



**QQI**

Quality and Qualifications Ireland  
Dearbhú Cáilíochta agus Cáilíochtaí Éireann

## Component Specification NFQ Level 6

### Milking Process Routine 6N0723

#### 1. Component Details

<b>Title</b>	Milking Process Routine
<b>Teideal as Gaeilge</b>	Gnáthamh Próiseas Bleán
<b>Award Type</b>	Minor
<b>Code</b>	6N0723
<b>Level</b>	6
<b>Credit Value</b>	5
<b>Purpose</b>	The purpose of this award is to equip the learner with the knowledge, skill and competence to autonomously perform and manage the dairy herd milking process in a manner that integrates key milking routines with required milk quality, food safety, dairy herd health and dairy cow welfare best practice for commercial Irish dairy herds.

#### Learning Outcomes

Learners will be able to:

- 1 Evaluate the factors that affect milk composition, milk quality and food safety to include udder structure and milk let down processes, milk solids, Total Bacterial Counts (TBC), Somatic Cell Counts (SCC), thermodurics, anti-biotic or other residue risks, cow hygiene, milking operator hygiene and the operation and management of a bulk tank in the context of Irish milk processor quality assurance and milk quality standards requirements.
- 2 Assess sickness and abnormal behaviour in dairy cows in terms of common signs and symptoms, the recognised best practices to deal with a sick cow, how symptoms should be clearly communicated to others, and the implications for cow/herd

management at milking time and how instructions in regard to sick cow management should be best interpreted or communicated to others.

- 3 Appraise best practice bio-security measures necessary to maintain a disease free herd including fencing, visitor management, relief milking management, management of bought in stock, health testing of stock and quarantine procedures.
- 4 Assess situations where diseases in dairy cows pose risks to milk production and quality, to milking operator health, and consumer health including the transfer pathways, preventative measures and management.
- 5 Assess legislative, and health and safety issues associated with milking including specific current legislation for milk quality standards, animal welfare and animal handling techniques in their implications for practical on farm compliance.
- 6 Appraise common milking parlour types in respect of their milking process flow, function of the key parlour components, milking machine maintenance checks required, and new developments and automation.
- 7 Report clearly on the implementation of any instructions and communications received in relation to the milking process and specific control measures where necessary.
- 8 Utilise appropriate preparatory and post milking procedures for the milking process in regard to the milking yard, the milking parlour, the milking machine including the careful assembly of the herd and return the herd post milking as appropriate.
- 9 Assess herd health pre-milking to identify cows which are on heat, lame or ill and record their identity numbers and draft identified cows to treatment and handling units where appropriate.
- 10 Utilise best practice procedures in regard to operator hygiene including selecting and using appropriate personal protective equipment.
- 11 Utilise recognised best practice procedures in regard to key cow pre and post milking procedures including teat preparation, hygiene and disinfection and checking for mastitis.
- 12 Utilise recognised best practice procedures in respect of: cluster attachment, milking of the cow, and cluster removal whilst ensuring safe and efficient operation.

- 13 Monitor the milking process and the operation of the milking machine, bulk tank, backing gate and cow flow, taking regard of efficiency and cow calmness, taking corrective action as appropriate.
- 14 Sample milk using appropriate techniques including the taking of milk from a cow and from either a recording jar or milk meter into a sample bottle or other vessel and taking a sterile sample for culture.
- 15 Utilise recognised best practice procedures to deal with a cow with mastitis including administering an intra-mammary antibiotic as per regulatory requirements.
- 16 Supervise the manual or automatic milking machine washing and rinsing procedure.
- 17 Demonstrate knowledge of essential milk bulk tank operational checks, bulk tank maintenance and bulk tank washing and cleaning routines and automated washing procedures.
- 18 Manage the implementation of risk assessment and hazard control at each milking process step as appropriate.

## Assessment

### General Information

All assessment should be planned in accordance with the programme assessment strategy developed as part of the programme submission for validation. See **Policies and Criteria for Validation of Programmes**. Assessment should be undertaken consistently and reflect current assessment guidelines. See [www.qqi.ie](http://www.qqi.ie).

All FET assessment is criterion referenced. Successful achievement of the award is based on learners attaining the required standards of knowledge, skill or competence consistent with the **minimum intended programme learning outcomes**.

The techniques set out below are considered the optimum approach to assessment for this component. In exceptional circumstances providers may identify alternative assessment techniques through the provider's application for programme validation which are reliable and valid but which are more appropriate to their context.

Assessment of a number of components may be integrated across programmes for delivery, provided that the learning outcomes of each minor award are assessed.

Group or team work may form part of the assessment, provided each learner's achievement is separately assessed.

All providers are required to submit an assessment plan as part of their application for programme validation. Assessment Plans will include information relating to scheduling and integration of assessment. See current FET validation guidelines at [www.qqi.ie](http://www.qqi.ie).

## Assessment Techniques

In order to demonstrate that they have reached the standards of knowledge, skill and competence identified in all the learning outcomes, learners are required to complete the assessment(s) below.

The assessor is responsible for devising assessment instruments (e.g. project and assignment briefs, examination papers), assessment criteria and mark sheets, consistent with the techniques identified below and QQI's assessment requirements.

Programme validation will require providers to map each learning outcome to its associated assessment technique. All learning outcomes **must** be assessed and achieved in accordance with the **minimum intended module learning outcomes** set out in the validated programme.

Skills Demonstration	60%
Examination - Theory	30%
Examination - Oral	10%

## Description

### Skills Demonstration

*A skills demonstration is used to assess a wide range of practical based learning outcomes including practical skills and knowledge. A skills demonstration will require the learner to complete a task or series of tasks that demonstrate a range of skills.*

### Examination - Theory

*An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.*

*A theory-based examination assesses the ability to recall, apply and understand specific theory and knowledge.*

### **Examination - Oral**

*An examination provides a means of assessing a learner's ability to recall and apply knowledge, skills and understanding within a set period of time and under clearly specified conditions.*

*An oral examination assesses the ability to speak effectively in the vernacular or other languages.*

### **Recognition of Prior Learning (RPL)**

To support the development and implementation of RPL with regard to access, granting credit/exemptions and achievement of awards/parts of awards, providers should refer to **QQI's Statutory Guidelines for Quality Assurance**, the **Policies and Criteria for Validation of Programmes** and the **Principles and Operational Guidelines for the Recognition of Prior Learning in Further and Higher Education and Training** available at [www.qqi.ie](http://www.qqi.ie)

### **Grading**

Pass	50% - 64%
Merit	65% - 79%
Distinction	80% - 100%

### **Specific Validation Requirements**

The provider must have all of the following in place to offer this award:

- 1.
- 2.
3. Access to a farm with appropriate animal and feedstuff housing and handling facilities in compliance with health and safety requirements
- 4.
5. Access to a farm with appropriate skills demonstration space in compliance with health and safety requirements
- 6.
7. Access to a farm of sufficient scale to ensure that all learners have access to animals and equipment required to practice and achieve learning outcomes to include:
- 8.
9. • Suitable sized dairy herd
- 10.
11. • Complete milking parlour including milk bulk tank

- 12.
13. Stated policies and procedures by the provider to deal with potential bio-security risks
- 14.
15. Access to a farm in compliance with current dairy hygiene regulations
- 16.
- 17.

**Supporting Documentation**

- 1.

**Access**

To access programmes leading to this award the learner should have reached the standards of knowledge, skill and competence associated with the preceding level of the National Framework of Qualifications. This may have been achieved through a formal qualification or through relevant life and work experience.

**Transfer**

Successful completion of this component award enables the learner to transfer to programmes leading to other certificates where this component is a mandatory or an elective requirement.

**2. FET Award Standards**

QQI award standards are determined within the National Framework of Qualifications (NFQ), <http://www.nfq-qqi.com>. QQI determines standards for the education and training awards that it makes itself and that are made by providers to whom it has delegated authority to make an award. Providers offering programmes leading to QQI awards **must** have their programme(s) validated in accordance with current validation policy (see [www.qqi.ie](http://www.qqi.ie)).

Award standards are designed to be consistent with the NFQ's award classes i.e. major, special purpose, supplemental and minor awards. They are expressed in terms of **learning outcomes** i.e. concise statements of what the learner is expected to know or be able to do in order to achieve a particular award. Learning outcomes for FET awards are contained within the associated specifications:

AWARD CLASS	STANDARDS	AWARDS
Major Award	Certificate Specification	Certificate (Levels 1 to 5) Advanced Certificate (Level 6)
Supplemental Award	Supplemental Specification	Supplemental Certificate (Level 3 to 6)
Special Purpose	Specific Purpose Specification	Specific Purpose Certificate (Levels 3 to 6)
Minor Award	Component Specification	Component Certificate (Levels 1 to 6)

Award standards are thresholds, they describe standards of knowledge, skill or competence to be acquired, and where appropriate, demonstrated, by a learner before an award may be made.

Award standards will be reviewed from time to time as necessary. Minor changes may be made by the QQI executive outside the review cycle where necessary. Changes to standards are published on QQI's website. Providers with validated programmes and providers with delegated authority to make awards are responsible for monitoring relevant standards and making necessary responses to changes.

### 3. FET Credit

Every FET certificate and component specification includes an FET credit value (Table 1). FET credit is quantified in multiples of 5 FET credits (up to 50 hours of learner effort). Learner effort is based on the time taken by typical learners at the level of the award to achieve the learning outcomes for the award. It includes all learning time involved including: guided learning hours, self-directed learning and assessment.

**Table 1: FET Credit Values**

NFQ Level	Major Awards Credit Values	Default Credit Values Minor Awards	Other Permitted Minor Award Credit Values	Special Purpose and Supplemental Award Credit Value Ranges
1	20	5	10	
2	30	5	10	
3	60	10	5,20	>5 and <60
4	90	10	5,15,20	>5 and <90
5	120	15	5,10,30	>5 and <120
6	120	15	5,10,30	>5 and <120

### Guide to Level

Learning outcomes at this level include a comprehensive range of skills which may be vocationally-specific and/or of a general supervisory nature, and require detailed theoretical understanding. The outcomes also provide for a particular focus on learning skills. The outcomes relate to working in a generally autonomous way to assume design and/or management and/or administrative responsibilities. Occupations at this level would include higher craft, junior technician and supervisor.

Strand	Sub-strand	Nature of learning
Knowledge	Breadth	Specialised knowledge of a broad area
	Kind	Some theoretical concepts and abstract thinking, with significant depth in some areas
Know How & Skill	Range	Demonstrate a comprehensive range of specialised skills and tools
	Selectivity	Formulate responses to well defined abstract problems
Competence	Context	Utilise diagnostic and creative skills in a range of functions in a wide variety of contexts
	Role	Exercise substantial personal autonomy and often take responsibility for the work of others and/or for the allocation of resources; form and function within, multiple and complex heterogeneous groups.

Learning to Learn	Learn to take responsibility for own learning within a managed environment.
Insight	Express an internalised, personal world view, reflecting engagement with others.

*Extract from 'Determinations for the Outline National Framework of Qualifications': NQAI*

