

BASIC FERMENTATION

Vocabulary:

Match the words with their definitions.

1. Bioreactor	A. The liquid nutrient solution prepared in the vessel to support cellular metabolism and growth.
2. Substrate	B. The continuous stirring or mixing of the medium to distribute nutrients and oxygen evenly.
3. Agitation	C. Any substance produced during metabolism, such as ethanol or lactic acid generated during fermentation.
4. Yield	D. The specialized vessel or container where biological reactions and microbial growth take place.
5. Medium	E. The total mass or amount of desired product generated from the fermentation process.
6. Metabolite	F. The specific nutrient base or chemical substance that microorganisms feed on to produce a reaction.

PRESENT CONTINUOUS

POSITIVE <table style="width: 100%;"> <tr><td>I am</td><td>I'm</td></tr> <tr><td>You are</td><td>You're</td></tr> <tr><td>He is</td><td>He's</td></tr> <tr><td>She is</td><td>She's</td></tr> <tr><td>It is</td><td>It's</td></tr> <tr><td>We are</td><td>We're</td></tr> <tr><td>They are</td><td>They're</td></tr> </table> working.	I am	I'm	You are	You're	He is	He's	She is	She's	It is	It's	We are	We're	They are	They're	NEGATIVE <table style="width: 100%;"> <tr><td>I am not</td><td>I'm not</td></tr> <tr><td>You are not</td><td>You aren't</td></tr> <tr><td>He is not</td><td>He isn't</td></tr> <tr><td>She is not</td><td>She isn't</td></tr> <tr><td>It is not</td><td>It isn't</td></tr> <tr><td>We are not</td><td>We aren't</td></tr> <tr><td>They are not</td><td>They aren't</td></tr> </table> working.	I am not	I'm not	You are not	You aren't	He is not	He isn't	She is not	She isn't	It is not	It isn't	We are not	We aren't	They are not	They aren't
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QUESTION <table style="width: 100%;"> <tr><td>Am I</td></tr> <tr><td>Are you</td></tr> <tr><td>Is he</td></tr> <tr><td>Is she</td></tr> <tr><td>Is it</td></tr> <tr><td>Are we</td></tr> <tr><td>Are they</td></tr> </table> working?	Am I	Are you	Is he	Is she	Is it	Are we	Are they	SHORT ANSWER <table style="width: 100%;"> <tr> <td>Yes, I am</td> <td>No, I am not</td> <td>No, I'm not</td> </tr> <tr> <td>Yes, you are</td> <td>No, you are not</td> <td>No, you aren't</td> </tr> <tr> <td>Yes, he is</td> <td>No, he is not</td> <td>No, he isn't</td> </tr> <tr> <td>Yes, she is</td> <td>No, she is not</td> <td>No, she isn't</td> </tr> <tr> <td>Yes, it is</td> <td>No, it is not</td> <td>No, it isn't</td> </tr> <tr> <td>Yes, we are</td> <td>No, we are not</td> <td>No, we aren't</td> </tr> <tr> <td>Yes, they are</td> <td>No, they are not</td> <td>No, they aren't</td> </tr> </table>	Yes, I am	No, I am not	No, I'm not	Yes, you are	No, you are not	No, you aren't	Yes, he is	No, he is not	No, he isn't	Yes, she is	No, she is not	No, she isn't	Yes, it is	No, it is not	No, it isn't	Yes, we are	No, we are not	No, we aren't	Yes, they are	No, they are not	No, they aren't
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-ING SPELLING <table style="width: 100%;"> <tr> <td style="background-color: #FF0000; color: white; padding: 5px;">work study</td> <td style="background-color: #FF0000; color: white; padding: 5px;">working studying</td> <td rowspan="3" style="padding: 5px;">GENERAL RULE: add -ing</td> </tr> <tr> <td style="background-color: #0000FF; color: white; padding: 5px;">live make</td> <td style="background-color: #0000FF; color: white; padding: 5px;">living making</td> </tr> <tr> <td style="background-color: #0000FF; color: white; padding: 5px;">run swim</td> <td style="background-color: #0000FF; color: white; padding: 5px;">running swimming</td> </tr> </table> Consonant + -e : delete -e and add -ing Consonant + vowel + consonant (stressed): double the consonant + -ing		work study	working studying	GENERAL RULE: add -ing	live make	living making	run swim	running swimming																					
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Extra Practice: [Present continuous: I'm doing. I'm not doing. Are you doing? - Test-English](#)

Fermentation Reading Assignment

A. Pre-Reading: New Vocabulary

The following words appear in the reading text. Match them to their correct definitions before you read.

1. Vessel	A. A surface containing switches, dials, or controls to monitor a machine.
2. Yeast	B. Containing a large amount of sugar; sweet.
3. Sugary	C. A microscopic, single-celled fungus used to cause fermentation.
4. Panel	D. An optical instrument used for viewing very small objects or organisms.
5. Rapidly	E. A container, tank, or large tube used to hold liquids or biological materials.
6. Microscope	F. Very quickly; at a fast speed.

B. Reading Text

Identify the verbs in Present Continuous tense.

Title: Monitoring the Fermentation Process

Inside the main laboratory, a very important experiment is taking place right now. The technical team is operating a modern bioreactor to produce a specific organic compound. Inside the vessel, millions of yeast cells are consuming a sugary substrate. They are transforming it into ethanol, which is the main metabolite that the company needs.

Look at the control panel. The mechanical system is providing constant agitation to ensure that oxygen reaches every cell. Dr. Rossi is monitoring the liquid medium carefully because the temperature is rising. At this exact moment, the cells are multiplying rapidly. The team expects a very high yield at the end of the day. Right now, a technician is extracting a small sample, and she is checking it under the microscope to ensure the process is running perfectly.



C. Reading Comprehension Exercises

Exercise 1: Open Questions

Answer the following questions based on the text:

1. What specific device is the technical team operating right now?
2. Why is the mechanical system providing continuous agitation?

Exercise 2: Multiple Choice

Choose the correct option according to the text:

1. **The yeast cells are transforming the substrate into...**

- a) Oxygen
- b) Ethanol
- c) Sugar

2. **Dr. Rossi is monitoring the medium carefully because...**

- a) The temperature is rising.
- b) The microscope is broken.
- c) The technician is leaving.

D. Grammar Exercises: Present Continuous**Exercise 1: True or False**

Read the rules and write **T** (True) or **F** (False). Rewrite the false ones in order to make them correct:

1. _____ We use the auxiliary verb "DO" or "DOES" to form the Present Continuous.
2. _____ The main verb must always end in "-ing" in the Present Continuous.
3. _____ We use this tense to talk about permanent routines and habits.

Exercise 2: Multiple Choice

Choose the correct form of the verb to complete the sentences:

1. Right now, the technician _____ the liquid sample.
a) is extracting b) are extracting c) extracting
2. Millions of cells _____ the sugary substrate at this moment.
a) is consuming b) am consuming c) are consuming
3. Look! The indicator light on the panel _____.
a) are flashing b) is flashing c) flashes

Exercise 3: Sentence Production

Look at the cues and write complete sentences in the **Present Continuous** to describe what is happening in the laboratory right now:

1. (He / test / a new bioreactor)

2. (I / analyze / the fermentation yield / on the computer)

3. (The cells / not / grow / in this acidic medium)

4. (The supervisor / check / the control panel / at the moment)
