

Virtual lab 3

[Science](#), [Biology](#)



Virtual Lab 3 Table I: Day P. caudatum alone, cells/mL P. aurelia alone,
cells/mL P. caudatum mixed, cells/mL P. aurelia mixed, cells/mL

0

1

1

1

1

2

6

5

5

3

4

14

27

11

16

6

24

40

9

31

8

28

48

7

39

10

28

50

5

46

12

28

51

3

48

14

28

48

0

49

16

28

48

0

49

Journal Questions:

Question 1

When a paramecium is growing individually, it will thrive considering that it

has no competition. This will enable it to grow to its complete size with the readily available resources. On the other hand, when the Paramecium species are grown jointly, one of them will turn out stronger than the other and develop even faster and bigger. As a result, the weak one will begin to die slowly as the stronger paramecium quickly takes control of the available natural resources competitively.

Question 2

I considered that in the case that the Paramecium species are grown jointly, they would result in competing for available natural resources. However, if they grew independently, each would utilize the readily available natural resources and develop most favorable strength, leading to both surviving.

Question 3

On the tenth day, the Paramecium caudatum population reached the carrying capacity of the environment when grown alone. This is given that, subsequent to counting them repeatedly the number remained the same.

Question 4

On the fourth day, the Paramecium aurelia population reached the carrying capacity of the environment. This is given that, subsequent to the fourth day, the Paramecium Aurelia started dying out, whereas the others remained strong.

Question 5

When the two Paramecium species utilize the available food resources, then one of them has the likelihood of benefiting from more of the available resources over the other one, further leaving it to scramble for the fast depleting food (survival of the fittest). In this regard, the weak Paramecium

species will lose the fight and die out. This will enable the strong one to grow strong to maturity while utilizing the readily available resources. Another observation entails the existence of chemical components that may lead to the death of one of the Paramecium species.

Question 6

Upon mixing the paramecium population in one test tube, one started dying out gradually. The other one attained its carrying capacity, further growing steadily leading to the death of the other paramecium.

Question 7

Two species cannot occupy one niche given that this activates competition.

Post-laboratory Questions:

Question 1 E

Question 2 A

Question 3 A

Question 4 E

Question 5 B

Question 6 A & B

Question 7 A

Question 8 B

Question 9 B

Question 10 C