

Sec. _____ Name: _____

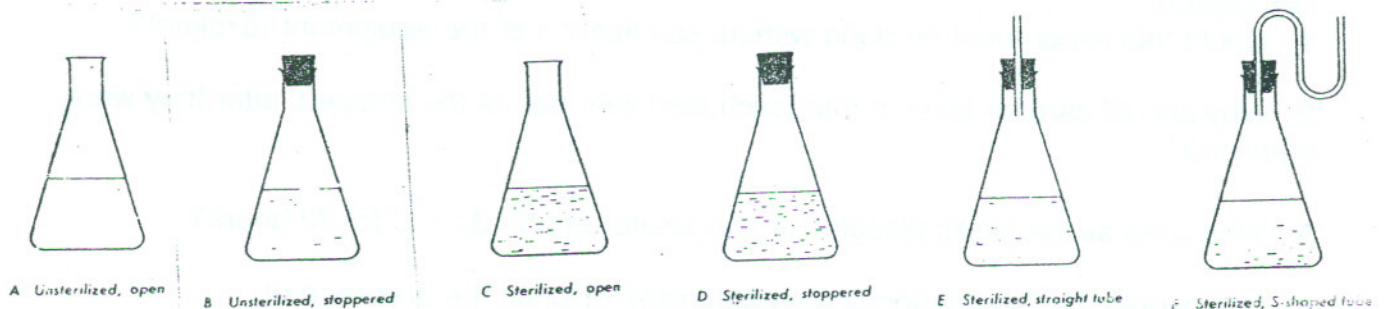
Experiment: Disproving Spontaneous Generation (B. Science 10-1-2d)

Purpose: To illustrate some experiments done by Pasteur that disproved spontaneous generation.

Materials: 6 flasks (250 mL)
 2 solid stoppers 2 one - hole stoppers
 8 cm section of glass tubing
 S - shaped glass tube

Methods:

1. Divide the broth equally among the 6 flasks. The flasks were prepared as shown in the diagram.



2. Place all the flasks in the incubator at 35 - 37 ° C for 72 hours.
3. Following the incubation period all the flasks were examined.
4. In the table, fill in Pasteur's observation for each of the 6 flasks. Each of the changes in the table indicates activity of microorganisms in the broth.

Results:

Flask	A	B	C	D	E	F
Presence of microorganisms						
Odor						
Surface (film)						
Degree of turbidity (cloudiness)						

Conclusions:

Summarize your finding from this experiment by evaluating each of the following theories. Use the following key to interpret your findings.

- + evidence exists to prove? possibility, but evidence is lacking
- evidence to disprove
- O does not apply

Flask	A	B	C	D	E	F
Living organisms were in the broth before incubation						
Organisms present in the broth came from the contaminated broth						
Organisms present in the broth came from the air						
Organisms will not appear if neither the broth nor air entering the flask contains organisms						

Discussion:

1. Could this experiment be done without sterilization of the equipment (explain)?
2. Why should care be taken not to touch the lower part of the stoppers after they were sterilized?
3. Why were all the flasks placed in the incubator at 35 - 37 ° C for 72 hours?
5. How would the "spontaneous generationist's" explain the presence of microorganisms?
6. How would Pasteur have viewed the same data?
7. Those believing in spontaneous generation refer to a "life force" what was meant by a "life force"?
8. Read Gen. 1: 9 - 13. Record what day of the week God created the first living thing, and also record what the first living things were?
Day _____ Living things: _____
- 9a. Read Genesis 2:7 and record what two things God used to form the first human.
1. _____ 2. _____
- 9b. We believe that God created the first person, at what point of our development is God involved in forming each one of us (Isaiah 44:24)?
- 9c. Because Christ is ultimately the creator of each of us, how should this affect our outlook and behavior as Christians (Ephesians 2:10)?