

5 second rule, Cece D 603

Science Fair Background Research

Source(s):	Date:	Question:	Notes: (in point form and remember to put in your own words)
https://www.britannica.com/topic/agar-seaweed-product https://ginobiotech.com/what-is-agar-and-why-is-it-used-in-microbiology/	Nov 7 2025	What is agar?	<ul style="list-style-type: none">● Agar is like jelly or gelatin substance● made out of red algae● From a species called gelidium
https://ginobiotech.com/what-is-agar-and-why-is-it-used-in-microbiology/	Nov 13	Why do we use agar in the petri dish?	<ul style="list-style-type: none">● It supports growth of bacteria● Also does not breakdown or dry to quickly
https://www.mi-sci.org/wp-content/uploads/2020/07/Bacteria-Growth-Plates.pdf		How long should I leave the petri dish in the incubator?	<ul style="list-style-type: none">● 2-7 days● You can count the colonies of bacteria (spores)● By two days you should see some spores● By 5 days you should see spores of bacteria that are countable
https://my.clevelandclinic.org/health/articles/24494-bacteria	Nov 13	What is bacteria and is good or bad	<ul style="list-style-type: none">● A single cell living organism● It can be anywhere like in your body outside or inside● There are billions of types● Pathogen is a type of bad bacteria that spreads quickly and causes disease● Spheres or ball-shaped (cocci bacteria).● Rod-shaped bacteria (bacilli).● Spirals or helixes (spirochetes)● Good bacteria are in your body to take care of you

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https://practicalbiology.org/standard-techniques/incubating-and-viewing-plates	Nov 13	Why do we use an incubator	<ul style="list-style-type: none"> It will help speed up the growth without harming the growth of the bacteria causing inaccurate conclusions
https://www.healthline.com/health/5-second-rule https://www.scientificamerican.com/article/fact-or-fiction-the-5-second-rule-for-dropped-food/	Nov 13	Does it matter what type of food is dropped on the floor?	<ul style="list-style-type: none"> Yes, wet or moist foods like apple slices will have a bigger chance of more bacteria and more spreading Then if you have a dry piece of food like bread or a muffin then it will take long for bacteria to spread For an experiment you want to use something moist like an apple
https://www.astrazeneca.com/content/dam/az/media-centre-docs/article_files/articles-2020/11229%20-%20AZ-USASEF-Agar-Experiment-v7-STEM-Day-Version-GY-FH.pdf	Nov 11	How do I make sure containers for mixing agar are sterile? How do I prepare the agar for each petri dish?	<ul style="list-style-type: none"> First microwave glass dish for 2 minutes in microwave to sterilize before mixing agar To prepare enough agar for 12 petri dishes you must mix 30 teaspoons of agar with 6 1/3 cups of water Microwave the agar solution for 4 minutes in the microwave Let solution cool Pour the agar evenly into the 12 petri dishes and wait until it solidifies
https://learning-center.homesciencetools.com/article/microscopic-agar-petri-dishes-science-lesson/	Nov 10	Do I mix the agar with the swab	<ul style="list-style-type: none"> You do a couple of strokes with the swab (After you have swab the apple) in the petri dish with agar
https://www.healthline.com/health/5-second-rule https://www.scientificamerican.com/article/fact-or-fiction-the-5-second-rule-for-dropped-food/	Nov 13	Do I swab the whole apple slice or just the side that touched the ground	<ul style="list-style-type: none"> You will collect more bacteria if you swab the side that touched the floor and a little around the sides You swab the sides because bacteria spreads super fast on moist
https://www.microban.com/blog/dont-let-microbe-Steph-walk-all-over-your-floors https://pubmed.ncbi.nlm.nih.gov/31113021/	Nov 14	How do the types of floor hold bacteria or affect the growth?	<ul style="list-style-type: none"> Silver helps prevent bacteria growth on tile flooring. It works because it disrupts bacteria's metabolism and stops it from getting the energy it needs to grow Tile will be more likely to have more bacteria Wood will not typically have too much bacteria because it is hard for it to grow but if it was left at room temperature after a spill for a 12hr without being washed then there would be a higher chance of the bacteria spreading and growing

