

1. TITLE OF THE CERTIFICATE (ES)

Certificado de Profesionalidad de nivel 3 en
QUIA0111 ANÁLISIS BIOTECNOLÓGICO

2. TRANSLATED TITLE OF THE CERTIFICATE (EN)

Professional Certificate Level 3 in
QUIA0111 BIOTECHNOLOGICAL ANALYSIS
(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 apply techniques and methods of biotechnological analysis, meaning technological applications using biological systems on organisms or compounds of a biochemical nature, aimed at controlling quality and research and/or development; acting under standards of good laboratory practice and personal and environment safety. This general competence is divided into the following **skills units** (UC):

- Organise and manage laboratory activity, applying specific procedures and standards (UC0052_3).
- Obtain and exchange biotechnological data online, using bioinformatics techniques (UC1537_3).
- Carry out testing and biotechnological analysis at molecular level in genomics, proteomics and metabolomics (UC1538_3).
- Carry out biotechnological analysis at cellular level in microorganisms, animal, vegetable and human cells (UC1539_3).
- Carry out immunological and other biotechnological analyses at animal and vegetable multicellular level (UC1540_3).
- Supervise correct compliance with the safety and environmental regulations in biotechnology (UC1541_3).

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

- Quality in the laboratory. (MF0052_3).
- Bioinformatics (MF1537_3).
- Molecular biology techniques (MF1538_3).
- Biotechnological techniques at cellular level (MF1539_3).
- Biotechnological techniques in animals and vegetables (MF1540_3).
- Safety and environmental regulations in biotechnology (MF1541_3).
- Practical training at the workplace in biotechnological analysis (MP0436)

(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, gathering the results in the established digital formats.
- Apply the computer tools and specific programs used in biotechnology.
- Isolate, sequence, amplify, register, label and conserve the nucleic acids, proteins and other metabolites, following the sequence laid down in the procedures established by the company.
- Apply the corresponding analytical techniques for the selection and isolation of cellular populations and register the results obtained in the appropriate formats.
- Carry out testing on living bodies, adapting the analysis to the living organism selected.
- Apply corrective response actions to situations of personal and environmental risk in a biotechnological context.
- 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 laboratories and/or companies developing biotechnological products and/or services; companies and organisations in any productive sector that use biological systems and living organisms or their derivatives for the creation or modification of products or processes for specific uses; laboratories that use biotechnology or genetic material in their activity; and public research bodies. The holder may work in the sectors of biotechnology, pharmaceuticals, cosmetics, chemicals, agriculture and food, energy resources, mining and the environment, as well as other sectors where these technologies are used.

The most pertinent occupations and positions are:

- Biotechnological analyst.
- Analyst in molecular biology.
- Biotechnological analyst at cellular level.
- Genetic expression systems analyst.
- Technician in biotechnological robotic platforms.
- Bioinformatics technician.

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 623/2013 of 2 August, establishing two professional certificates in the professional family Chemicals, which are included in the National Repertoire of Professional Certificates and update the professional certificates established in Appendices I, II, III and IV of Royal Decree 1970/2008 of 28 November, and as Appendices I and II of Royal Decree 1374/2008 of 1 August. (Appendix I, Code: QUIA0111)

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	90	700
Practical training at the workplace	10	80
Total duration of training leading to the certificate		780

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

National Europass Centre: 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

