Edexcel Biology International A-level

CP 14 - Effects of different antibiotics

Flashcards

State the aseptic techniques.

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- Wipe down surfaces with antibacterial cleaner, before and after experiment
- Use a Bunsen burner in the work space so that convection currents draw microbes away from the culture.
- Flame the wire hoop before using it to transfer bacteria.
- Flame the neck of any bottles before using them, this prevents any bacteria entering the vessel.
- Keep all vessels containing bacteria open for the minimum amount of time.
- Close windows and doors to limit air currents.

Why is bacteria incubated at 25°C?

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To prevent the growth of pathogens (harmful bacteria), which occurs at higher temperatures.

How can you compare the effectiveness of different antibiotics applied to the same bacteria?

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Measure the diameter and calculate the area of the zone of inhibition (clear zone) on the agar.

What does the zone of inhibition indicate?

What does the zone of inhibition indicate?

It indicates the bacteria killed by the antibiotic. The larger the zone the more effective the antibiotic.

State the hazards and precautions of this practical.

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Naked flame: keep away from flammable materials, tie hair up, wear goggles

Bacteria is a biohazard, use disinfect and wash hands, dispose of bacteria safely

Disinfectant is flammable, keep away from naked flame.

Why should the lid not be completely taped to the petri dish?

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To allow oxygen to enter the petri dish, preventing the growth of harmful anaerobic bacteria.

Describe the graph that can be plotted from the results of this practical.

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A bar chart of zone of inhibition against antibiotic.

How is the control set up for this practical?

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By placing a disc dipped in distilled water on the agar.