



Hand Shaking Experiment: Section A Results Answer Sheet



Dirty section

Colony 1 *large round cream colonies with a white centre*

Colony 2 *small yellow colonies*

Colony 3 *very small cream colonies with irregular shape*

Colony 4 *small cream round oval colonies*

Colony 5 *small round white colonies*

Clean section

Colony 1 *small round white colonies*

Colony 2 *small cream round oval colonies*

Observations

1 Which side of the Petri dish contained the highest number of microbes?

Clean

2 Which side of the Petri dish contained more different colonies of microbes?

Dirty

3 How many different colony types were there on the:

Clean - 2 Dirty - 5

Conclusions

1 Some people may see more microbes on the clean side of the Petri dish than the dirty side. Why?

There may be more microbes on the clean side than the dirty side but if students have washed their hands correctly there should be a lower number of different types of microbes. The increase in the number of microbes is probably due to microbes from the water or the paper towel used to dry their hands.

2 Which colonies would you consider the friendly microbes and why?

The microbes on the clean side as they are probably the natural microbes found on our hands.



Hand Shaking Experiment: Section B Conclusions Answer Sheet

- 1 Which method of hand hygiene eliminated the most microbes?
Hand washing with soap and warm water.

- 2 Why would soap help eliminate more microbes than washing with water alone?
Soap helps to break up the natural oil on your skin to which microbes can stick.

- 3 What are the advantages and disadvantages to using antibacterial soap when washing your hands?
Advantages: kill any unwanted microbes
Disadvantages: also kill natural skin microbes
(note: general (non-antibacterial) soap will remove harmful microbes from the hands)

- 4 What evidence do you have that microbes can be transmitted by hands?
The types of microbes on the first plate are spread along to the other plates and the numbers are gradually decreasing.

- 5 Which areas of the hand do you think would contain the most microbes and why?
Under the finger nails, on the thumbs and between the fingers as these are places that people either forget to wash or don't wash very well.

- 6 List 5 times when it is important to wash your hands
 - a. Before cooking
 - b. After touching pets
 - c. After using the toilet
 - d. Before eating
 - e. After sneezing into them

