

# EUROPASS CERTIFICATE SUPPLEMENT

## TITLE OF THE DIPLOMA

*Técnico en Cultivos Acuícolas*

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

*Technician in Aquaculture*

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This translation has no legal status

## DIPLOMA DESCRIPTION

**The holder of this diploma will have acquired the general competence with regard to:**

Carrying out the activities aiming to farm aquatic species and carry out basic maintenance of the installations, achieving the required operational quality, and observing current regulations on application, environmental and labour risk prevention.

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

### "Live Food Cultivation Techniques"

The holder:

- Prepares the required equipment and materials according to the production plan, relating them to both each cultivation stage and the species.
- Applies phytoplankton cultivation techniques, describing cultivation conditions and taking into account health and hygiene measures.
- Applies rotifer production techniques, describing cultivation conditions and taking into account health and hygiene measures.
- Applies brine shrimp nauplii production techniques, describing cultivation conditions and taking into account health and hygiene measures.
- Determines the quality and quantity of live food cultivation, performing calculations and remarks and interpreting the collected data.
- Performs cleaning, disinfection and sterilisation tasks and sanitation treatments, identifying the materials and the products and applying them when appropriate.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks and applying the measures to prevent them

### "Fish-Fattening Techniques"

The holder:

- Characterises the installations and the equipment associated to fish fattening, describing them and relating their use to each stage of the process.
- Handles fish during pre-fattening and fattening operations, describing and applying animal health and welfare criteria.
- Applies procedures associated to fish pre-fattening and fattening, recognising their sequencing and describing the specific methodology of each of them.
- Prepares and distributes fish feeds, identifying the different feed studs and applying the methods set for each system.
- Measures the physicochemical and biological parameters describing and applying the appropriate techniques for each case.
- Detects alterations by directly observing the environment and the usual behaviour of fish, applying correction measures and checking their effect.
- Performs cleaning tasks and sanitation treatments, identifying the materials and products and relating them

with each culture stage and system.

- Undertakes fishing activities and arranges the product to be transported, interpreting and applying final product quality regulations.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks and applying the measures to prevent them.

### **"Mollusc-Fattening Techniques"**

The holder:

- Prepares the material and human resources, associating their features and functions with the corresponding system and stage of the process to each grown species.
- Carries out the appropriate tasks to obtain seeds, performing calculations and preparation operations, and verifying their quality and quantity.
- Applies pre-fattening and fattening techniques, describing and sequencing the specific methodology for each species and culture system.
- Controls the evolution of the cultivation, measuring physicochemical parameters and verifying the biological and pathological quality.
- Harvests the production, preparing the product according to the quality criteria, the final destination and the current regulations.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks, and applying the measures to prevent them

### **"Cultivation Installations and Equipment"**

The holder:

- Prepares the equipment and the installations according to the stage and the species of the cultivation, interpreting their technical documentation and applying set procedures.
- Characterises water and air treatment systems related to the installations and stages of the cultivation, determining their features and performing required calculations and adjustments.
- Carries out preventive maintenance operations in equipment and consumable elements, associating them to their operational requirements and applying the procedures set in the technical documentation.
- Detects basic damage and breakdowns, controlling the operation of the circuits and the equipment and relating breakdowns to their origin.
- Disinfects equipment, machinery and fluid conduction systems, interpreting and applying sanitation and hygiene protocols.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks, and applying the measures to prevent them.

### **"Fish Hatchery Techniques"**

The holder:

- Uses the materials and the equipment associated to fish farming, describing them and relating their use to each stage and system of the process.
- Handles brood fish, describing and applying reproduction techniques.
- Handles layings, describing and applying incubation techniques
- Applies techniques associated to larvae and post-larvae cultivation, recognising its sequencing and applying the specific methodology of each of them.
- Applies techniques associated to alevin cultivation, following the specific methodology of each species
- Detects alterations by directly observing the environment and the usual behaviour of brood, larval and post-larval fish, applying correction measures and checking their effect.
- Measures the physicochemical and biological parameters, describing and applying the appropriate techniques for each case.
- Performs cleaning tasks and sanitation treatments, identifying the materials and the products and applying them safely when appropriate.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks and applying the measures to prevent them.

### **"Mollusc Hatchery Techniques"**

The holder:

- Arranges the equipment and the machinery to develop the activities aiming at mollusc hatchery, associating their functions with the stage and species of the cultivation.
- Houses brood fish, describing and applying the specific conditioning conditions for maturation.
- Manipulates layings, taking into account the features of each species and applying induction and fertilisation techniques.
- Carries out larval cultivation tasks, recognising the different development stages and applying the specific methodology for each species.
- Applies post larval fixation and cultivation techniques, identifying collectors and stages of development and relating them to the characteristics of the species.
- Manipulates seeds for its relocation to fattening installations, taking into account the characteristics of the species and applying size and quality criteria.
- Applies corrective measures, detecting alterations in the environment and in the behaviour of organisms, taking into account prevention protocols.
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks and applying the measures to prevent them.

### **"Crustacean Cultivation Techniques"**

The holder:

- Uses the materials and the equipment associated to crustacean cultivation, describing them and relating their use to each stage and system of the process.
- Handles brood fish and eggs, describing and applying reproduction and incubation techniques.
- Applies those techniques associated with post-larvae cultivation, recognising its sequencing and applying the specific methodology of each of them
- Applies techniques related to crustacean pre-fattening and fattening, describing them and relating them to the stages and the species of the cultivation
- Applies corrective measures, detecting alterations in the environment and the in behaviour of organisms, taking into account prevention protocols.
- Performs cleaning tasks and sanitation treatments, identifying the materials and the products and in each case applying them safely.
- Takes samples and measures the physicochemical and biological parameters, describing and applying the appropriate techniques for each case
- Complies with the rules on labour risk prevention and environmental protection, identifying the associated risks, the measures and the equipment to prevent them

### **"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 protective 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 the job conditions and the risk factors present in his/her labour setting.
- Participates in the development a risk prevention plan for small enterprises, identifying the responsibilities of the all agents involved.
- Applies protection and prevention measures, analysing risk situations in the labour setting of the Technician in Aquaculture.

### **"Business and Entrepreneurial Initiative"**

The holder:

- Recognises skills related to entrepreneurial initiative, analysing the requirements derived from the different job positions and business activities.
- Defines the opportunity to create 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 structure and the organization of aquaculture companies, relating them to the production and marketing of the resulting products and services.
- 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.
- Applies techniques to develop phytoplankton and zooplankton production, cooperating in the tasks set in the planning, and observing quality, safety and environmental preservation protocols determined by the company.
- Applies techniques to perform mollusc production, cooperating in the tasks set in the planning and respecting the quality, safety and environmental preservation protocols determined by the company.
- Applies techniques to perform fish and crustacean production, cooperating in the tasks set in the planning and respecting the quality, safety and environmental preservation protocols determined by the company.

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

The technician in Aquaculture mainly works, employed or self-employed, in aquaculture companies, aquariums, research centres and shell-fishermen brotherhoods, in production areas of live food, fish, crustacean and mollusc, and in the maintenance area of aquaculture installations.

The most relevant occupations or jobs are the following:

- Employee at phytoplankton cultivations.
- Employee at zooplankton cultivations.
- Employee at seawater fish-fattening cultivations.
- Employee at inland waters fish cultivations.
- Employee at crustacean cultivations.
- Employees at mollusc cultivations in their natural environment.
- Employee at floating or submerged structures devoted to mollusc fattening.
- Employee at ponds devoted to mollusc fattening.
- Employee at seawater facilities devoted to fish reproduction.
- Employee at inland waters facilities devoted to fish reproduction.
- Employee at seawater larval fish cultivations.
- Employee at seawater mollusc reproduction facilities.
- Employee at larval mollusc cultivations.
- Employee at crustacean reproduction facilities.
- Employee at larval crustacean cultivations.
- Fluid circuit repairer at aquaculture installations.
- Fluid circuit maintainer at aquaculture installations.
- Repairer of culture buildings and structures at aquaculture installations.
- Maintainer of culture buildings and structures at aquaculture installations.
- System fitter at fish, mollusc and crustacean cultures.
- Fish, mollusc and crustacean cultivation systems repairer.
- Fish, mollusc and crustacean cultivation systems maintainer.
- Repairer of equipment for air conditioning, heat and refrigeration, filtering, feeding, pumping, dosage and fluid treatment at aquaculture installations.

- Maintainer of equipment for air conditioning, heat and refrigeration, filtering, feeding, pumping, dosage and fluid treatment at aquaculture installations.
- Adjuster of equipment for air conditioning, heat and refrigeration, filtering, feeding, pumping, dosage and fluid treatment at aquaculture installations.
- Workshop manager at aquaculture installations.
- Team leader of fitters, adjusters, repairers and maintainers at aquaculture installations.

### **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: Post-compulsory Secondary Education
- INTERNATIONAL:
  - Level 3 of the International Standard Classification of Education (ISCED3)
  - Level \_\_\_\_\_ of the European Qualifications Framework (EQF\_\_).

**Entry requirements:** Holding the Certificate in Compulsory Secondary Education or holding the corresponding access test.

**Access to next level of education/training:** This diploma may provide access to Higher Technical Cycles provided that an entrance exam is passed.

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

- Minimum teaching requirements established by the State: Royal Decree 254/2011, of 28 February, according to which the diploma of Technician in Aquaculture 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. An Annex I may be added and will be filled in by the corresponding Autonomous Community.

## INFORMATION ON THE EDUCATION SYSTEM

