

Unit 1

Why did you choose a career in science? I chose a science career because I am passionate about it and because from a very young age I dreamed of studying it and practicing it in the future.

2 What field of science are you currently working or studying in? I am currently studying for an associate degree in chemical technology.

3 What would you like to do next in your work or studies? After completing the associate degree in chemical technology, I want to continue with the bachelor's degree in industrial chemistry.

1B

Is science education in the US similar to science education in your country? I think that scientific education has undergone changes in the United States and in Puerto Rico.

If you decided to study in the US, which qualification would be best for you? I think the best option would be a baccalaureate in the United States.

3 A

what you enjoy most about working in your scientific field? What I would enjoy the most in my scientific career would be to be in the laboratory and be able to do different experiments that help the company.

what you would like to do (and not like to do) next in your career? Everything I do with my career I would like, but one thing I would not like to do in my job is work with people who are not fit and committed to the job.

which of your past and present experiences are most relevant to your future in science? I have many experiences which filled me with knowledge and learning that I did not have and which I want to apply in the world of work.

## 5A

1. State the aims of your research

Through the verification of the antifungal effect of cinnamon essential oil at 25%, 50%, 75% and 100% on *Candida albicans* in an in vitro test, the research wants to propose natural alternatives in dental treatments for oral candidiasis, thanks to the presence of its active ingredient cinnamic aldehyde, without strictly resorting to the use of commercial antifungals that currently exist.

2. Define what the problem is

*Candida albicans* is considered a primary pathogen in the pathogenesis of oral Candidiasis. This being a disease of universal distribution, which can be established in people of any sex, of all ages, from infants to older adults.

3. Explain why your topic is worth researching

It's important to know about cinnamon because cinnamon has many benefits and disadvantages for our health which could affect or compromise our health, remember that everything in excess is harmful.

4. Say what the expected outcomes of the research are

The expected results are the 100% cinnamon essential oil presenting an anti fungal effect on *Candida albicans*, being superior to the different concentrations.

5. Outline the procedures

Cinnamon essential oil was extracted by means of drag distillation method steam using components such as tween 20 and glycerin,in concentrations 25%,50%,75% and 100%.The strain was seeded in 16 petri dishes of Mueller-Hinton agar though the Disk Diffusion Method,placing each one of the concentrations in each dish,with a positive control group (Nystatin) and a negative control group (physiological serum) ,at which were incubated at 37 C for 24 hours. 16 repetitions of each oil concentration were carried out,obtaining 64 treatments of the experimental group p.

#### 6 Outline how you will limit your investigation

This research could be limited by using only 100% cinnamon essential oil as it has a greater antifungal effect.

#### 6A

Consumer interest in wines produced in organic vineyards has increased significantly

1. in the last few years. ( 1 ) However to date it is unclear whether these production methods actually improve soil or grape quality. ( 2 ) \_\_\_\_The proposed research will be the first phase of a long-term study on a New Zealand vineyard. These results (3) Will indicate \_ whether methods of viticulture improve grape quality.
  1. The research (4)Aims to investigate the effects of organic agriculture on soil and grape quality.(5)The initial phase will consist of two treatments, organic and conventional (the control), each replicated four times in a randomised, complete block design. All organic practices will follow the standards set out by the Food Standards Australia New Zealand (FSANZ).  
(6) The study will assess soil quality using physical, chemical and biological indicators over six years. The next phase will then assess the physiology of the vines.

#### 13 G

1. Hello my name is Luz Marie Rodriguez Rosario and I'm currently a student
2. My research focuses on cinnamon bark and leaves
3. This is useful because we know the benefits and drawbacks
4. For example, if we consume a lot of cinnamon it can cause serious damage to our health.
5. However, there are a number of problems with the coumarin that cinnamon contains and coagulates the blood.

#### 5c

- 1.D
- 2.A
- 3.B
- 4.F
- 5.E
- 6.C

## 15 Interview for a job in pairs

Luz Marie: Tell me about yourself?

Lyann: I considered myself a very lovable, friendly, and respectful person. I'm very responsible and hardworking candidate.

Luz Marie: How did you find out about the company?

Lyann: I saw a flyer online and it picked my interest right away

Luz Marie: What are your goals with this job?

Lyann: My goals are to improve the goals of the industries, visions, collaborations, teamwork, and to find cures.

Luz Marie: When could you start working?

Lyann: I can start working right away

Lyann: How would you describe yourself?

Luz Marie: I would describe myself as a creative person, helpful and willing to help clients, capable of the company with a lot of effort and dedication.

Lyann: What are your qualities?

Luz Marie: My qualities are responsible, attentive, helpful, respectful, punctual, capable, decisive, fast learning and quick adaptation.

Lyann: Where did you see the job offer?

Luz Marie: I saw the offer through an announcement made on its official company page.

Lyann: How do you visualize yourself in the future?

Luz Marie: In the future I envision myself achieving a promotion and holding a higher-ranking position in the company so that I can lead the company to achieve all its objectives. And me as a person achieving all goals and dreams filling myself with more knowledge.