

# Biology Laboratory Technician

## Introduction

Biology laboratory technicians support biological scientists. They set up equipment, prepare and carry out experiments, take measurements and report on their findings. They work in a wide range of areas, including industry, education, medical science and research institutions.

## Also known as

- Laboratory Technician, Biology

## Work Activities

Biology laboratory technicians are responsible for day-to-day activities in the laboratory. They have a variety of duties, including:

- Managing equipment stocks, ordering replacements when necessary.
- Disposing of laboratory waste.
- Preparing and maintaining equipment.
- Taking and testing samples.
- Preparing solutions and reagents.
- Recording and analysing experiment results.

They are involved in a wide range of areas. For example, in pharmaceutical companies, they help scientists to research, develop and test new drugs.

Hospital-based technicians sort blood and tissue samples, label tubes and bottles, make up solutions, and clean and sterilise equipment.

In schools, colleges and universities, they set up materials and equipment for demonstrations, and prepare teaching aids such as slides, samples and models. Increasingly, they also help learners with their work and add their ideas and experience to help teachers prepare lessons.

In the food and drink processing industries, biology lab technicians test food safety, for example, checking for potentially harmful micro-organisms. Others store and maintain the micro-organisms needed to make products such as bread, yoghurt, cheese and wine.

In forensic science, technicians prepare samples from body fluids such as blood and saliva.

Laboratory technicians work at different levels of responsibility. Senior technicians might have more responsibility for experiment work and report writing. They might have duties such as giving on-the-job training to other technicians, supervising staff, or managing health and safety procedures.

For many types of work, technicians need to wear protective clothing such as coats, gloves, eye protection and safety footwear.

Technicians use a wide variety of laboratory equipment in their work. They also use computers, for example, to monitor stock levels and record experiment results.

Being able to read, write and speak Welsh may be an advantage when you're looking for work in Wales.

## Personal Qualities and Skills

To be a biology laboratory technician, you'll need:

- Practical and observation skills.
- Attention to detail.



- A thorough and methodical approach to your work.
- The ability to record test results accurately and write reports of your findings.
- Teamwork skills: you may work closely with biologists, technologists, teachers, students/trainees and other technicians.
- Initiative and the ability to work without supervision.
- The ability to use a wide variety of laboratory equipment.
- Computer and word-processing skills.
- An enquiring mind, with willingness to learn and develop new skills.

Some technicians work with hazardous substances and potentially dangerous materials. It's important to follow instructions carefully, learn and use working practices and wear protective clothing or use protective equipment when needed.

## Pay and Opportunities

### Pay

Salaries vary depending on the company and range of responsibility. The pay rates given below are approximate.

Biology laboratory technicians earn in the range of £14,500 - £17,000 a year, rising to £21,500 - £28,000 with experience. Salaries of over £30,000 are possible for people in senior positions.

### Hours of work

Biology laboratory technicians usually work a 35- to 39-hour week, Monday to Friday.

### Where could I work?

Employers throughout the UK include companies in the pharmaceutical, food and agrochemical industries, and in industrial biotechnology. Biology laboratory technicians can also work in the water industry. There are also opportunities in the NHS, local and national government departments and agencies, and research councils. Other biology laboratory technicians work in schools and colleges, and in university research laboratories.

Opportunities for biology laboratory technicians occur in towns, cities and rural areas throughout the UK.

### What's happening in this work area?

There's a shortage of laboratory technicians, with many more people urgently needed to fill the gaps. A 2012 report by the Technician Council states that 450,000 more laboratory technicians will be needed by 2020, if we are to sustain an innovation economy.

### Where are vacancies advertised?

Vacancies are advertised in science magazines and journals, including New Scientist (which also posts jobs on its website). They also appear on job boards, in local/national newspapers, at Jobcentre Plus and on the Universal Jobmatch website.

## Entry Routes and Training

### Entry routes

Most people enter a post and then have training on-the-job. It's possible to enter and train through an Intermediate, Advanced Level or Degree Apprenticeship

### Training

Apart from training on-the-job, you might have part-time study by day- or block-release for relevant qualifications. These could include Edexcel (BTEC) level 3 Nationals, higher national qualifications, foundation degrees and degrees.

You might work towards a qualification such as a:

- Level 2 NVQ Certificate or level 3 NVQ Diploma in Laboratory and Associated Technical Activities.
- Level 2/3 NVQ Diploma in Laboratory Science.

The Institute of Science & Technology (IST) has developed the Certificate in Laboratory Technical Skills. This is available at levels 1-3, with a fourth level planned. The Certificate is awarded by PAA/VQ-SET, and delivered through registered centres.

Usually after some years' experience, you can take the IST's Higher Diploma. This is for specialist technicians working in specific areas of science.

The IST runs a range of other training courses, as well as continuing professional development programmes. For more information, please see the IST website.

### **Registered Science Technician (RSciTech)**

The Science Council has launched a new register for professional technicians. Registration recognises technicians' vital role and raises their profile: becoming a Registered Science Technician (RSciTech) will help ensure that your expertise is properly recognised by employers and others within the science community. Registration is through membership of one of a number of recognised professional bodies.

To register, you'll usually need a relevant level 3 qualification, such as an AS or A level, level 3 NVQ or Edexcel (BTEC) level 3 National. For more information, please see the Science Council website.

### **Progression**

You could progress to a supervisory, team leader or senior position.

### **Work Experience**

Previous background in laboratory work, for example, as a routine tester or assistant would be really useful for this career.

### **Rehabilitation of Offenders Act**

In some posts, for example, in schools and further education colleges, working as a laboratory technician is an exception to the Rehabilitation of Offenders Act 1974. This means that you must supply information to an employer about any spent or unspent convictions, reprimands or warnings, if they ask you to. This is different from other careers, where you only have to reveal information on unspent convictions if you are asked to.

## **Qualifications**

Most employers ask for at least 4/5 GCSEs at grades A\*-C, including Maths, English and Science or Biology, or equivalent.

To get onto an Intermediate or Advanced Level Apprenticeship, you'll usually need five GCSEs at grade C or above, possibly including English and Maths.

To get onto a Degree Apprenticeship, you will usually need at least 2 A levels.

Laboratory technicians often have higher qualifications, such as A levels or equivalent, and some have HNDs, foundation degrees or degrees.

Some universities accept the Welsh Baccalaureate as equivalent to 1 A-level.

## **Adult Opportunities**

### **Age limits**

It is illegal for any organisation to set age limits for entry to employment, education or training, unless they can show there is a real need to have these limits.

### **Skills/experience**

Some entrants have a background in laboratory work, for example, as a routine tester or assistant.

### **Training**

It's possible to enter and train through an Intermediate Level Apprenticeship or Advanced Level Apprenticeship (Laboratory and Science Technicians).

### Statistics

- 20% of laboratory technicians work part-time.
- 16% have flexible hours.

## Further Information

### Contacts

- **Apprenticeships: Get In. Go Far**  
National Apprenticeship Service (NAS)  
Tel: 0800 015 0400  
Email: [nationalhelpdesk@findapprenticeship.service.gov.uk](mailto:nationalhelpdesk@findapprenticeship.service.gov.uk)  
Website: [www.apprenticeships.org.uk](http://www.apprenticeships.org.uk)
- **Skills Development Scotland - Modern Apprenticeships**  
Tel: 0800 9178000  
Email: [info@skillsdevelopmentscotland.co.uk](mailto:info@skillsdevelopmentscotland.co.uk)  
Website: [www.myworldofwork.co.uk/modernapprenticeships](http://www.myworldofwork.co.uk/modernapprenticeships)
- **GreenJobs**  
Email: [info@greenjobs.co.uk](mailto:info@greenjobs.co.uk)  
Website: [www.greenjobs.co.uk](http://www.greenjobs.co.uk)
- **New Scientist**  
Publisher: Reed Business Information Ltd  
Email: [ns.subs@quadrantsubs.com](mailto:ns.subs@quadrantsubs.com)  
Website: [www.newscientist.com](http://www.newscientist.com)
- **Royal Society of Biology**  
Address: Charles Darwin House, 12 Roger Street, London WC1N 2JU  
Tel: 020 7685 2550  
Email: [info@rsb.org.uk](mailto:info@rsb.org.uk)  
Website: [www.societyofbiology.org](http://www.societyofbiology.org)
- **PAAVQ-SET**  
Vocational qualifications  
Address: Brooke House, 24 Dam Street, Lichfield, Staffordshire WS13 6AA  
Tel: 01543 254223  
Email: [info@paa-uk.org](mailto:info@paa-uk.org)  
Website: [www.paa-uk.org](http://www.paa-uk.org)
- **Institute of Science & Technology (IST)**  
Address: Kingfisher House, 90 Rockingham Road, Sheffield S1 4EB  
Tel: 0114 2763197  
Email: [office@istonline.org.uk](mailto:office@istonline.org.uk)  
Website: [www.istonline.org.uk](http://www.istonline.org.uk)
- **Careers Wales - Welsh Apprenticeships**  
Tel: 0800 028 4844  
Website: [ams.careerswales.com/](http://ams.careerswales.com/)

## Related Careers

- Biochemist
- Materials Scientist
- Biomedical Scientist
- Astronomer

- Biotechnologist
- Botanist
- Analytical Scientist
- Analytical Chemist
- Colour Technologist
- Ecologist
- Forensic Scientist
- Chemistry Laboratory Technician
- Physics Laboratory Technician
- Marine Biologist
- Microbiologist
- Acoustician
- Zoological Scientist
- Toxicologist
- Clinical Research Associate
- Process Development Technologist
- Soil Scientist
- Laboratory Technician
- Scientist
- Biologist
- Physicist