

## 1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 3 en  
QUIA0208 ENSAYOS MICROBIOLÓGICOS Y BIOTECNOLÓGICOS

## 2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 3 in  
QUIA0208 MICROBIOLOGICAL AND BIOTECHNOLOGICAL TESTING  
(This translation has no legal status)

## 3. PROFILE OF SKILLS AND COMPETENCES

The holder of this certificate will have acquired the **general competence** to organise and carry out microbiological testing, including testing of sterility; detection, isolation, counting, characterisation and identification of microorganisms and their metabolites in different materials or products; or any type of testing which microorganisms are used as part of a system of detection, as well as biotechnological testing based on biology, biochemistry, immunology and/or genetics. This general competence is divided into the following **skills units** (UC):

- Organise and manage laboratory activity, applying specific procedures and standards (UC0052\_3).
- Arrange the sampling plan and take samples (UC0053\_3).
- Carry out microbiological testing and inform of the results (UC0054\_3).
- Carry out biotechnological testing and inform of the results (UC0055\_3).

The professional skills are acquired through the **learning outcomes** defined within the related Training Modules (MF):

- Quality in the laboratory (MF0052\_3).
- Sampling for testing and analyses (MF0053\_3).
- Microbiological testing (MF0054\_3).
- Biotechnological testing (MF0055\_3).
- Practical training at the workplace in microbiological and biotechnological testing (MP0052)

(See legal basis for all learning outcomes information acquired by the holder of this Certificate in each MF).

As a reference the learning outcomes include in the Practical training at the workplace that complete and reinforce the learning outcomes acquired in the other training modules, are:

- Interpret and apply the regulations referring to good laboratory practice, health and safety and environmental control, including the results in the established digital format.
- Take samples and transfer them in conditions that guarantee their representative nature and prevent cross-contamination.
- Carry out microbiological analyses using the appropriate analytical techniques and applying the principles of good laboratory practice, as well as current legislation and regulations.
- Apply biotechnological techniques that are available, following the principles of good practice in laboratories, as well as current legislation and regulations.
- Take part in the company's working processes, following the rules and instructions established at the workplace.

## 4. RANGE OF OCCUPATIONS ACCESSIBLE TO THE HOLDER OF THIS CERTIFICATE

The holder of this certificate may work in companies or laboratories in a variety of sectors where microbiological and biotechnological testing has to be carried out in areas such as the environment, food, materials, R&D, etc. The holder may work in the chemical industry, agricultural and food industry, the environment, processing industries, service laboratories, biotechnological industries and, in general, all those sectors in which microbiological and/or biotechnological evaluation of raw materials, natural resources and/or products derived from different processes is important or essential to the activity in question.

The most pertinent occupations and positions are:

- Water analyst, in general.
- Laboratory microbiology analyst.
- Food industry microbiology analyst.
- Environmental industry microbiology analyst.
- Biotechnological industry laboratory analyst.
- Drinkable and waste-water microbiology analyst.
- Pharmaceutical industry microbiological control analyst.

The holder of this professional certificate has recognition of the basic level training in labour risk prevention, according to Annex IV of the Royal Decree 39/1997 of 17 of January approving the Labour Risks Prevention Act.

## 5. OFFICIAL BASIS OF THE CERTIFICATE

### Name and status of the national/regional authority providing accreditation/recognition of the certificate

The Ministry of Employment and Social Security or the corresponding autonomous regional administration within the scope of its competence, in the name of the King. The certificate is valid throughout Spain.

### Level of the certificate

The Professional Certificate Level 3 of the National Repertoire of Professional Certificates corresponds to level 4 of the International Standard Classification of Education (ISCED-P 2011).

The European Qualification Framework (EQF) level:

### Grading scale/Pass requirements

The grading scale and pass level of the training modules are expressed on a scale of 0 to 10. The minimum score for a pass is 5 in every training module including a pass in the practical training at the workplace module.

The grading system is as follows:

- FAIL: 0 to 4.9
- PASS-SATISFACTORY: 5 to 6.9
- PASS-GOOD: 7 to 8.9
- PASS-EXCELLENT: 9 to 10

### Access to next level of education/training

This Professional Certificate Level 3 gives access to Professional Certificate Level 3 within the same professional area and family.

For validation purposes, the educational authorities will recognise the professional module or modules of the VET diplomas corresponding to the skills units included in the training modules of this certificate.

### Legal basis

Royal Decree 1970/2008 of 28 November, establishing four professional certificates in the professional family Chemicals, which are included in the National Repertoire of Professional Certificates. (Appendix IV, Code: QUIA0208).

Amended by Royal Decree 623/2013 of 2 of August, establishing two professional certificates in the professional family Chemicals, which are included in the National Repertoire of Professional Certificates and actualizations of Appendix I, II, III and IV of Royal Decree 1970/2008 and I and II of Royal Decree 1374/2008

## 6. OFFICIALLY RECOGNISED WAYS OF ACQUIRING THE CERTIFICATE

This certificate may be acquired by:

1. Training: Completion with a pass grade of the face-to-face or online training programme.
2. Recognition of the professional skills acquired through professional experience or non-formal training (prior learning): Completion of a process of skills evaluation and accreditation in all the skills units making up the professional certificate.
3. Dual training: Completion of a training and apprenticeship contract, which may range from 1 year (or 6 months, if stipulated as such in the collective agreement) to 3 years, during which effective working time is combined with time dedicated to training under the training programme for the professional certificate.

The training method (number 1 above) requires successful completion of the training modules and the practical training at the workplace:

Description of vocational training received	Percentage of total programme (%)	Duration (hours)
Training modules	85	440
Practical training at the workplace	15	80
<b>Total duration of training leading to the certificate</b>		<b>520</b>

### Entry/access requirements:

- *Bachiller* Diploma (upper secondary education); or
- Professional Certificate Level 2 in the same professional area.
- If neither of the above or higher certifications are held, a pass in the key skills tests.

**Additional information:** Professional certificates are instruments for official accreditation of the professional qualifications in the National Catalogue of Professional Qualifications for all economic activities, within the scope of the labour administration. The National Repertoire of Professional Certificates is divided into three qualification levels (Level 1, Level 2 and Level 3), and by sectors into 26 professional families and 102 professional areas. More information is available at: [www.sepe.es](http://www.sepe.es)

National Europass Centre: [www.oapee.es](http://www.oapee.es)

(\*) **Explanatory note:** This document is designed to provide additional information about the specified certificate, but has no legal status in itself. The format of the description is based on the following texts: Council Resolution 93/C 49/01 of 3 December 1992 on the transparency of qualifications; Council Resolution 96/C 224/04 of 15 July 1996 on the transparency of vocational training certificates; and Recommendation 2001/613/EC of the European Parliament and of the Council of 10 July 2001 on mobility within the Community for students, persons undergoing training, volunteers, teachers and trainers.

More information is available at: <http://europass.cedefop.eu.int>

## Information on Professional Certificates of the Map of Qualifications and Vocational Training in Spain

