

Activity: Observing Bacteria Cultures in Yogurt

Materials:

- * Plain yogurt with active cultures
- * Light microscope
- * Slides, cover slips
- * Distilled water
- * Dropper

Procedure:

1. Clean your slides and cover slips for dust and other particles.
2. Place a very small portion of plain yogurt onto the slide, and add one drop of water.
Place the cover slip on top.
3. Under low power, find a section where the yogurt is pretty thin;
this is where you will find the bacteria.
4. Switch to high power (400X for most microscopes) for a better view of the bacteria.
If you have a microscope with an oil immersion lens, it will give you an even better view of these small organisms.

Make a sketch of your view under different magnifications.

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Questions:

1. How many different kinds of bacteria could you find?

2. What other foods have bacteria living in them?

Conclusion:

What did you learn? _____

Activity: Observing Bacteria Cultures in Yogurt - Part 2

Materials:

- * Compound light microscope
- * slides
- * cover slips
- * dropper
- * plain yogurt
- * vial or cup
- * toothpick

Procedure:

1. Find a small vial and clean it thoroughly. If a collection vial is unavailable a plastic cup will do. Make sure ALL soap is completely rinsed off.
2. Put a small amount of yogurt in the container, and put it aside in a dark, relatively warm area. Leave undisturbed for at least 24 hours.
3. After the time has past, take a small sample with a toothpick and place on a slide. If the sample seems too thick, dilute with a drop of water. Next, place a cover slip on top.
4. First observe the bacteria at low power 100X to find a good place to start looking. The diaphragm setting should be very low (small) because these bacteria are nearly transparent.
5. Switch into the highest power to identify the bacteria according to arrangement.
6. Bacteria is classified as follows:

First observe the way the bacteria are arranged and draw in the boxes below:

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|----------------|-------------------|---------------------|
| paired = diplo | chained = strepto | clusters = staphylo |
|----------------|-------------------|---------------------|

Next observe the shape of the bacteria:

| | | |
|----------------|----------------|--------------------|
| round = coccus | rod = bacillus | spiral = spirillus |
|----------------|----------------|--------------------|

From here you can identify any bacteria you might find. For example, a common inhabitant of yogurt is a paired, round bacteria or diplococcus.

Make a sketch of your view under different magnifications.

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Be sure to clean the collection vials and slides thoroughly after usage.

Questions:

How many kinds of bacteria could you find? _____

What are doctors looking for when you might have strept throat? _____

What did you learn? _____
