

Spore Formation LR

Spore formation. Objective, to understand the process of spore formation. Some plants like mosses, ferns, and molds reproduce by spore formation.

Spore formation is a form of asexual reproduction. Spores are present in the atmosphere in the form of tiny spherical bodies. A spore has a thick wall surrounding it.

The presence of this thick wall protects it and hence it is able to survive even in unfavorable conditions. When conditions aren't favorable, a spore grows into a new plant. Let's understand spore formation with the help of an example.

Take a piece of bread and sprinkle some water on it. Now keep this piece of bread in a warm, dark place. Sprinkle water on the bread at regular intervals to keep it moist.

This moist, warm condition surrounding the bread is favorable for the growth of spores. Observe the bread after two days. You will see mold growing on the bread.

The mold grew out of fungal spores that were present in the air, which germinated on the piece of bread. Now with the help of a magnifying glass, observe the bread mold. Fine thread-like projections and rounded structures can be seen.

The thread-like projections are called hypha, and the rounded structures are called sporangia. Carefully lift one of the sporangia with the help of tweezers and place it on a glass slide. Cover the glass slide with a cover slip, and then observe the glass slide under a microscope.

You will see tiny spores present in the sporangia. This is how spores, which are present in the air, start germinating on the bread. To summarize, spore formation is one of the methods of asexual reproduction.

Spores have thick walls, which protect them during unfavorable conditions. The thread-like projections on bread mold are called hypha. The rounded structures on

bread mold are called sporangia, and they contain the spores.

Summary: Spore Formation

Spore formation is a type of **asexual reproduction** found in plants like **mosses, ferns, and molds**. **Spores** are tiny **spherical structures** that are present in the **atmosphere** and can survive **unfavorable conditions** due to their **thick protective wall**.

When conditions become **favorable**, spores grow into new plants.

Example of Spore Formation (Bread Mold Experiment)

1. A **piece of bread** is kept in a **warm, moist, dark place** to create suitable conditions for spores to grow.
2. **After two days**, mold appears on the bread due to **fungal spores** germinating from the air.
3. Observing the mold under a **magnifying glass**, we see:
 - **Hyphae** – Thin thread-like structures.
 - **Sporangia** – Rounded structures that contain spores.
4. **Spores from sporangia** spread and germinate to form new molds.

Key Points:

- **Spores** help certain organisms reproduce **asexually**.
 - They have **thick walls** for protection in **harsh conditions**.
 - **Hyphae** are thread-like structures found in molds.
 - **Sporangia** are round structures that contain spores.
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Quiz Questions

1. **Which of the following organisms reproduce through spore formation?**
 - (A) Birds
 - (B) Ferns ☒
 - (C) Fish
 - (D) Mammals
2. **What protects spores during unfavorable conditions?**

- (A) A thin membrane
- (B) Their color
- (C) A thick wall ☒
- (D) Their shape

3. **What are the thread-like structures on bread mold called?**

- (A) Spores
- (B) Hyphae ☒
- (C) Sporangia
- (D) Roots

4. **What condition helps spores germinate on bread?**

- (A) Cold and dry environment
- (B) Warm, moist, dark environment ☒
- (C) Bright sunlight
- (D) High air pressure