DEVELOP NEW FOOD PRODUCTS

UNIT CODE: FOP/OS/FT/CR/04/6/A

UNIT DESCRIPTION

This unit describes the competencies required to develop new food products. It involves conducting brainstorming sessions; conducting new product feasibility studies; developing and analysing new product prototype; conducting new product tests and market testing the new product as well as patenting, commercialization of the new product and conducting analysis of competing products in the market.

It applies in the Food Processing sector.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the **key outcomes** which make up **workplace function**.	PERFORMANCE CRITERIA These are **assessable** statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the range.*
1. Conduct brainstorming sessions	1.1 Multidisciplinary team is identified and formed based on target products to develop 1.2 Brainstorming is carried out in accordance with potential products to produce 1.3 Brainstorming outcomes are recorded and shared based on product development procedures 1.4 Plant plan is shared with implementers as per workplace policy
2. Conduct new product feasibility studies	2.1 Feasibility study strategy is developed based on overall plant plan 2.2 Required resources are identified and budgets developed as per feasibility study strategy 2.3 Feasibility study is conducted based on feasibility study strategy and best practice 2.4 Collected data and information is synthesized based on accepted statistical methods
3. Market test new product	3.1 New product *marketing protocol* is developed based on plant marketing plan 3.2 Market testing is conducted based on the marketing protocol 3.3 Marketing data and information is analyzed based on accepted statistical methods 3.4 Findings are documented, reports prepared and

	recommendations provided and disseminated to relevant authority
4. Conduct new product tests	4.1 New product is reformulated and improved based on market findings and recommendations
	4.2 New product *laboratory tests* are conducted as per product standards and legal requirement
	4.3 New product is registered with *relevant agencies* as per legal requirements
	4.4 Packaging is developed based on the nature of the product, legal requirements and plant standards
	4.5 New product information, properties and process specifications are documented as per workplace policy and best practice
5. Introduce new product	5.1 New product patents/Industrial Property Rights are obtained as per legal requirements
	5.2 New product resourcing plan for commercialization is developed based on product formula and process steps
	5.3 New product *quality monitoring framework* is developed as per plant quality standards
6. Conduct competitor analysis	6.1 Competing products are identified according to the market demands
	6.2 Consumer feedbacks are recorded and analyzed according to the product performance in the market
	6.3 Recommendations are made and undertaken based on competing products analysis outcome
	6.4 Follow up on product performance is conducted based on workplace policy
	6.5 Documentation of product performance and follow up is carried out based on workplace policy

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Product standards may include but are not limited to:	• Physical • Chemical • Microbiological • Organoleptic

2. Resources and requirements may include but are not limited to:	• Human • Financial • Infrastructural
3. Marketing protocol may include but are not limited to:	• Product • Price • Place • Promotion
4. Laboratory tests may include but are not limited to:	• Raw material tests • In-process tests • End product tests • Shelf life • Trade sample tests • Non–conformance tests
5. Relevant agencies may include but are not limited to:	• Functional managers and their team • Managing director • Board of directors • Government authorities • Suppliers
6. Quality monitoring framework may include but are not limited to:	• Parameters to be tested • Tests to be done • Testing frequency • Sampling method

Required Skills and Knowledge
This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate skills of:
- Communication
- Inter-personal
- Leadership
- Planning
- Problem solving
- Root-cause analysis
- Interpretation
- Trouble shooting
- Apparatus handling
- Analytical
- Sampling

- Report writing
- Research
- Computer

Required Knowledge

The individual needs to demonstrate knowledge of:
- Food engineering Food chemistry Food analysis
- Food microbiology
- Basic research
- Quality/Safety management systems
- Food Biotechnology
- Technology of specific products Standardization
- Principles of procurement
- Statutory requirements and regulations
- Hygiene and sanitation
- GMPs
- Packaging Storage
- Emerging issues
- Competing product analysis

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Carried out brainstorming sessions 1.2 Conducted new food product feasibility study 1.3 Developed new food product prototype 1.4 Analyzed new food product prototype 1.5 Market tested new food product 1.6 Conducted new food product reformulation and testing 1.7 Obtained new food product patents/Industrial Property Rights 1.8 Developed new food product quality monitoring framework 1.9 Analyzed and documented competing products in the market
2. Resource Implications	The following resources must be provided: 2.1 Workplace or assessment facility with a functional laboratory and pilot plant
3. Methods of Assessment	Competency may be assessed through:

	3.1 Observation 3.2 Oral questioning 3.3 Projects 3.4 Written tests 3.5 Performance analysis
4. Context of Assessment	Competency may be assessed: 4.4 On the job 4.5 Off the job 4.6 In work placement (attachment) Off the job assessment must be undertaken in a closely simulated workplace environment.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.