipments for multiple products without affecting the quality of the finished products, and to optimize production and saving energy		1	0.5	0.5
PC11. Allot responsibilities/ work to assistants and helpers		2	0.5	1.5
PC12. Organise raw materials required for the batch/order from internal or external warehouse		2	1	1
PC13. Check and ensure the variety and grade of raw material taken for production		2	0.5	1.5
PC14. Check the conformance of raw material quality to organisation standards, through physical parameters and by referring the		3	1.5	1.5

quality analysis report from the supplier / internal lab analysis report				
PC15. Ensure working and performance of required machineries and tools		3	1	2
PC16. Change production/process flow chart on day-to-basis, based on production plan		3	1	2
PC17. Co-ordinate with inter department team and ensure continuous supply of raw materials, packaging materials and man power		3	1	2
PC18. Ensure breakdowns are attended immediately to reduce the down time		3	1	2
PC19. Ensure on-line production samples are taken following SOP, analysed and reported immediately		2	1	1
PC20. Make necessary changes in process/production based on quality report to enhance yield		3	1.5	1.5
PC21. Take appropriate corrective and preventive actions in case of any non- conformance related to product and process and ensure its immediate implementation		3	1.5	1.5
PC22. Authorize removal of unused/worn out/out-dated process machineries from production line and make provisions for installing new/latest machineries		2	0.5	1.5
PC23. Check and analyze new machineries for food safety and hazards		3	1	2

PC24. Carry out trials on new machineries and analyze its performance and suitability for the organisation		3	1	2
PC25. Ensure maintenance of milling unit is in safe and hygienic condition		2	0.5	1.5
PC26. Ensure post production cleaning of work area, machineries, equipment and tools using recommended cleaning agents and sanitizers		5	2	3
PC27. Ensure repairs/faults of all machines (if any) are attended immediately		6	2	4
PC28. Ensure periodic (daily/weekly/monthly/quarterly/half yearly/annual) maintenance of all machines and equipment following the SOP or following suppliers instructions/manuals		4	1.5	2.5
PC29. Plan fumigation of grain mill, arrange for fumigation by communicating with internal department/external agencies and carry out fumigation of entire plant at scheduled time through fumigation technicians		3	1	2
PC30. Provide training to employees on process, quality, GMP), GHP, HACCP, occupational health and safety, handling storage and distribution (stock rotation based on FEFO/FIFO), etc.		4	1	3
PC31. Handle legal issues related to food laws and regulations in co-ordination with quality team		3	1.5	1.5
PC32. Handle quality management system audits for certifications		3	1.5	1.5

	like ISO, HACCP , etc.				
		Total	100	35	65
3. FIC/N1003 (Complete documentation and record keeping related to grain milling)	PC1. Document and maintain record of details of all raw materials used such as names of raw materials, supplier details, receiving date/ date of manufacture, expiry date, supplier quality document, quality parameters for all raw materials, internal quality analysis report, etc., as per organisation standards		10	6	4
	PC2. Document and maintain record of observations (if any) related to raw materials and packaging materials		5	3	2
	PC3. Load the raw material details in computer or in the ERP system followed by the organisation for future reference		5	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		5	3	2
	PC5. Document and maintain records of production details such as the product produced, production sequence, equipment and machinery details, efficiency and capacity utilization of equipment, etc.		10	6	4
	PC6. Document and maintain records of process details such as type of raw material used, process parameters (temperature, time etc. as applicable) for the entire process in process chart or production log for all products produced		15	9	6
	PC7. Document and maintain record of batch size, raw material used, yield after each stage of process, wastage, energy utilization and		10	6	4

	final products produced			
	PC8. Document and maintain record of observations or deviations (if any) related to production and process parameters	5	3	2
	PC9. Load the production and process parameter details in computer or in the ERP system followed by the organisation for future reference	5	3	2
	PC10. Verify documents and track them from finished product to raw materials, in case of quality concerns, and during quality management system audits	5	3	2
	PC11. Document and maintain records of the types of finished products produced	3	2	1
	PC12. Document and maintain records of finished products details such as name of the product, batch number, time of packing, date of manufacture, date of expiry, other label details, primary and secondary packaging materials for all finished products, storage conditions, etc., as per organisation standards	7	4	3
	PC13. Maintain record of observations or deviations (if any) related to finished products	5	3	2
	PC14. Load the finished product details in computer or in the ERP system followed by the organisation for future reference	5	3	2
	PC15. Verify the documents and track them from finished product to raw materials, in case of quality concerns, and during quality management system audits	5	3	2
	Total	100	60	40
4. FIC/N9001 (Food safety, hygiene and sanitation for	PC1. Comply with food safety and hygiene procedures followed in the organisation	5	2	3

processing food products)

PC2. Ensure personal hygiene by using 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 specified purpose
PC6. Use safety equipment such as fire extinguisher, first aid kit and eye-wash station when required
PC7. Follow housekeeping practices by having designated area for materials/tools
PC8. Follow industry standards like GMP and 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 audits 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

6	1	5
5	2	3
10	4	6
5	2	3
10	4	6
5	2	3
10	4	6
5	1	4
5	1	4
5	1	4
4	1	3

	PC13. Determine the quality of food using criteria such as aroma, appearance, taste and best before date, and take immediate measures to prevent spoilage		5	2	3
	PC14. Store raw materials, finished products, allergens separately to prevent cross-contamination		5	2	3
	PC15. Label raw materials and finished products and store them in designated storage areas according to safe food practices		5	2	3
	PC16. Follow stock rotation based on FEFO / FIFO		10	4	6
		Total	100	35	65
6. FIC/N9004 (Manage and lead a team)	PC1. Ensure that the team is aware of the schedule and job expectations on a daily basis		12	4	8
	PC2. Involve the team in regular meetings to communicate information intended for them		12	4	8
	PC3. Ensure communication to the team on any changes in policies/ processes by the organization through required verbal/ written mechanisms		12	4	8
	PC4. Ensure participation of the team in various engagement initiatives organized by the organization		12	4	8
	PC5. Counsel and address issues among the team for any work related issues		12	4	8
	PC6. Support the manager in deployment of the team as per production schedule and the organizational norms and guidelines		10	4	6
	PC7. Ensure periodic training of the team and support the team by delivering trainings		10	3	7
	PC8. Share knowledge of processes, techniques and products with the team to enhance their skill		10	4	6

	levels				
	PC9. Provide feedback to the manager pertaining to performance of the team		10	4	6
		Total	100	35	65

SECTION 2

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

During the industry interactions carried out while creating occupational maps and prioritization of job roles for Qualification Pack development, the mentioned qualification was indicated as a key requirement by the industry. Governing Council of FICSI shared the final approval for the development of the role. The qualification has also been validated and its need has been endorsed by leading industry players such as Cargill, Rajdhani Flour Mills, Sreebhog, Source Well Flours, Parmanand and Sons Food Products Pvt Ltd, etc. In addition, workshops were conducted and visits carried out in Lawrence Road, New Delhi (hub of food processing units, especially in food grain milling) for the validation of the Qualifications Pack. The overall requirement for the qualification was also validated with All India Food Processing Association (AIFPA) members.

In addition, the NSDC Human Resource and Skill Requirement study has indicated that grain based products are the largest contributors to the Food Processing Industry accounting for 28% to 30% of revenues. The total rice milling capacity in the country is about 200 million tonnes per annum. The report also states that India will continue to be one of the largest producers of cereals and the growth in processing infrastructure may help this industry to optimally leverage its raw material advantage. Favourable government policies such as increased alignment with international quality standards for this sub sector are being encouraged. Hence, requirement for skilled manpower in this sub-sector is expected to increase.

Evidence of the qualification is supported by 39 validations with representation largely from medium and small enterprises owing to the MSME nature of this industry. The complete list of validating companies has been enclosed as an annexure to the Q file.

What is the estimated uptake of this qualification and what is the basis of this estimate?

As per the NSDC Human Resource and Skill Requirement study, the projected size of the Food Grain Milling sub sector till year 2022 is Rs. 3532 billion (CAGR of 7.8%). The incremental human resource requirement (annual) in Food Grain Milling is expected to be 42,000 with demand in the organised sector being 8,000 (annual).

The mentioned qualification is one of the key job roles in the food grain milling sub-sector and would be a key contributor in the aforementioned incremental human resource requirement.

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

The qualification discussed above is checked for any duplication across sectors. Given the qualification is niche to Food Processing sector, there is no duplication or pre-existing similar qualifications.

What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

The comments, feedback and suggestions were collected through interaction with industry during December '14 to August'15. The same will be compiled and justifiable changes will be incorporated in the next/updated version of the QP. This QP is set to be revised post 15th September, 2016.

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

- List of QP NOS validating companies – Annexure 3
- NSDC Human Resource and Skill Requirement study – Annexure 4

SECTION 3

SUMMARY EVIDENCE OF LEVEL

Level of qualification: Level 6

Summary of Direct Evidence (from learning outcomes):

The job activities are exhaustively studied and their outcomes are evaluated to understand their mapping with the NSQF framework. The same had been reviewed and validated by sector skill council and industry representatives.

Summary of other evidence (if used):

Chief Miller – QP FIC/Q 1001					
Process required	Professional Knowledge	Professional Skills	Core Skills	Responsibility	Level
The job holder is expected to manage the milling process for all types of grains. This role demands wide range of specialized technical skill, clarity of knowledge, and practice in broad range of activity. This involves activities such as managing the entire milling process for all types of grains (wheat, rice, pulses) end to end, overseeing activities such as handling of various milling machineries, maintenance	The job holder is expected to have factual and theoretical knowledge in broad contexts within a field of work or study. For example, the job holder is expected to have knowledge of basic food microbiology, food safety standards and regulations, legal regulations pertaining to work place like health and safety, handling quality management system audits, and other food	The job holder is expected to possess a range of cognitive and practical skills required to generate solutions to specific problems in a field of work. For instance, the job holder has to identify, ensure documentation and report problems such as rodents and pests to management, counsel and address problems among the team for any work related issues, change	The job holder is expected to be reasonably good in mathematical calculation, data collection, and logical communication, understand political and social environment well. For instance, s/he should be able to handle storage and distribution based on FIFO/FEFO, ensure on-line production samples are taken following SOP, take appropriate corrective and	The job holder is responsible for his own work and learning and full responsibility for other's work and learning. S/he is a master technician who prepares for the milling process and manages it end to end, manages and leads his team during the entire process, ensures his team undergoes periodic training, ensures participation of team in various	6

<p>of process parameters, inspection of raw materials, and finished goods to achieve the desired quality and quantity of products. Since this does not require a command of wide ranging theoretical and practical skill, it does not qualify as a level 7 role.</p>	<p>laws/regulations on the product. Since all the above mentioned areas are not related to wide ranging factual knowledge, this role qualifies as a level 6 role.</p>	<p>production/process flow chart on a day to day basis, ensure problems such as breakdowns are attended to immediately, handle legal issues, handle issues related to quality management system audits, etc. Hence this role qualifies for a Level 6.</p>	<p>preventive action in case of any non-conformance, handle legal issues related to food laws and regulations in coordination with the quality team, counsel and address issues among the team. Hence, this role qualifies for Level 6.</p>	<p>engagement activities organized by the organisation, shares knowledge of processes, techniques with the team to enhance their skill levels. Hence, this role qualifies for Level 6.</p>	
Level 6	Level 6	Level 6	Level 6	Level 6	Level 6

SECTION 4

EVIDENCE OF RECOGNITION OR PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

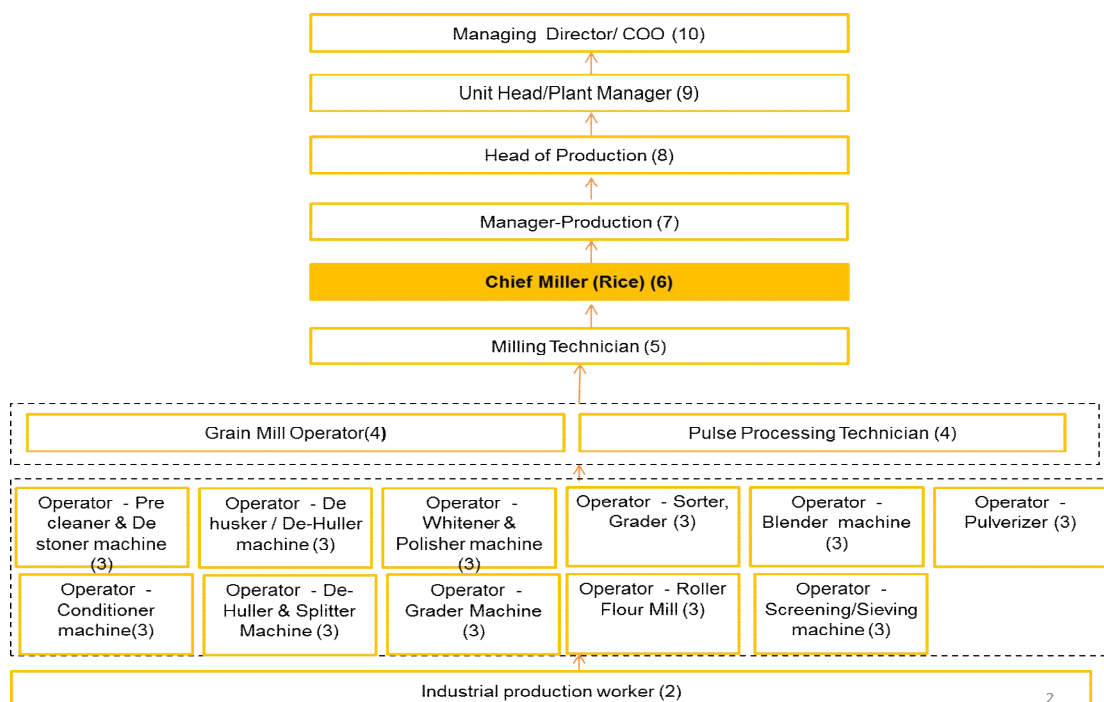
1. Discussing the growth trajectory within each occupation after studying organisational charts of various industry players across small, medium and large scale organizations.
2. Exploring various lateral career opportunities for the discussed qualification
3. Ensuring that there is a clear role up in terms of performance criteria qualification experience and skill requirement from lower NSQF Level to higher levels in the hierarchy.

Please refer to the career path as per Annexure 1 which clearly defines the career path.

Please attach any documents giving further information about any of the topics above.

Give details of the document(s) here:

Annexure 1: Career Map of Chief Miller



Annexure 2: Qualification Pack of Chief Miller (separate file)

Annexure 3: List of QP/NOS validating companies (separate file)