

# EUROPASS DIPLOMA SUPPLEMENT

## TITLE OF THE DIPLOMA (ES)

*Técnico Superior en Procesos y Calidad en la Industria Alimentaria*

## TRANSLATED TITLE OF THE DIPLOMA (EN)<sup>(1)</sup>

*Higher Technician in Processes and Quality in the Food Industry*

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(1) This translation has no legal status.

## DIPLOMA DESCRIPTION

**The holder of this diploma will have acquired the General Competence with regard to:**

Organising and controlling the processes of food preparation programming and supervising the necessary operations, material and human resources, applying production plans, quality, food safety, labour risks prevention and environmental protection in accordance with current legislation.

**Within this framework, the PROFESSIONAL MODULES and their respective LEARNING OUTCOMES acquired by the holder are listed below:**

### “Food Technology”

The holder:

- Recognises preparation processes of the meat industry describing associated procedures and techniques.
- Characterises preparation processes of products derived from fishing and aquaculture describing their fundamentals.
- Develops the preparation processes of milks for consumption and dairy products characterising their technological fundamentals.
- Recognises the preparation processes of cans and/or vegetable soups describing associated procedures and techniques.
- Characterises preparation processes derived from cereals and sweets justifying processing operations and its sequence.
- Recognises the preparation processes of other food products describing their technological fundamentals.

### “Food Biotechnology”

The holder:

- Recognises biochemistry fundamentals relating them with cell functions.
- Analyses microbiology fundamentals relating them with their application in the food industry.
- Characterises bioreactors relating them with their biotechnological applications in the food industry.
- Describes biotechnology applications to the food industry identifying involved microorganisms and processes.
- Recognises biosensors and other biotechnology applications assessing their potential to guarantee food quality.

### “Food Analysis”

The holder:

- Organises the laboratory recognising its facilities, equipment and resources.
- Carries out the sampling and preparation of the sample, relating the same with the analyses to be carried out.
- Applies techniques of physical and chemical analyses to food, describing their fundamentals.
- Carries out instrumental analyses in food products justifying the selected technique.
- Writes technical reports, relating obtained results with product control and product processing.

### “Treatments for the Preparation and Preservation of Food”

The holder:

- Organises the conditioning and transformation of raw materials justifying selected operations and equipment.
- Manages preservation treatments through heating describing their fundamentals and control parameters.
- Applies low temperature preservation treatments describing techniques and processing equipment.
- Supervises drying treatments and concentration of food products recognising methods and control parameters.
- Prepares food products, selecting conditioning, preparation, transformation and preservation operations.
- Organises the packaging and packing of prepared products, justifying selected techniques and equipment.

### **“Food Production Organisation”**

The holder:

- Determines production programmes of a production unit analysing information on the process and the product.
- Coordinates work teams in production units, recognising the systems for the allocation of tasks, equipment and people.
- Supervises the production of a productive unit analysing processing control methods.
- Calculates production costs describing applied methodology.

### **“Marketing and Logistics in the Food Industry”**

The holder:

- Plans supply identifying needs and stock.
- Monitors the receipt, dispatch and storage of goods relating them with the quality of the final product.
- Markets raw materials, auxiliary materials and prepared products recognising and applying business techniques.
- Promotes produced products, characterising and applying advertisement techniques.
- Applies technologies of information and communication to logistic and commercial management, characterising the main computer tools.

### **“Quality and Environmental Management in the Food Industry”**

The holder:

- Applies quality management systems describing the regulations on which they are based and their requirements.
- Prepares quality records, analysing their characteristics and importance for the monitoring and improvement in the process and products.
- Monitors spillages, residues and emissions produced, recognising their environmental impact.
- Uses resources efficiently, assessing associated environmental benefits.
- Applies environmental management systems describing the regulations on which they are based and their requirements.

### **“Electromechanical Maintenance in Processing Industries”**

The holder:

- Identifies the materials that constitute equipment and installations in the processing industry relating them with their characteristics and their use.
- Analyses mechanical elements of equipment, machinery and installations recognising their function.
- Characterises hydraulic and pneumatic installations assessing their intervention in industrial processes.
- Identifies electrical machinery relating the same with their purpose in the process.
- Characterises maintenance tasks justifying needs.

### **“Microbiological and Sensory Control of Food”**

The holder:

- Organises the microbiology laboratory recognising facilities, equipment, resources and safety measures.
- Carries out microbiological tests, describing the fundamentals of the technique used.
- Arranges the tasting room and materials recognising its influence in the sensory characteristics.
- Carries out the sensory analysis relating drawn impressions with their application.

### **“Food Nutrition and Safety”**

The holder:

- Recognises the basic concepts of a correct nutrition describing its characteristics.
- Recognises food products made for specific people assessing their repercussions and implications.
- Supervises the application of good hygiene practices and food handling, assessing their repercussion on the hygienic-sanitary quality of products.
- Supervises support plans or binding prerequisites, assessing their importance for hygienic-sanitary hazard control.
- Manages the self-control systems based on the HACCP, justifying the principles associated to them.
- Applies voluntary standards of food safety management, recognising their requirements.

### **“Integrated Processes in the Food Industry”**

The holder:

- Regulates control systems in production processes recognising their components and technological fundamentals.
- Manages the preparation of a food product in the dairy industry, describing production activities, materials and equipment and automatic processing systems needs.
- Monitors the preparation of a food product in the meat industry justifying checking points and established control parameters.
- Manages the preparation of vegetable products, describing production activities, equipment and automatic processing systems.
- Monitors the preparation of food products in the fish industry characterising the process of preparation, equipment, checking points and control parameters.

### **“Food Innovation”**

The holder:

- Supervises the preparation of food with a longer shelf-life, describing their technological fundamentals.
- Manages the preparation of food adapted to new market niches, recognising particularities in each case.
- Monitors the preparation of functional food relating its properties with its influence on health.
- Manages the preparation of food adapted to sections of the population with food intolerance recognising their requirements.

### **“Project on Processes and Quality in the Food Industry”**

The holder:

- Identifies the needs of the production sector, relating them with the standard projects that may satisfy them.
- Designs projects related to the competences described in the diploma, including and developing their constituting stages.
- Plans the project implementation, determining the intervention plan and associated documentation.
- Defines the procedures for the monitoring and control of the project implementation, justifying the selection of variables and instruments used.

### **“Professional Training and Guidance”**

The holder:

- Selects job opportunities, identifying the different possibilities of labour integration, and the alternatives of lifelong learning.
- Applies teamwork strategies, assessing their effectiveness and efficiency on the achievement of the company's goals.
- Exercises rights and complies with the duties derived from labour relationships, recognising them in the different job contracts.
- Determines the protection action of the Spanish Health Service in view of the different covered eventualities, identifying the different types of assistance.
- Assesses risks derived from his/her activity, analysing job conditions and risk factors present in his/her labour setting.
- Participates in the development of a risk prevention plan in a small enterprise, identifying the responsibilities of all agents involved.
- Applies protection and prevention measures, analysing risk situations in the labour setting of the Higher Technician in Processes and Quality in the Food Industry.

### **“Business and Entrepreneurial Initiative”**

The holder:

- Recognises skills related to entrepreneurial initiative, analysing the requirements derived from job positions and business activities.
- Defines the opportunity of creating a small enterprise, assessing the impact on the performance setting and incorporating ethic values.
- Carries out the activities for the setting-up and implementation of a company, choosing the legal structure and identifying the associated legal obligations.
- Carries out basic administrative and financial management activities of an SME, identifying the main accounting and tax obligations and filling in documentation.

### **“On the Job Training”**

The holder:

- Identifies the company's structure and organization relating the same to the production and marketing of the products obtained.
- Applies labour and ethic habits in his/her professional activity according to the characteristics of the job position and the procedures established by the company.
- Supports the organisational activities of the processes of food production, recognising established goals, production activities, procurement, storage and dispatch of raw materials, auxiliary materials and processed products.
- Collaborates in the production control of a food unit, supervising work areas, equipment effectiveness to guarantee performance in conditions of hygiene, efficiency, environmental safety and protection in accordance with established procedures.
- Participates in quality control activities carrying out physicochemical, instrumental, microbiological and organoleptic analyses.
- Participates in the application of quality management, food safety, labour risk prevention and environmental management systems, proposing actions for the improvement of the process and products and applying the specific regulations of the sector.

## RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THE DIPLOMA

The Higher Technician in Processes and Quality in the Food Industry works in small, medium and large enterprises of the food industry within a work team that carries out tasks related to production management, organisation and control, functional areas of logistics, research and development, quality, food safety, labour risks prevention and environmental protection. S/he will hold the position of intermediate officer under the supervision of higher technical staff, although s/he will have a higher degree of autonomy in small enterprises in which s/he will be responsible for business management and administration.

The most relevant occupations or jobs are the following:

- Line, manufacturing plant, department or warehouse manager
- Shift manager
- Equipment, processes and products supervisor
- Production manager
- New products preparation and processes development manager
- Food analysis technician
- Sensory analysis technician
- Quality control laboratory technician
- Quality inspector or counsellor
- Food safety management manager
- Procurement manager
- Packaging and packing line manager
- Environmental control and labour safety manager
- Commercial agent

## AWARD, ACCREDITATION AND LEVEL OF THE DIPLOMA

**Name of the body awarding the diploma on behalf of the King of Spain:** Spanish Ministry of Education or the different Autonomous Communities according to their areas of competence. The title has academic and professional validity throughout Spain.

**Official duration of the education/ training leading to the diploma:** 2000 hours.

**Level of the diploma (national or international)**

- NATIONAL: Non-University Higher Education
- INTERNATIONAL:
  - Level 5 of the International Standard Classification of Education (ISCED5).
  - Level 5 of the European Qualifications Framework (EQF5).

**Entry requirements:** Holding the Certificate in Post-Compulsory Secondary Education (Bachillerato) or holding the corresponding access test.

**Access to next level of education/training:** This diploma provides access to University studies.

**Legal basis.** Basic regulation according to which the diploma is established:

- Minimum teaching requirements established by the State: Royal Decree 451/2010 of 16 April, according to which the diploma of Higher Technician in Multi-platform Applications Development and its corresponding minimum teaching requirements are established.

**Explanatory note:** This document is designed to provide additional information about the specified diploma and does not have any legal status in itself.

**COURSE STRUCTURE OF THE OFFICIALLY RECOGNISED DIPLOMA**

<b>PROFESSIONAL MODULES IN THE DIPLOMA ROYAL DECREE</b>	<b>CREDITS ECTS</b>
<b>Food Technology.</b>	10
<b>Food Biotechnology.</b>	6
<b>Food Analysis.</b>	8
<b>Treatments for the Preparation and Preservation of Food.</b>	15
<b>Food Production Organisation.</b>	4
<b>Marketing and Logistics in the Food Industry.</b>	6
<b>Quality and Environmental Management in the Food Industry.</b>	7
<b>Electromechanical Maintenance in Processing Industries.</b>	7
<b>Microbiological and Sensory Control of Food.</b>	4
<b>Food Nutrition and Safety.</b>	5
<b>Integrated Processes in the Food Industry.</b>	8
<b>Food Innovation.</b>	4
<b>Project on Processes and Quality in the Food Industry.</b>	5
<b>Vocational Training and Guidance.</b>	5
<b>Business and Entrepreneurial Initiative.</b>	4
<b>On the Job Training.</b>	22
	TOTAL CREDITS
	<b>120</b>
<b>OFFICIAL DURATION (HOURS)</b>	<b>2000</b>

\* The minimum teaching requirements shown in the table above comprise 55% official credit points valid throughout Spain. The remaining 45% corresponds to each Autonomous Community and can be described in the **Annex I** of this supplement.

## INFORMATION ON THE EDUCATION SYSTEM

