

1- **The suitable plate/s for counting:**.....

47 colonies

2- **The total dilution:**

1st tube dilution: $1/1+99 = 1/100$

2nd tube dilution: $1/1+9 = 1/10$

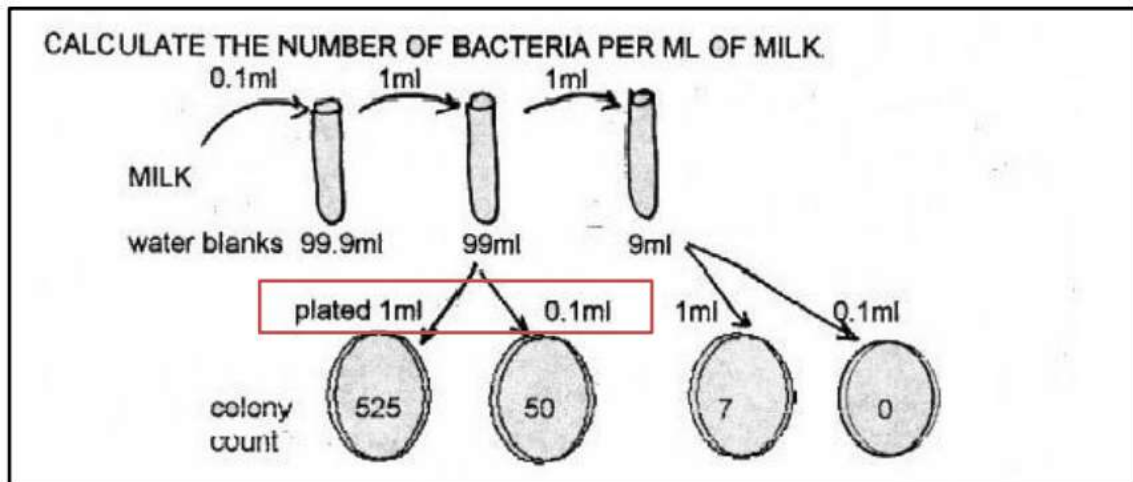
3rd tube dilution: $2/2+8 = 2/10 = 1/5$

Total dilution = $1/100 * 1/10 * 1/5 = 1/5000$

3- **The volume plated:** $0.1 \text{ ml} = 1/10 \text{ ml}$

4- **The equation used for calculation:**

$47/1/5000 * 1/10 = 47/5 * 10^4 \text{ CFU/ml}$



1- The suitable plate/s for counting:.....

50 Colonies

2- The total dilution:

1st tube dilution: $0.1/0.1+99.9 = 1/1000$

2nd tube dilution: $1/1+99 = 1/100$

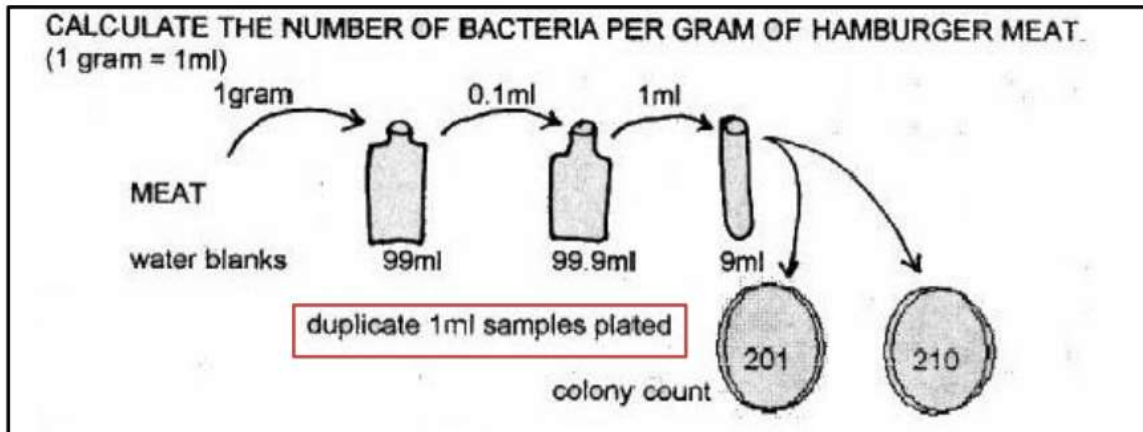
Total dilution= $1/1000*1/100= 1/100000= 1/10^5=10^{-5}$

3- The volume plated: $0.1 \text{ ml} = 1/10 = 10^{-1} \text{ ml}$

4- The equation used for calculation:

$50/10^{-5}*10^{-1} = 50/10^{-6} = 5*10^5 \text{ CFU/ml}$

Individual home work:



1- The suitable plate/s for counting:

$$210 + 201 / 2 = 205.5 \text{ colonies}$$

2- The total dilution:

$$1^{\text{st}} \text{ tube dilution: } 1 / (1 + 99) = 1 / 100$$

$$2^{\text{nd}} \text{ tube dilution: } 0.1 / (0.1 + 99.9) = 1 / 1000$$

$$3^{\text{rd}} \text{ tube dilution: } 1 / (1 + 9) = 1 / 10$$

$$\text{Total dilution} = 1 / 100 * 1 / 1000 * 1 / 10 = 1 / 1000000 = 1 / 10^6 = 10^{-6}$$

3- The volume plated: 1 ml

4- The equation used for calculation:

$$205.5 / 10^{-6} * 1 = 205.5 * 10^6 \text{ CFU/gm}$$